Submitted To:
CITY OF LAKE ELSINORE

PRELIMNARY DRAINAGE REPORT

To Support:
Dexter Village Project

10/20/2025

Job No. 10.103

Prepared For:

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Eugene Abrego Date

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5-YR 1-HR
5-YR 3-HR
5-YR 6-HR
5-YR 24-HR

10-YR 1-HR
10-YR 3-HR
10-YR 6-HR

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10-YR 24-HR

100-YR 1-HR
100-YR 3-HR
100-YR 6-HR
100-YR 24-HR

DEVELOPED CONDITIONS
2-YR 1-HR
2-YR 3-HR
2-YR 6-HR
2-YR 24-HR

5-YR 1-HR
5-YR 3-HR
5-YR 6-HR
5-YR 24-HR

10-YR 1-HR
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10-YR 6-HR
10-YR 24-HR

100-YR 1-HR
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100-YR 24-HR

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2-YR 1-HR
2-YR 3-HR
2-YR 6-HR
2-YR 24-HR

5-YR 1-HR
5-YR 3-HR
5-YR 6-HR
5-YR 24-HR

10-YR 1-HR
10-YR 3-HR
10-YR 6-HR
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100-YR 1-HR

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SOILS REPORT

ZONING MAP

I. INTRODUCTION

A. PURPOSE OF PRELIMINARY DRAINAGE STUDY

The proposed storm drain improvements are located in the City of Lake Elsinore, California. See Location Map – Figure 1. The Dexter Village Project will consist of residential housing. The purpose of this report is to compute the developed condition hydrology calculations to demonstrate compliance with the City of Lake Elsinore Third Street Drainage Improvements Technical Study, dated February 13, 2018.

The proposed development is generally bound by undeveloped land to the north, Dexter Avenue to the south, 3rd Street to the west and 2nd Street to the east. Existing access to the site is currently provided from Dexter Avenue, 3rd Street and 2nd Street. See Location Map – Figure 1 in Appendix A.

This report provides the required storm drain layout for the project, a summary of runoff estimates for the developed condition.

B. PROJECT OBJECTIVES

The following objectives will be addressed in this drainage study:

- A description of the physical setting of The Dexter Village Project, and the potential for flooding in this area.
- Discussion of existing drainage facilities.
- Watershed storm water runoff analysis utilizing Unit Hydrograph and Flood Routing calculations.
- Develop in-tract drainage storm drain system layout for The Dexter Village Project

C. PROJECT DESCRIPTION

The Dexter Village Project drainage boundary encompasses approximately 22.9 acres. Existing land use consists of vacant land. Site elevations within the project boundary range from approximately 1322' to 1283.

The proposed improvements in The Dexter Village Project will include construction of new apartment building units, single family home units, drive aisles, parking lot areas, storm drain facilities and underground utilities. The project is area is divided into 3 main drainage areas, DA A, DA B and DA C. The proposed storm drain system will consist of concrete gutters, a bioretention/detention basin, underground detention basins with biotreatment BMPs to treat runoff, and an underground infiltration basin. DA A will utilize a detention basin with underground storage and a Modular Wetland System (MWS) unit to capture and treat the Design Capture Volume (DCV) and mitigate Hydrologic Conditions of Concern (HCOC). DA B will utilize a detention basin with underground storage and a MWS unit to capture the Design Capture Volume (DCV) and mitigate Hydrologic Conditions of Concern (HCOC). DA C will utilize an infiltration basin with underground storage to capture the DCV and mitigate HCOC. Detailed sizing and HCOC calculations are provided in the separately submitted PWQMP report.

1. Project Location

The proposed development is generally bound undeveloped land to the north, Dexter Avenue to the south, 3rd Street to the west and 2nd Street to the east. See Location Map – Figure 1.

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2. Existing Land Uses

The existing land uses are based on aerial topography and of watershed areas. The existing land is undeveloped with natural native grass based on the aerial photography. The project is tributary to the Santa Ana Watershed Region.

3. Existing Drainage Facilities

Existing flow patterns within the project site flow in a southwest direction for Drainage Areas A and B and southeast for Drainage Area C. There is a low point at the downstream end of DA C. Runoff from this area currently ponds and sheet flows across Dexter Avenue. Stormwater from this project currently sheet flow across the project site and to Dexter Avenue. There are no existing drainage structures built within the project property boundary.

4. Proposed Drainage Facilities

The proposed storm drain improvements in The Dexter Village Project will include the construction of new drainage facilities. The new drainage facilities will consist of concrete gutters, bioretention basins and an underground infiltration basin.

DA A

Runoff from DA A will surface flow to a series of catch basin inlets and ultimately drain to Detention Basin No. 1. The proposed Detention Basin No. 1 will be designed to capture DCV and mitigate 2-year, 5-year, 10-year and 100-year storms. The proposed basin will include a Modular Wetland System (MWS) unit to treat DCV. Additional volume storage is provided with an underground system composed of perforated pipe encased in gravel. Once treated, runoff from the proposed Detention Basin No. 1 will be conveyed to a proposed storm drain line, Line A, located along the DA A eastern drainage boundary. The proposed Line A will discharge flows to the existing Third Street storm drain line. Flow patterns for this project are in conformance with City of Lake Elsinore Third Street Drainage Improvements Technical Study. The proposed detention basin detains and decreases 2-year, 5-year, 10-year and 100-year storm events to existing peak flow rates. Therefore, DA A developed flows will not impact the Third Street storm drain line and downstream drainage facilities.

DA B

Runoff from DA B will surface flow to a series of catch basin inlets and which will drain to an Detention Basin No. 2. The proposed Detention Basin No. 2 will be designed to capture DCV and mitigate 2-year, 5-year, 10-year and 100-year storms. The proposed basin will include a MWS unit to treat DCV. Additional volume storage is provided with an underground system composed of perforated pipe encased in gravel. Once treated, runoff from the proposed Detention Basin No. 2 will be conveyed to a proposed storm drain line, Line A, located along the DA B western drainage boundary. The proposed Line A will discharge flows to the existing Third Street storm drain line. Flow patterns for this project are in conformance with City of Lake Elsinore Third Street Drainage Improvements Technical Study. The proposed detention basin detains and decreases 2-year, 5-year, 10-year and 100-year storm events to existing peak flow rates. Therefore, DA B developed flows will not impact the Third Street storm drain line and downstream drainage facilities.

DA C

Runoff from DA B will be captured by proposed catch basin inlets connected to a proposed storm drain pipe network and an infiltration basin. The infiltration basin will be designed to

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capture and infiltrate DCV, 2-year, 5-year, 10-year and 100-year storms. DA C in its existing condition drains to a low point in Dexter Avenue where runoff currently ponds.The infiltration basin provides additional volume and surface area by providing additional volume storage with an underground system composed of perforated pipe encased in gravel. The proposed underground infiltration basin will improve driving conditions along Dexter Avenue by infiltrating, 2-year, 5-year and 10-year and 100-year storms storms and effectively improving flooding conditions along Dexter Avenue. Only the 100-year 24-hour storm will be partially captured. Once the underground infiltration basin is full, 100-year 24-hour storm flows will bypass the infiltration basin using a proposed spillway and surface flow to Dexter Avenue. DA C runoff in its existing condition flows to Dexter Avenue.

DA D

Runoff from DA D will flow along the proposed curb and gutter on 2ND Street and Dexter Avenue. Runoff from this area will collect in a low point in Dexter Avenue where an MWS unit will treat water quality flows. Large storm events will sheet flow across Dexter Avenue using an Arizona crossing. There are no existing drainage facilities near this area and therefore runoff will sheet flow across Dexter Avenue as it does in the existing condition.

DA E

Runoff from DA E will flow along the proposed curb and gutter on 3rd Street. Runoff from this area will be collected by an MWS unit that will serve as a catch basin and water quality treatment. The proposed MWS unit will discharge flows to the existing storm drain in 3rd Street.

DA F

Runoff from DA E will flow along the proposed curb and gutter on Dexter Avenue. Runoff from this area will be collected by an MWS unit that will serve as a catch basin and water quality treatment. The proposed MWS unit will discharge flows to a proposed storm drain in 3rd Street.

Refer to the separately Water Quality Management Plan Study submitted for The Dexter Village Project for details and location of water quality facilities.

OFFSITE AREA

There are 174 acres north of the project site which discharge runoff through the project area. This offsite has been analyzed as part of the City of Lake Elsinore Third Street Drainage Improvements Technical Study. This offsite area is part of a 631 acre watershed, prorating the drainage area flows, the project site receives approximately 320 cfs. Offsite runoff will be captured by a proposed inlet located within a depressed area along the northerly property line. The inlet will connect to the proposed storm drain, Line A. The proposed Line A will collect offsite runoff and runoff generated by DA A and DA B. Line A will discharge to the existing Third Street Storm Drain line. Preliminary design and sizing calculations for the proposed inlet are provided in Appendix E. Reference calculations are provided in Appendix E.

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II. HYDROLOGY

A. GENERAL GUIDELINES

Hydrologic Calculations were prepared using methodology outlined by the RCFC&WCD Hydrology Manual dated April, 1978. Onsite hydrology was computed using the Unit Hydrograph method. Per criteria from the RCFC&WCD Hydrology Manual, Antecedent Moisture Condition (AMC) II was used for the 2-yea, 5-year, 10-year and 100-year analyses that reflects the degree of ground saturation from previous rainfall events. The AMC value can range from I to III, with condition III being the most severe, allowing for greater runoff and low infiltration.

B. RATIONAL METHOD HYDROLOGY METHODOLOGY

To properly identify drainage patterns for offsite streets, the Rational Method was utilized to compute the 100-year peak discharges for the study area. A technical description of the rational method is provided in the RCFC&WCD Hydrology Manual dated April, 1978. The Rational Method is an empirical computation procedure for developing a peak runoff rate (discharge) for small watershed for storms of a specified recurrence interval. The rational method equation is based on the assumption that the peak flow rate is directly proportional to the drainage area, rainfall intensity and a loss coefficient, which describes the effects of land use and soil type. Hydrology calculations were prepared to identify tributary flows within DA D, E and F, refer to Exhibit B in Appendix B for the study area.

The portion of the soil map from the RCFC&WCD Hydrology Manual, plate C-1.41, was overlaid and the soil map indicated that the study area consists of soil type B. Precipitation data for the project location was taken from Plates in the RCFC&WCD Hydrology Manual and are provided in Appendix F of this report.

CivildCadd/CivilDesign Hydrology – Hydraulics Software by CivilDesign Corporation and Joseph E. Bonadiman and Associates, Incorporated was used to compute hydrology calculations. The peak discharges and time of concentration at specified nodes are shown on the hydrology map. To compute Rational Method Calculations, hydrologic information was entered into the CivildCadd/CivilDesign Hydrology – Hydraulics Software. The computer files for the 100-year calculations are included in Appendix C.

C. SYNTHETIC UNIT HYDROGRAPH METHOD CALCULATION

To properly design onsite storm drain facilities, the Unit Hydrograph method was utilized to compute the 2-year, 5-year, 10-year and 100-year peak discharges for the 1-hr, 3-hr, 6-hr and 24-hr storms. A technical description of the Unit Hydrograph method is provided in the RCFC&WCD Hydrology Manual dated April, 1978.

The Synthetic Unit Hydrograph Method, a computational procedure for developing peak runoff and discharge for storms of a specified recurrence interval, is used in watersheds larger than 300 acres. This procedure calculates effective rainfall, which is the portion of the total rainfall that appears as surface runoff, at a specific concentration point. Because no two drainage basins have the same physical characteristics, the appropriate adjustments must be accounted for 2-year, 5-year, 10-year and 100-year storm frequencies for each of the 1-hour, 3-hour, 6-hour, and 24-hour durations. The Synthetic Unit Hydrograph Method calculations were utilized to conduct determine peak flow rates. The CivildCadd/CivilDesign Hydrology – Hydraulics Software was used to compute Synthetic Unit Hydrograph calculations. The computer files are included in Appendix C.

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Although the project watershed areas are less than 300 acres, this project uses the Synthetic Unit Hydrograph Method. The Synthetic Unit Hydrograph Method has to be used as there is an existing offsite area north of the project that will need to be captured by this project. This offsite drainage area peak flow rate was calculated using the Synthetic Unit Hydrograph Method. Hydrograph models will be combined during final engineering to generate peak flow rate and size onsite storm drain pipe. Per RCFC&WCD Hydrology Manual, the "Short Cut" Unit Hydrograph Method cannot be used for this project as this would combine hydrograph models from the two methods, which is not allowed

D. HYDROGRAPH ROUTING CALCULATION SOFTWARE

The Detention Basin Routing (Modified Pul's) Method outlined above were performed using the CivildCadd/CivilDesign Hydrology – Hydraulics Software. Routing calculations were performed for the proposed underground infiltration basins. The computer files for the 2-year, 5-year, 10-year and 100-year storm frequencies for the 1-hour, 3-hout, 6-hour and 24-hour durations are included in Appendix D.

E. FLOOD ASSESSMENT

The Federal Emergency Management Agent (FEMA) publishes Flood Insurance Rate Maps (FIRMs) that identify areas where there is flooding potential. The FIRM that applies to this project is Riverside County Map Number 06065C2029G, dated August 28, 2008. The entire project site is within Flood Hazard Zone "X" (Other Flood Areas) – Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. A portion of the map applicable to this project has been included in Appendix A.

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III. SUMMARY OF RESULTS

Table 1 & Table 2 summarize the 2-year, 5-year, 10-year and 100-year storm flow rates for the existing and developed condition. The proposed development reduces developed peak flow rates for most storm events to existing peak flow rates or less. The 100-year, 24-hour storm developed peak storm flow rate is 14.2 cfs which is 0.7 more than the existing peak flow rate of 13.5 cfs. The increase in flows, 5% (0.7 cfs), is minimal and will not impact downstream drainage facilities.

Table 3 summarizes the peak flow rates for the offsite street improvements. Runoff from DA E and F have been tabulated in the existing storm drain facility in 3rd Street and therefore will flow unretained to the main storm drain lines in 3rd Street and Dexter Avenue.

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TABLE I: SUMMARY FLOWS
EXISTING CONDITION

	2-YR				5-YR				10-YR				100-YR			
AREA ID	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	14.2	9.2	8.3	1.7	20.7	13.9	12.6	3.4	25.7	17.4	15.9	4.8	42.4	29.2	26.9	9.1
B	7.0	4.5	4.1	0.8	10.0	6.8	6.3	1.7	12.3	8.6	7.9	2.3	20.0	14.3	13.3	4.4
	21.2	13.7	12.4	2.5	30.7	20.7	18.9	5.1	38	26	23.8	7.1	62.4	43.5	40.2	13.5

TABLE II: SUMMARY FLOWS
DEVELOPED CONDITION - DETAINED FLOWS

	2-YR				5-YR				10-YR				100-YR			
AREA ID	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	1.5	9.8	3.4
B	0.4	0.4	0.4	1.4	0.4	1.1	5.1	2.7	0.4	4.5	8.4	3.5	8.5	13.2	13.3	6.2
C	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	4.6
TOTAL	0.9	0.9	0.9	1.9	0.9	1.6	5.6	3.2	0.9	5.0	8.9	4.2	9.0	14.7	23.1	14.2
% INCREASE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%

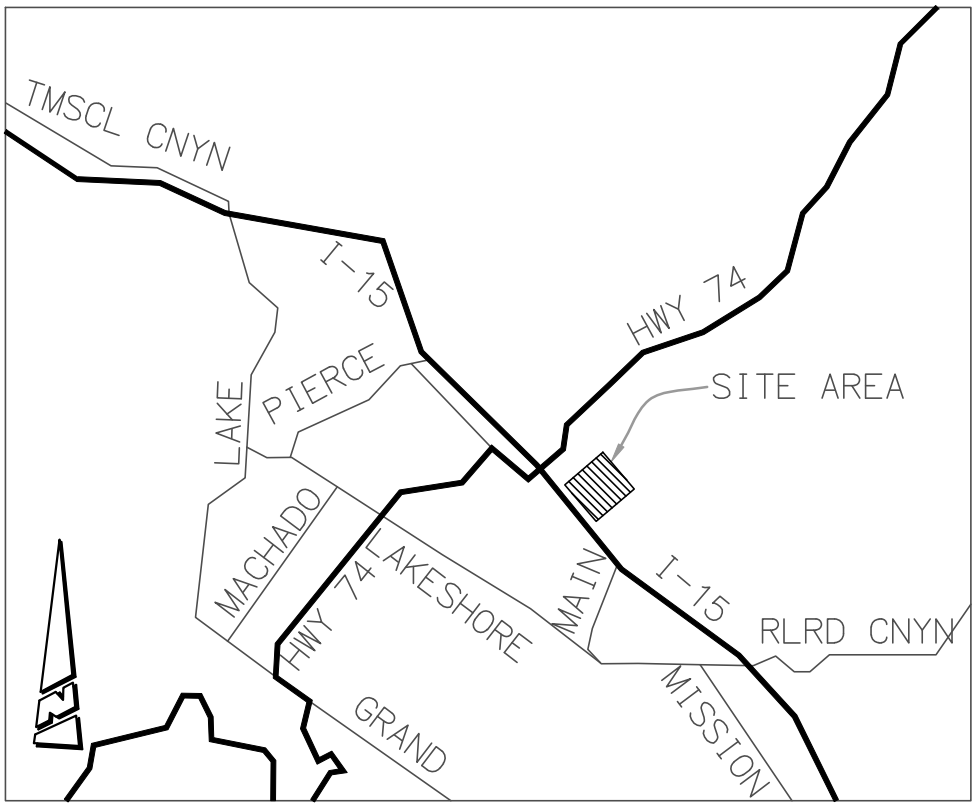
NOTES:
*PEAK FLOW RATE IS 0 CFS AS THE STORM RUNOFF IS 100% INFILTRATED.

TABLE III: SUMMARY FLOWS
DEVELOPED CONDITION - RATIONAL METHOD CALCULATIONS - OFFSITE STREETS

	100-YR
AREA ID	
D	8.1
E	11.5
F	2.5

APPENDIX A

LOCATION MAP

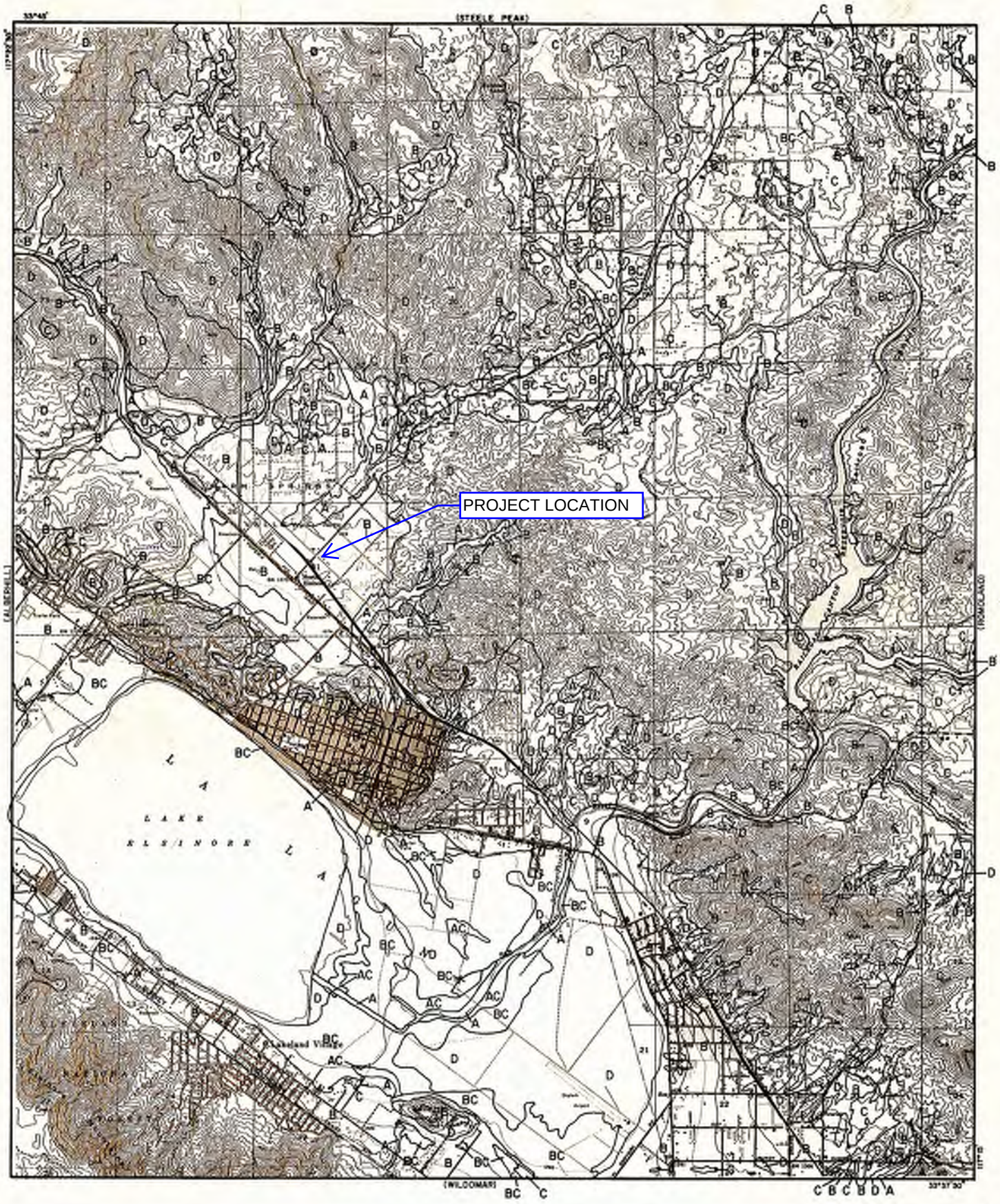


LOCATION MAP

N.T.S.

FIGURE 1

SOILS MAP



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC & WCD

HYDROLOGY MANUAL

N

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR ELSINORE

PLATE C-1.41

RAINFALL MAPS

PROJECT LOCATION
0.57

NOTES
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 1-HOUR PRECIPITATION

DRAWN BY R.A.S. | SHEET No.
APPROVED CHIEF ENGINEER R.E. NO. 9822 | PLATE D-4.3 | DR. No.
DATE | REVISED

PROJECT LOCATION
1.45

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 — 1-HOUR PRECIPITATION

DRAWN BY: R.A.S.
SHEET NO.
PLATE D-4.4
APPROVED CHIEF ENGINEER R.S. NO. 4822
DATE
REVISED
DA NO.

PROJECT LOCATION
1.0

NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973.

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

2-YEAR — 3-HOUR
PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 8822	DRAWN BY R.A.S.	SHEET NO.
DATE	PLATE E-5.1	DR. NO.

PROJECT LOCATION
2.5

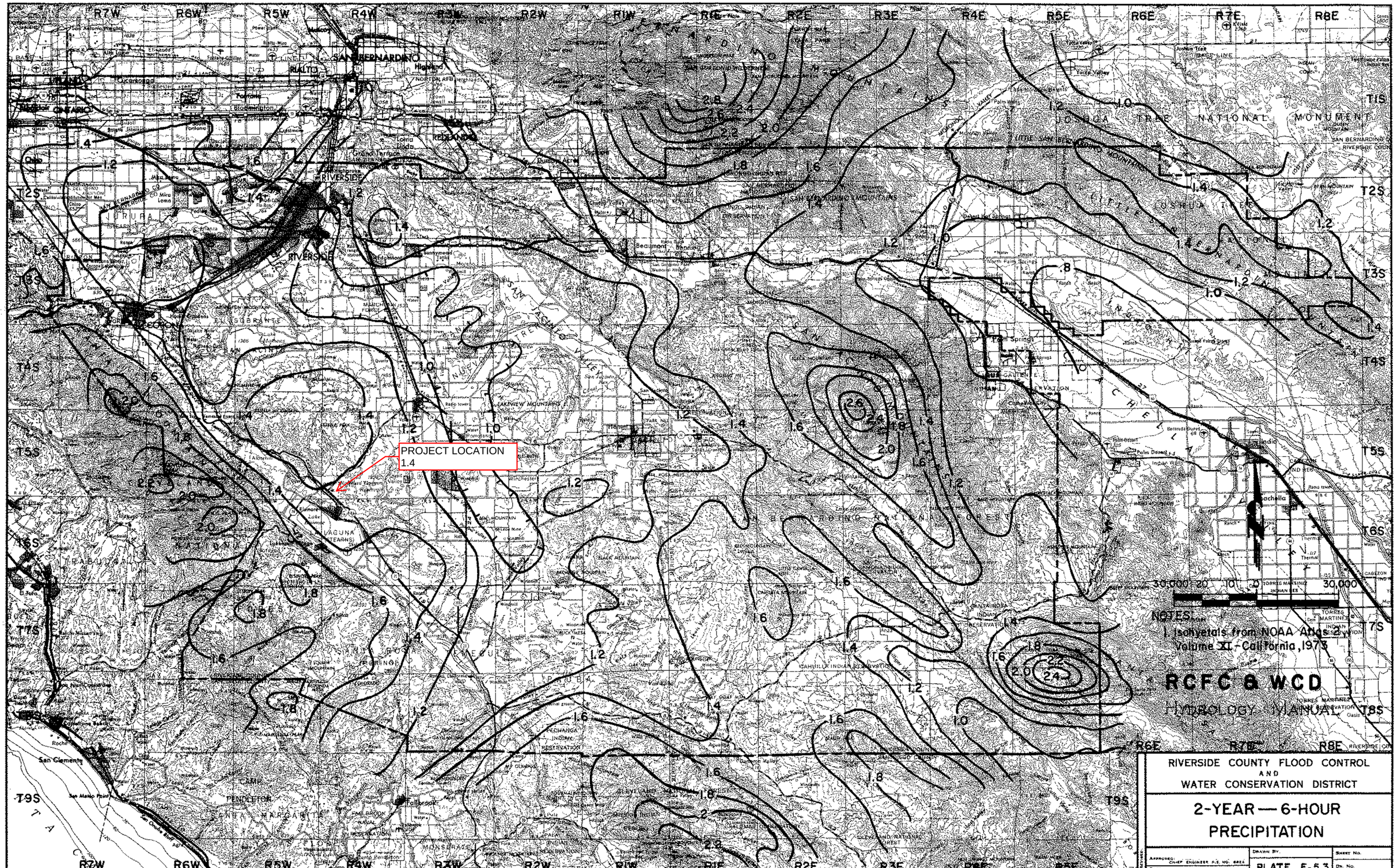
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973

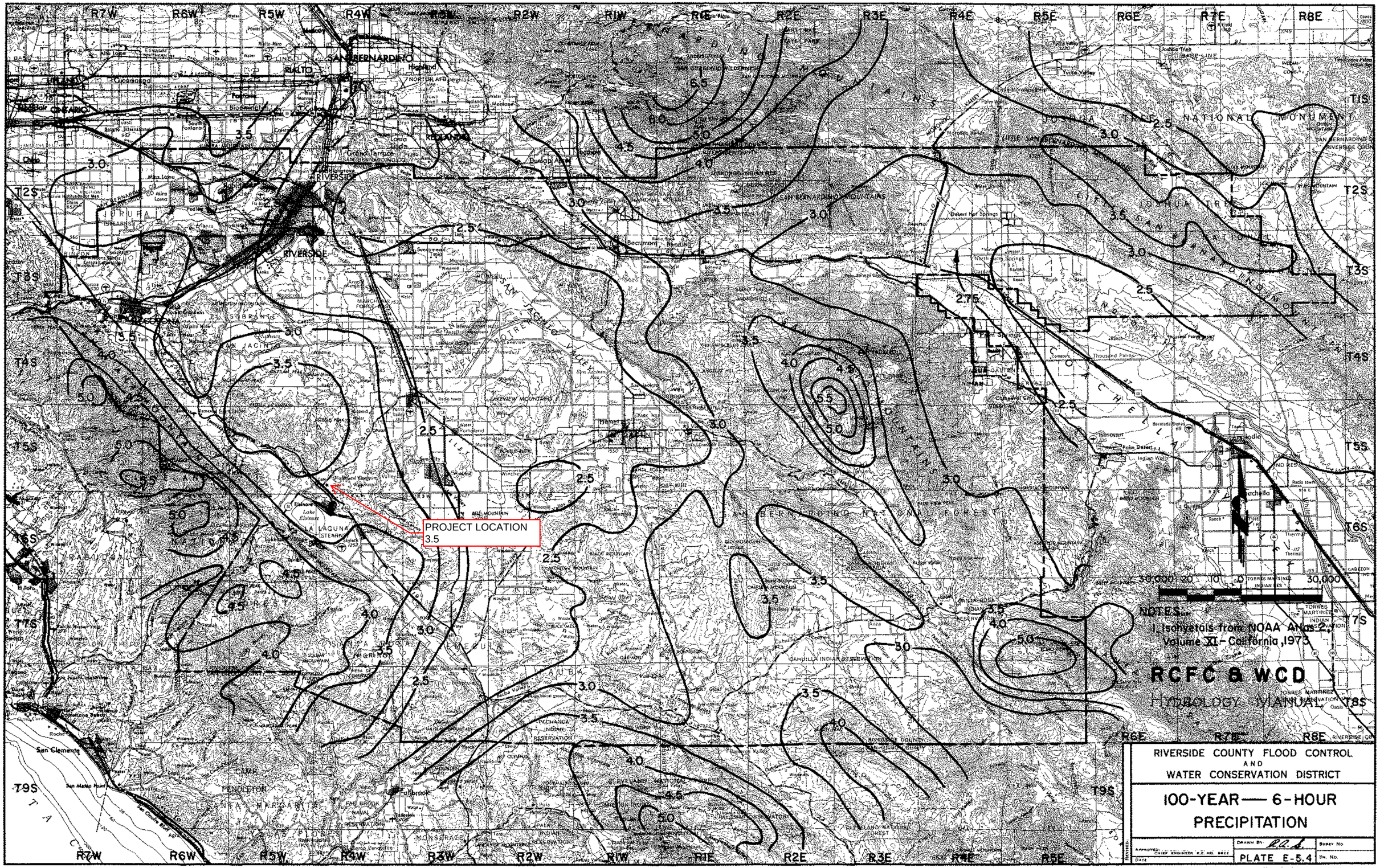
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HYDROLOGY MANUAL

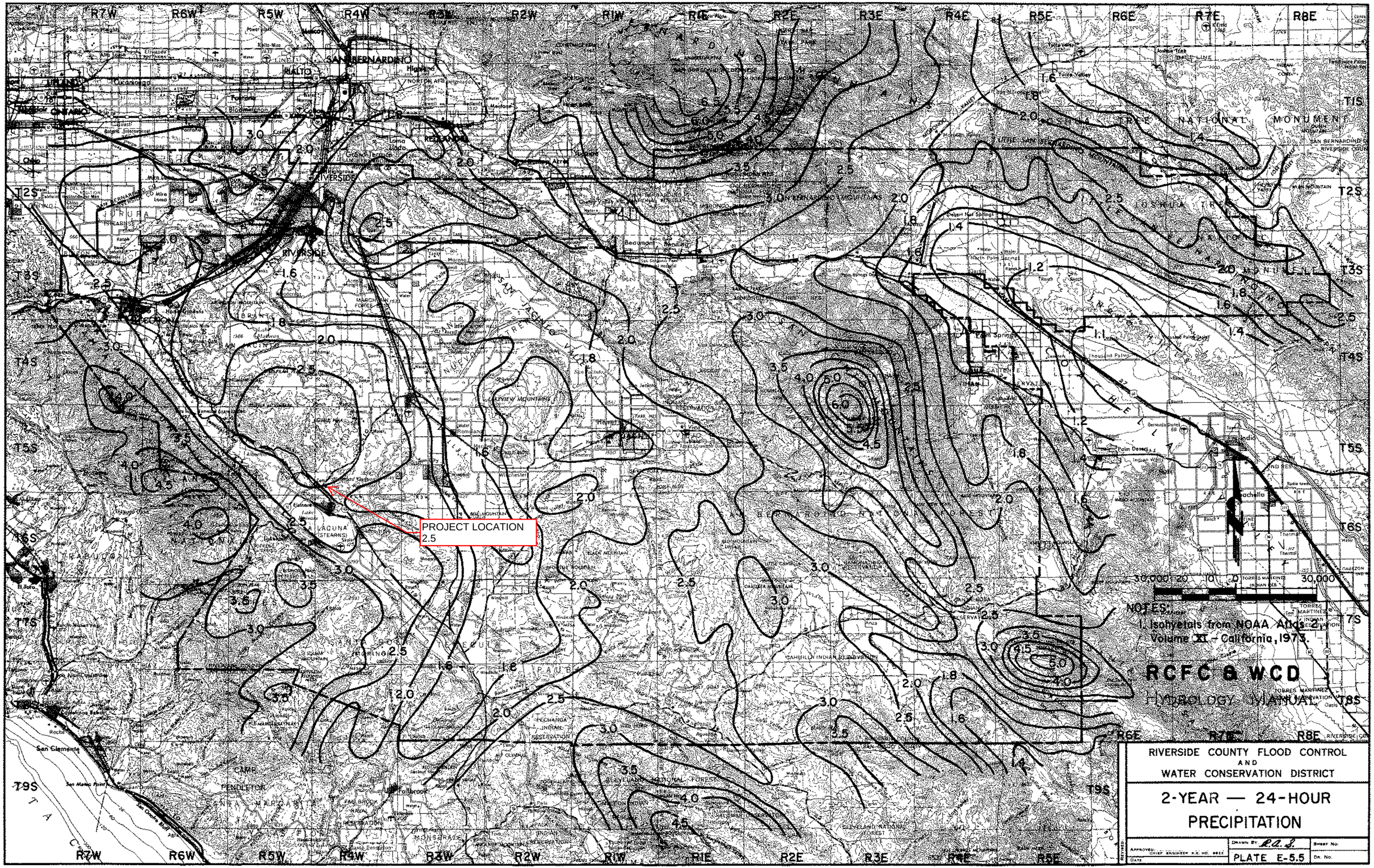
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

100-YEAR — 3-HOUR
PRECIPITATION

APPROVED: CHIEF ENGINEER R.E. NO. 6822
DATE
DRAWN BY: R.R.S.
PLATE E-5.2
SHEET NO.
DR. NO.
REVISED


PROJECT LOCATION
1.4
NOTES
1. Isohyetals from NOAA Atlas 2 Volume XI - California, 1973
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RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 6-HOUR PRECIPITATION
PLATE E-5.3
SHEET No.
DRAWN BY.
APPROVED: CHIEF ENGINEER R.E. NO. 6822
DATE
REVISED
DR. No.


PROJECT LOCATION
3.5
NOTES:
1. 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
PLATE E-5.4
SAN BERNARDINO
RIVERSIDE
RIALTO
COLTON
NORTON AFB
SAN JACINTO
LAKEVIEW MOUNTAINS
SAN JACINTO MOUNTAINS
SAN BERNARDINO MOUNTAINS
JOSHUA TREE NATIONAL MONUMENT
CLEVELAND NATIONAL FOREST
CAMP PENDLETON
SANTA MARGARITA
SAN LUIS REY
SAN DIEGUITO
SAN JACINTO RIVER
SANTA ANA RIVER
SANTA MARGARITA RIVER
SAN LUIS REY RIVER
SAN DIEGUITO RIVER
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S


PROJECT LOCATION
2.5
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
PLATE E-5.5

PROJECT LOCATION
6.00

NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 24-HOUR PRECIPITATION

APPROVED: CHIEF ENGINEER R.E. NO. 6822	DRAWN BY:	SHEET NO.
DATE:	PLATE E-5.6	DR. NO.

IMPERVIOUS AND RI CALCULATIONS

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principa ss)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

USED IN UNDEVELOPED LAND COVER

USED IN PROPOSED LANDSCAPE AREAS

RCFC & WCD
HYDROLOGY MANUAL

RUNOFF INDEX NUMBERS FOR PERVIOUS AREA

PLATE D-5.5 (1 of 2)

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
AGRICULTURAL COVERS (cont.) -					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Deciduous (Apples, apricots, pears, walnuts, etc.)		See Note 4			
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87
Vineyard		See Note 4			

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.

2. Quality of cover definitions:
   Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.
   Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.
   Good-Heavy or dense cover with more than 75 percent of the ground surface protected.

3. See Plate C-2 for a detailed description of cover types.

4. Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.

5. Reference Bibliography item 17.

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent(2)
Natural or Agriculture	0 - 10	0
Single Family Residen		
40,000 S. F. (1 Acr	10 - 25	20
20,000 S. F. (½ Acr	30 - 45	40
7,200 - 10,000 S. F. Lots	45 - 55	50
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 -100	90

USED IN UNDEVELOPED LAND AREAS

USED IN DRAINAGE AREA B

USED IN DRAINAGE AREA A & DRAINAGE AREA B

mate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.

2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area should always be made, and a review of aerial photos, where available may assist in estimating the percentage of impervious cover in developed areas.

3. For typical horse ranch subdivisions increase impervious area 5 percent over the values recommended in the table above.

RCFC & WCD
HYDROLOGY MANUAL

IMPERVIOUS COVER FOR DEVELOPED AREAS

PLATE D-5.6

EXISTING CONDITION
RI AND PERVIOUS CALCULATIONS

DRAINAGE ADREA A

RI UNDEVELOPED LAND = 78

AREA = 15.48 AC

UNDEVELOPED AREA = 15.48 ACRES (0% IMP)

DRAINAGE AREA B

RI UNDEVELOPED LAND = 78

AREA = 7.46 AC

UNDEVELOPED AREA = 7.46 ACRES (0% IMP)

DEVELOPED CONDITION
RI AND PERVIOUS CALCULATIONS

DRAINAGE AREA A

RI RESIDENTIAL LANDSCAPE = 56

AREA = 6.70 AC
RESIDENTIAL AREA = 6.70 ACRES (80% IMP)

DRAINAGE AREA B

RI RESIDENTIAL LANDSCAPE = 56

AREA = 6.87 AC
CONDOMINIUM AREA = 6.87 ACRES (65% IMP)

AREA = 3.06 AC
APARTMENT AREA = 3.06 ACRES (80% IMP)

AVERAGED IMPERVOUS RATIO = 0.30
RI = 56

DRAINAGE AREA C

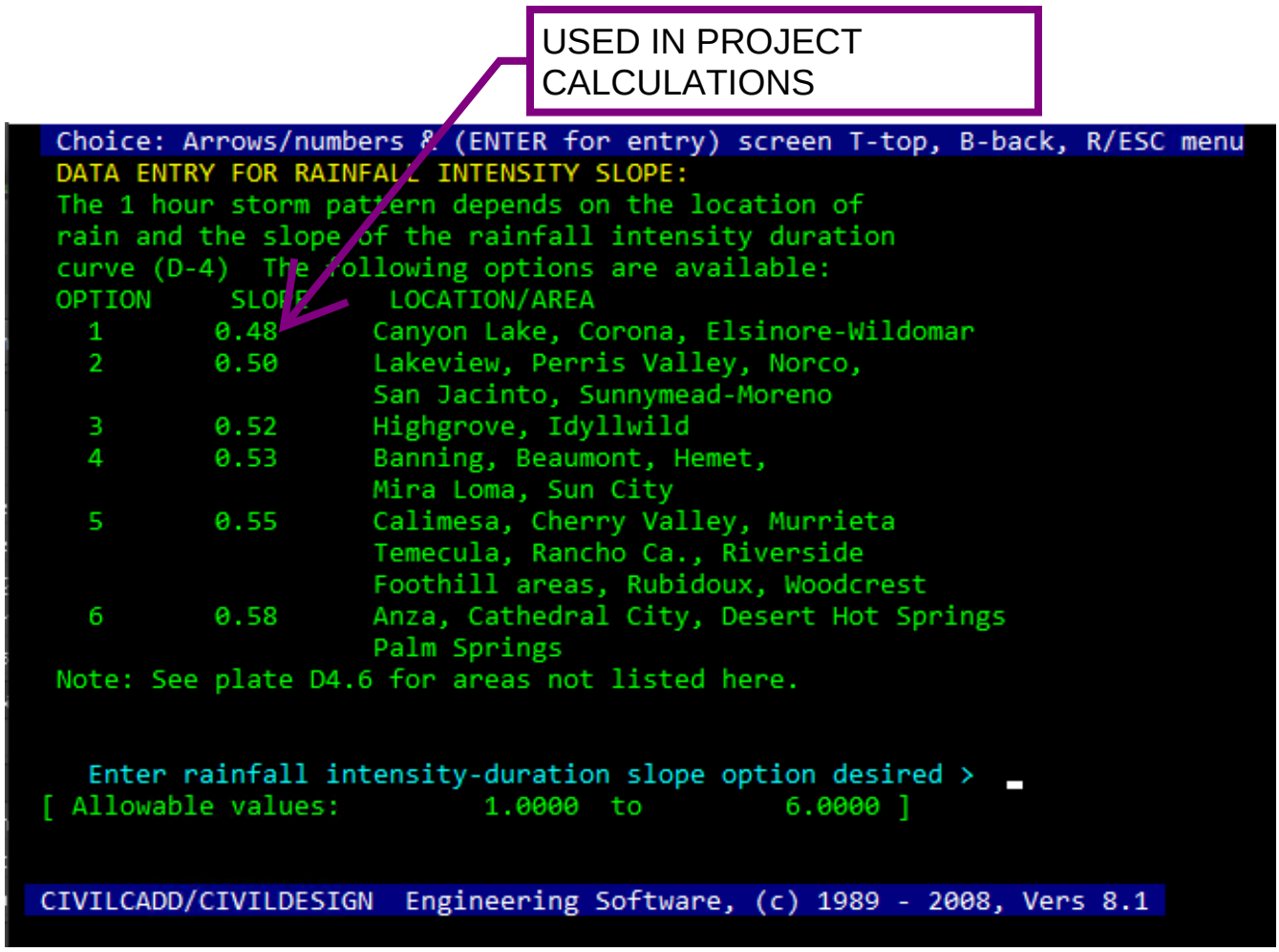
RI UNDEVELOPED LAND = 78
AREA = 0.50 ACRES
UNDEVELOPED AREA = 0.50 ACRES (0% IMP)

RI RESIDENTIAL LANDSCAPE = 56
AREA = 4.05 AC
CONDOMINIUM AREA = 4.05 ACRES (65% IMP)

RI RESIDENTIAL LANDSCAPE = 56
AREA = 2.56 AC
APARTMENT AREA = 2.56 ACRES (80% IMP)

IMPERVOUS RATIO = 0.66
AVERAGED RI = 57.5

RAINFALL INTENSITY
SLOPE SELECTION


USED IN PROJECT CALCULATIONS
Choice: Arrows/numbers & (ENTER for entry) screen T-top, B-back, R/ESC menu
DATA ENTRY FOR RAINFALL INTENSITY SLOPE:
The 1 hour storm pattern depends on the location of
rain and the slope of the rainfall intensity duration
curve (D-4) The following options are available:
OPTION SLOPE LOCATION/AREA
1 0.48 Canyon Lake, Corona, Elsinore-Wildomar
2 0.50 Lakeview, Perris Valley, Norco,
San Jacinto, Sunnymead-Moreno
3 0.52 Highgrove, Idyllwild
4 0.53 Banning, Beaumont, Hemet,
Mira Loma, Sun City
5 0.55 Calimesa, Cherry Valley, Murrieta
Temecula, Rancho Ca., Riverside
Foothill areas, Rubidoux, Woodcrest
6 0.58 Anza, Cathedral City, Desert Hot Springs
Palm Springs
Note: See plate D4.6 for areas not listed here.
Enter rainfall intensity-duration slope option desired >
[Allowable values: 1.0000 to 6.0000]
CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989 - 2008, Vers 8.1

FIRM MAP

NOTES TO USERS

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

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

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

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

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

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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

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

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

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1994 or later.

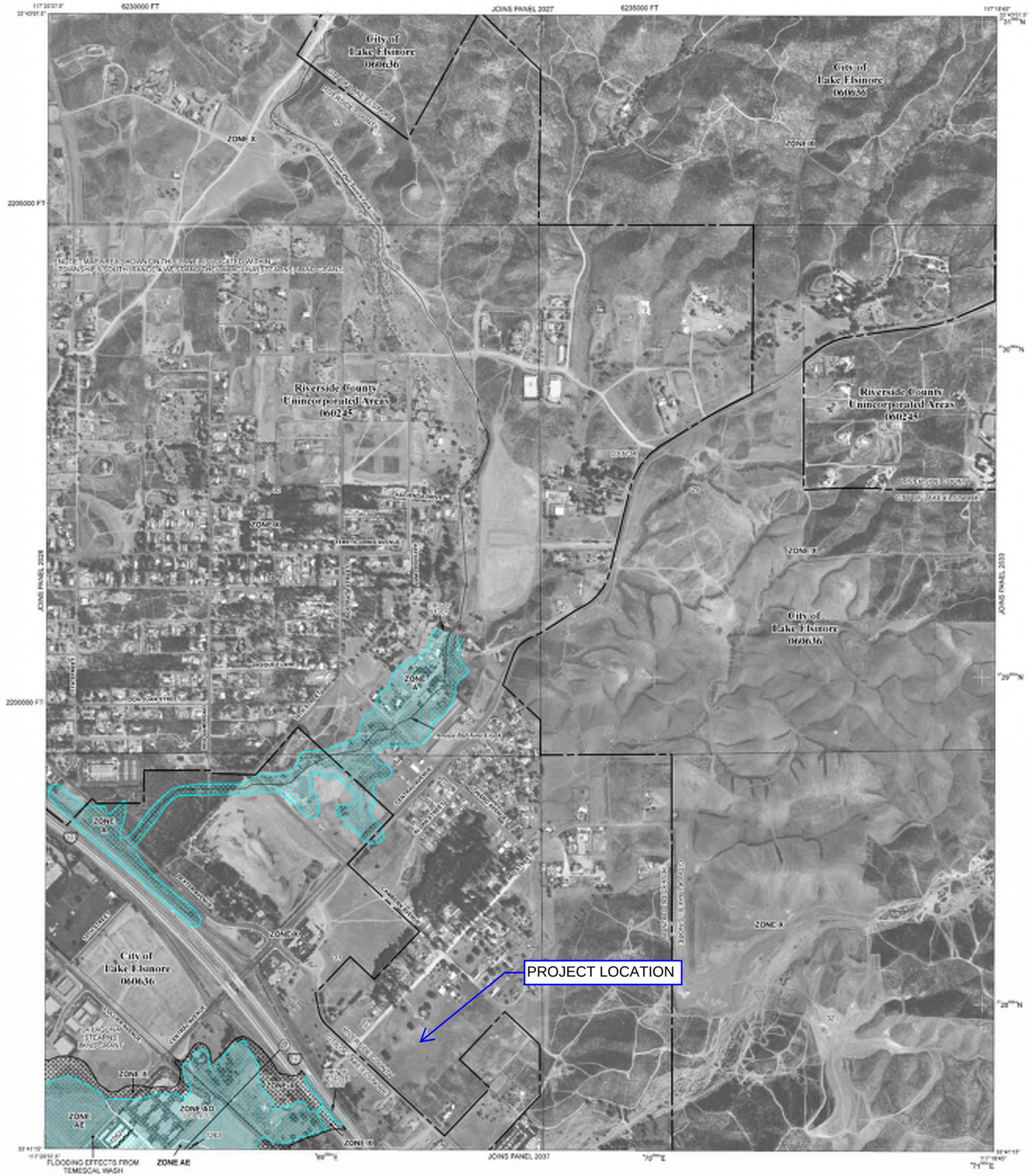
This map may reflect more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As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

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

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

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

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

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

- **ZONE A** — No Base Flood Elevations determined.
- **ZONE AE** — Base Flood Elevations determined.
- **ZONE AH** — Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** — Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** — Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** — Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** — Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

OTHER AREAS

- **ZONE X** — Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

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

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 3759000mN — 1000-meter Universal Transverse Mercator grid values, zone 11N
- 600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone VI (FIPSZONE 0406), Lambert Conformal Conic projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

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

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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

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

MAP SCALE 1" = 800'

200 0 400 800 1000 FEET
100 0 100 200 METERS

NFIP

PANEL 2029G

FIRM

FLOOD INSURANCE RATE MAP

RIVERSIDE COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 2029 OF 3805

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LAKE ELSINORE, CITY OF	060636	2029	G
RIVERSIDE COUNTY	060245	2029	G

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

MAP NUMBER
06065C2029G

EFFECTIVE DATE
AUGUST 28, 2008

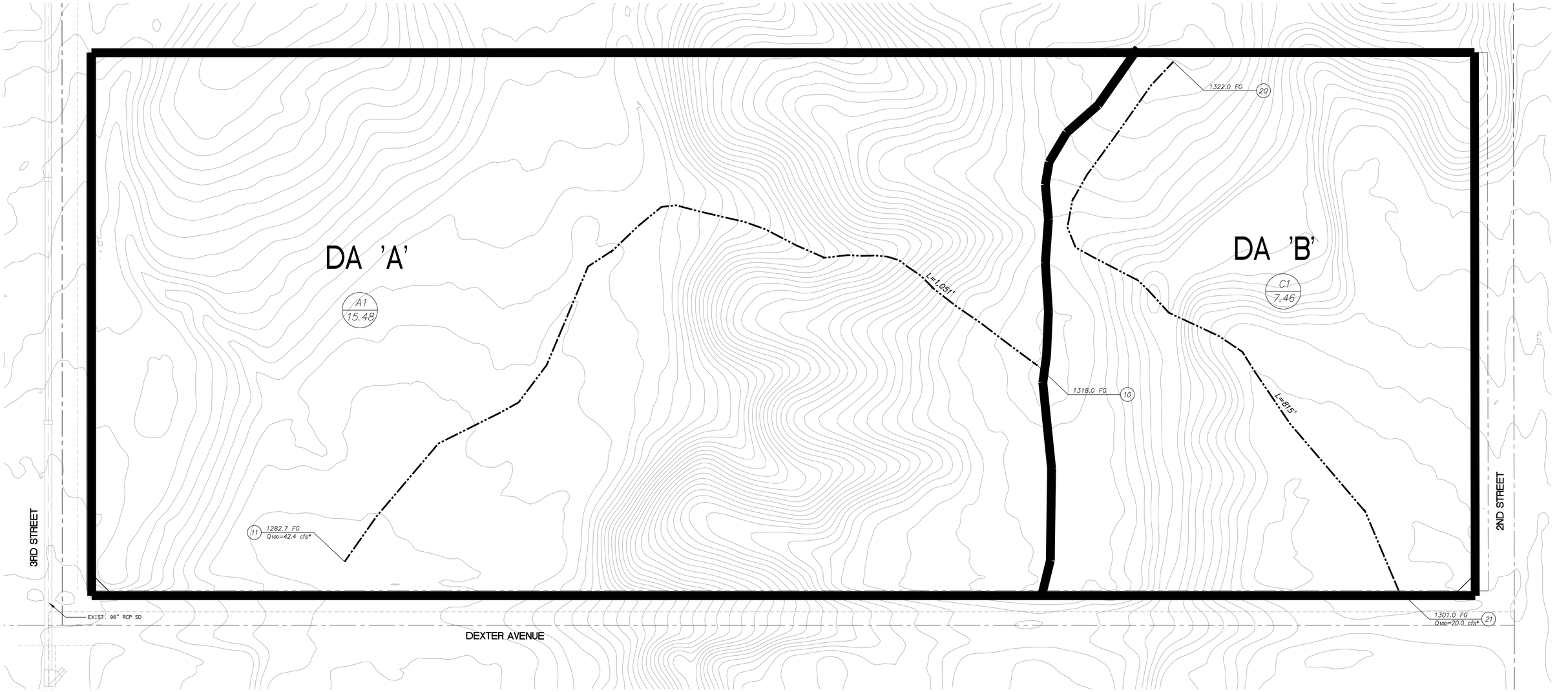
Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

APPENDIX B

HYDROLOGY MAP

EXISTING CONDITIONS



NOTES:
* BASED ON 100-YR 1-HR UNIT HYDROGRAPH CALCULATIONS.

TABLE I: SUMMARY FLOWS
EXISTING CONDITION

	2-YR				5-YR				10-YR				100-YR			
AREA ID	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	14.2	9.2	8.3	1.7	20.7	13.9	12.6	3.4	25.7	17.4	15.9	4.8	42.4	29.2	26.9	9.1
B	7.0	4.5	4.1	0.8	10.0	6.8	6.3	1.7	12.3	8.6	7.9	2.3	20.0	14.3	13.3	4.4
	21.2	13.7	12.4	2.5	30.7	20.7	18.9	5.1	38	26	23.8	7.1	62.4	43.5	40.2	13.5

TABLE II: SUMMARY FLOWS
DEVELOPED CONDITION - DETAINED FLOWS

	2-YR				5-YR				10-YR				100-YR			
AREA ID	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	1.5	9.8	3.4
B	0.4	0.4	0.4	1.4	0.4	1.1	5.1	2.7	0.4	4.5	8.4	3.5	8.5	13.2	13.3	6.2
C	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	4.6
TOTAL	0.9	0.9	0.9	1.9	0.9	1.6	5.6	3.2	0.9	5.0	8.9	4.2	9.0	14.7	23.1	14.2
% INCREASE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%

NOTES:
*PEAK FLOW RATE IS 0 CFS AS THE STORM RUNOFF IS 100% INFILTRATED.

LEGEND

- A / 0.9 — SUBAREA NO. / SUBAREA AREA - Acre
- 32 — NODE NO. & ELEVATION
- FLOW LINE
- DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- SUBAREA TRIBUTARY BOUNDARY
- DRAINAGE PATH

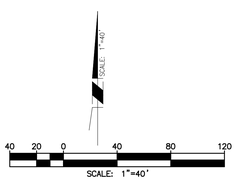
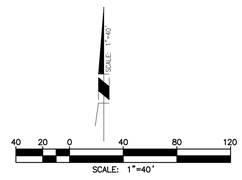


EXHIBIT A
DEXTER VILLAGE
EXISTING CONDITIONS

PROACTIVE ENGINEERING CONSULTANTS

2/24/2025

DEVELOPED CONDITIONS



LEGEND

DA A	DRAINAGE AREA ID
A / 0.9	SUBAREA NO. / SUBAREA AREA - Acre
(32)	NODE NO. & ELEVATION
MWS #1	MODULAR WETLAND UNIT SYSTEM NO.
	DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
	SUBAREA TRIBUTARY BOUNDARY
	DRAINAGE PATH

TABLE I: SUMMARY FLOWS
EXISTING CONDITION

AREA ID	2-YR				5-YR				10-YR				100-YR			
	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	14.2	9.2	8.3	1.7	20.7	13.9	12.6	3.4	25.7	17.4	15.9	4.8	42.4	29.2	26.9	9.1
B	7.0	4.5	4.1	0.8	10.0	6.8	6.3	1.7	12.3	8.6	7.9	2.3	20.0	14.3	13.3	4.4
	21.2	13.7	12.4	2.5	30.7	20.7	18.9	5.1	38	26	23.8	7.1	62.4	43.5	40.2	13.5

TABLE II: SUMMARY FLOWS
DEVELOPED CONDITION - DETAINED FLOWS

AREA ID	2-YR				5-YR				10-YR				100-YR			
	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR	1-HR	3-HR	6-HR	24-HR
A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.5	1.5	9.8	3.4
B	0.4	0.4	0.4	1.4	0.4	1.1	5.1	2.7	0.4	4.5	8.4	3.5	8.5	13.2	13.3	6.2
C	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	4.6
TOTAL	0.9	0.9	0.9	1.9	0.9	1.6	5.6	3.2	0.9	5.0	8.9	4.2	9.0	14.7	23.1	14.2
% INCREASE	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%

NOTES:
*PEAK FLOW RATE IS 0 CFS AS THE STORM RUNOFF IS 100% INFILTRATED.

TABLE III: SUMMARY FLOWS
DEVELOPED CONDITION - RATIONAL METHOD CALCULATIONS - OFFSITE STREETS

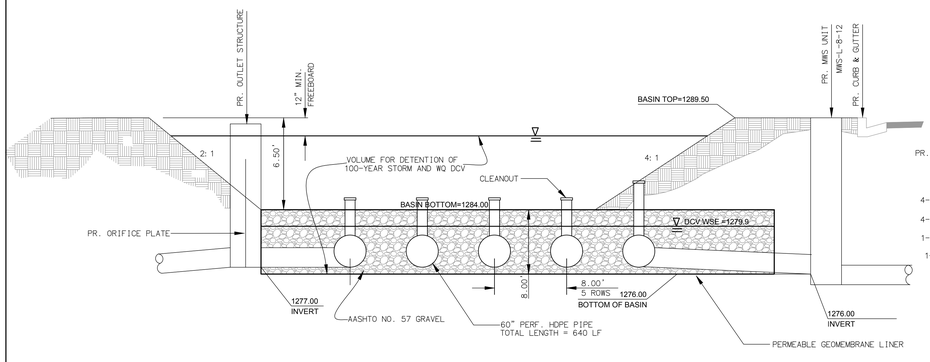
AREA ID	100-YR
D	8.1
E	11.5
F	2.5

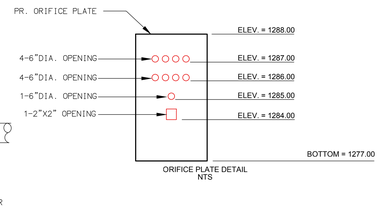
1327.0 FS (50)
E1 1.22
L=562'
1315.0 FS (51)
DA 'E'
L=578'
L=1,035'
EXISTING CATCH BASIN
PROP. PARKWAY CULVERT
1294.0 FS Q100=10.3 cfs (52)
E2 4.51
QIN=320.3 CFS (OFFSITE FLOWS)
1294.0 FS (10)
PROP. CONCRETE GUTTER
E3 0.58
DA 'A'
A 6.70
L=1,308'
1286.5 FS Q100=11.5 cfs (53)
1279.0 FS Q100=0.0 cfs* (11)
MWS #3
MWS #4
DETENTION BASIN NO. 1
PROP. MWS UNIT
MWS #1
1285.0 FS Q100=0.0 cfs* (21)
DETENTION BASIN NO. 2
MWS #2
PROP. MWS UNIT
L=1,079'
DA 'B'
B1 6.87
B2 3.06
OFFSITE INLET LOCATION
HEADWALL INLET - RCFCWCD STD.
1315.4 FS (20)
1322.5 FS (30)
C1 0.50
1334.0 FS (40)
DA 'D'
D1 2.16
L=568'
1308.0 FS (41)
C2 4.05
DA 'C'
L=721'
1293.0 FS Q100=0.0 (31)
INFILTRATION DETENTION BASIN NO. 1
C3 2.56
BASIN OUTFALL FOR 100-YR 24-HR STORMS
2ND STREET
D2 1.05
L=976'
PROP. ARIZONA CROSSING
MWS #4
L=685'
PROP. PARKWAY CULVERT
1284.0 FS Q100=2.5 cfs (61)
PROP. SD
DEXTER AVENUE
DA 'F'
F1 0.78
1313.0 FS (60)
1299.0 FS Q100=8.1 cfs (42)

EXHIBIT B
DEXTER VILLAGE
DEVELOPED CONDITIONS

PROACTIVE ENGINEERING CONSULTANTS

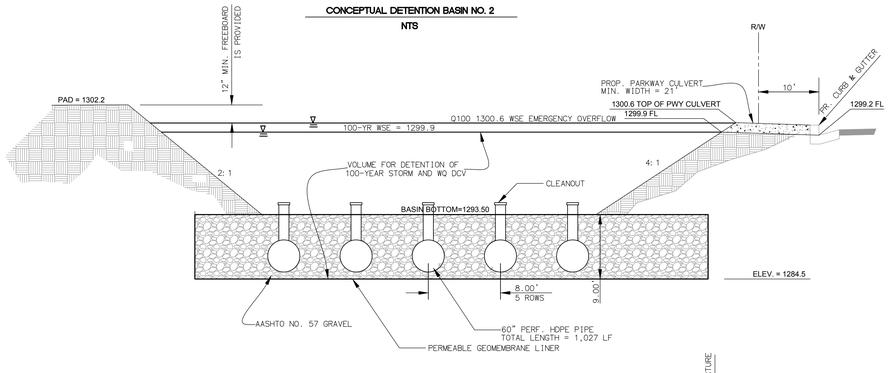
9/12/2025



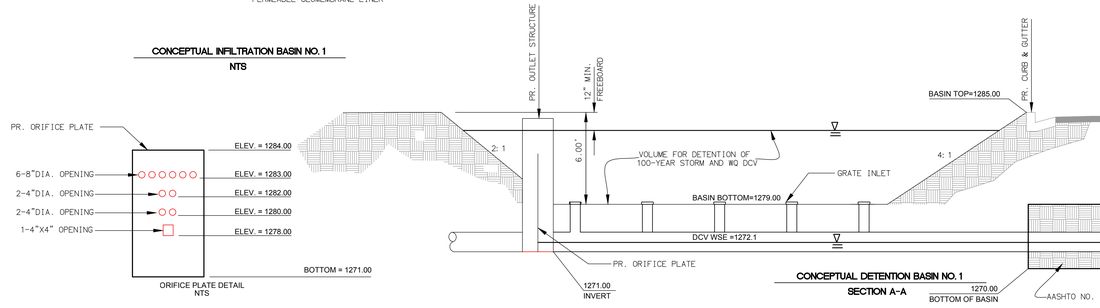


ORIFICE PLATE DETAIL
NTS

CONCEPTUAL DETENTION BASIN NO. 2
NTS



CONCEPTUAL INFILTRATION BASIN NO. 1
NTS

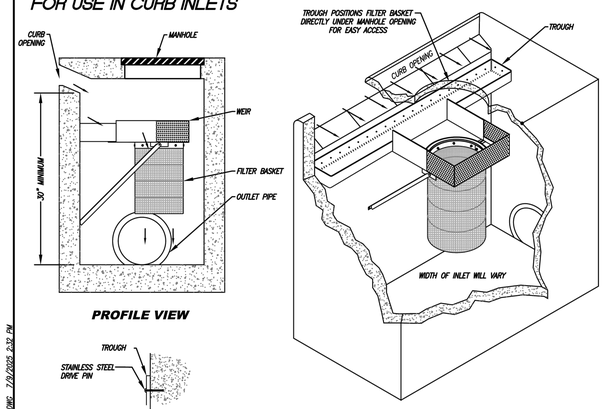


ORIFICE PLATE DETAIL
NTS

CONCEPTUAL DETENTION BASIN NO. 1
SECTION A-A

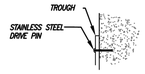
BIO CLEAN FABRIC FILTER

FOR USE IN CURB INLETS



PROFILE VIEW

CONFIGURATION DETAIL



MOUNTING DETAIL

INSTALLATION NOTES

1. TROUGH SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO FILTER.
2. TROUGH SYSTEM TO BE MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. ALL HARDWARE, FLANGE, FRAME, SHALL BE STAINLESS STEEL.
4. OPTIONAL HYDROCARBON BOOM SHALL BE 2" DIAMETER.
5. FILTER IS LOCATED DIRECTLY UNDER THE MANHOLE FOR EASY REMOVAL AND MAINTENANCE.
6. LENGTH OF TROUGH CAN VARY FROM 2' TO 30'
7. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE – CONTACT CONTECH FOR MORE INFORMATION.
8. BYPASS IS FACILITATED VIA OVERFLOW OF THE TROUGH SYSTEM AND IS EQUAL TO THE CAPACITY OF THE CURB OPENING.
9. ADDITIONAL TREATMENT AND STORAGE CAPACITY CAN BE ACHIEVED BY UTILIZING MULTIPLE FILTER BASKETS.
10. STORAGE CAPACITY BASED ON BASKET HALF FULL.
11. CONCRETE STRUCTURES SOLD SEPARATELY.

NOT TO SCALE

PERFORMANCE NOTES

1. GREATER THAN 80% TOTAL SUSPENDED SOLIDS (TSS) REMOVAL BASED ON THIRD PARTY INDEPENDENTLY OBSERVED FULL-SCALE TESTING.
2. LISTED TREATMENT FLOW RATE BASED UPON OBSERVED FULL SCALE HYDRAULIC FLOW TESTING AND UTILIZING A SAFETY FACTOR OF 2.
3. DOES NOT MEET CALIFORNIA FULL CAPTURE REQUIREMENTS.

MODEL #	TREATMENT FLOW RATE (CFS)	SOLIDS STORAGE CAPACITY (CF)
BIO-CURB-FABRIC-12	1.29	0.7
BIO-CURB-FABRIC-24	2.26	1.4

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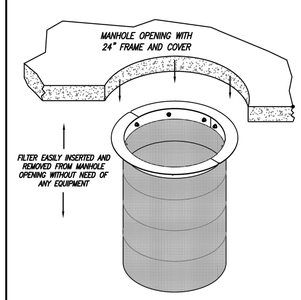
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

CURB INLET FILTER
FABRIC
STANDARD DETAIL

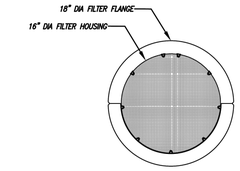
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BIO CLEAN FABRIC FILTER

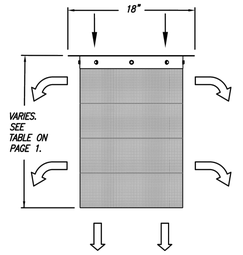
FOR USE IN CURB INLETS



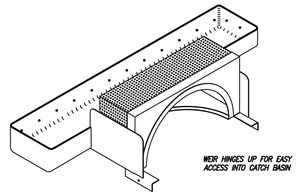
INSTALLATION DETAIL



DETAIL OF DIAMETERS



FLOW PATH



WEIR DETAIL

FLOW RATES – 24" TALL FABRIC FILTER	
FILTER TREATMENT FLOW RATE	2.26 CFS
FILTER SURFACE AREA = 9.77 SQ FT PER 24" TALL X 16"ø BASKET, SAFETY FACTOR = 2	
LOADING RATE APPLIED = 207.29 GPM/SQ FT	
FILTER TREATMENT FLOW RATE = 9.77 X 207.29 / 2 = 1,012.61 GPM = 2.26 CFS	
*FILTER FLOW RATE CALCULATED BASED UPON INDEPENDENT PERFORMANCE TESTING USING A LOADING RATE OF 207.29 GPM/SQ FT FILTER SURFACE AREA.	
SEE PAGE 1 FOR NOTES	

NOT TO SCALE

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CURB INLET FILTER
FABRIC
STANDARD DETAIL

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PRELIMINARY FILTER INSERTS FOR INLETS ALONG 3RD STREEET AND DEXTER
NTS

EXHIBIT B
THE COVE
DEVELOPED CONDITIONS

PROACTIVE ENGINEERING CONSULTANTS

9/12/2025

APPENDIX C

RATIONAL METHOD CALCULATIONS

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 02/21/25 File:COVEAREAD.out

DA D
STREET HYDROLOGY
100-YR STORM

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

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

Program License Serial Number 6094

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 40.000 to Point/Station 41.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 588.000(Ft.)
Top (of initial area) elevation = 1334.000(Ft.)
Bottom (of initial area) elevation = 1308.000(Ft.)
Difference in elevation = 26.000(Ft.)
Slope = 0.04422 s(percent)= 4.42
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.674 min.
Rainfall intensity = 3.164(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.804
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 2)  =  78.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      5.548(CFS)
Total initial stream area =        2.180(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       41.000 to Point/Station       42.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1308.000(Ft.)
End of street segment elevation =  1299.000(Ft.)
Length of street segment  =   685.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  22.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
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 =      6.884(CFS)
Depth of flow =   0.413(Ft.), Average velocity =   3.170(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  14.300(Ft.)
Flow velocity =   3.17(Ft/s)
Travel time =    3.60 min.     TC =   16.28  min.
 Adding area flow to street
COMMERCIAL subarea type
Runoff Coefficient = 0.876
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 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Rainfall intensity =      2.806(In/Hr) for a   100.0 year storm
Subarea runoff =      2.579(CFS) for      1.050(Ac.)
Total runoff =      8.127(CFS)    Total area =       3.230(Ac.)
Street flow at end of street =      8.127(CFS)
Half street flow at end of street =      8.127(CFS)
Depth of flow =   0.432(Ft.), Average velocity =   3.299(Ft/s)
Flow width (from curb towards crown)=  15.286(Ft.)
End of computations, total study area =            3.23 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.707
Area averaged RI index number =  70.8
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 10/17/25 File:DEXAREAE.out

DA E
DEVELOPED CONDITION
100-YR STORM

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

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

Program License Serial Number 6094

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++

Process from Point/Station 50.000 to Point/Station 51.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 562.000(Ft.)
Top (of initial area) elevation = 1327.000(Ft.)
Bottom (of initial area) elevation = 1315.000(Ft.)
Difference in elevation = 12.000(Ft.)
Slope = 0.02135 s(percent)= 2.14
TC = k(0.480)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.039 min.
Rainfall intensity = 3.121(In/Hr) for a 100.0 year storm
SINGLE FAMILY (1 Acre Lot)
Runoff Coefficient = 0.719
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 2)  =  56.00
Pervious area fraction =  0.800; Impervious fraction =  0.200
Initial subarea runoff =      2.738(CFS)
Total initial stream area =        1.220(Ac.)
Pervious area fraction = 0.800


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       51.000 to Point/Station       52.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****
________________________________________________________________________
Estimated mean flow rate at midpoint of channel =      6.583(CFS)
Depth of flow =   0.179(Ft.), Average velocity =   2.063(Ft/s)
      ******* Irregular Channel Data ***********
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
      1              0.00              1.00
      2            100.00              0.00
      3            200.00              1.00
Manning's 'N' friction factor =   0.020
------------------------------------------------------------------
Sub-Channel flow  =      6.583(CFS)
  '     '    flow top width =     35.722(Ft.)
  '     '     velocity=    2.064(Ft/s)
  '     '    area =      3.190(Sq.Ft)
  '     '    Froude number =     1.217

Upstream point elevation =  1315.000(Ft.)
Downstream point elevation =  1295.000(Ft.)
Flow length =  1035.000(Ft.)
Travel time  =    8.36 min.
Time of concentration =   21.40 min.
Depth of flow =   0.179(Ft.)
Average velocity =   2.063(Ft/s)
Total irregular channel flow =     6.583(CFS)
Irregular channel normal depth above invert elev. =   0.179(Ft.)
Average velocity of channel(s) =   2.063(Ft/s)
 Adding area flow to channel
SINGLE FAMILY (1 Acre Lot)
Runoff Coefficient = 0.685
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 2)  =  56.00
Pervious area fraction =  0.800; Impervious fraction =  0.200
Rainfall intensity =      2.460(In/Hr) for a   100.0 year storm
Subarea runoff =      7.601(CFS) for      4.510(Ac.)
Total runoff =     10.339(CFS)    Total area =       5.730(Ac.)
Depth of flow =   0.212(Ft.), Average velocity =   2.310(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       52.000 to Point/Station       53.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1295.000(Ft.)
End of street segment elevation =  1286.500(Ft.)
```

```
Length of street segment  =   578.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  24.000(Ft.)
Distance from crown to crossfall grade break  =  22.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     10.895(CFS)
Depth of flow =   0.463(Ft.), Average velocity =   3.697(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  16.795(Ft.)
Flow velocity =   3.70(Ft/s)
Travel time =    2.61 min.     TC =   24.00  min.
 Adding area flow to street
COMMERCIAL subarea type
Runoff Coefficient = 0.872
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 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Rainfall intensity =      2.328(In/Hr) for a   100.0 year storm
Subarea runoff =      1.178(CFS) for      0.580(Ac.)
Total runoff =     11.517(CFS)    Total area =       6.310(Ac.)
Street flow at end of street =     11.517(CFS)
Half street flow at end of street =     11.517(CFS)
Depth of flow =   0.470(Ft.), Average velocity =   3.747(Ft/s)
Flow width (from curb towards crown)=  17.167(Ft.)
End of computations, total study area =            6.31 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.736
Area averaged RI index number =  56.0
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2005 Version 7.1
Rational Hydrology Study Date: 02/21/25 File:COVAREAF.out

DA F
STREET HYDROLOGY
100-YR STORM

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

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

Program License Serial Number 6094

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++

Process from Point/Station 60.000 to Point/Station 61.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 976.000(Ft.)
Top (of initial area) elevation = 1313.000(Ft.)
Bottom (of initial area) elevation = 1284.000(Ft.)
Difference in elevation = 29.000(Ft.)
Slope = 0.02971 s(percent)= 2.97
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.513 min.
Rainfall intensity = 3.631(In/Hr) for a 100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.880
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 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.492(CFS)
Total initial stream area =        0.780(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =            0.78 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  56.0
```

UNIT HYDROGRAPH CALCULATIONS

EXISTING CONDITIONS

2-YEAR STORM

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 - 2008, Version 8.1
Study date 08/15/22 File: THECOVE12.out

++

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
1-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	0.57	8.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.45	22.45

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.570(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.570(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	4.40	0.301	0.268	(0.271)	0.033
2	0.17	4.50	0.308	0.268	(0.277)	0.040
3	0.25	5.40	0.369	0.268	(0.332)	0.102
4	0.33	5.40	0.369	0.268	(0.332)	0.102
5	0.42	5.70	0.390	0.268	(0.351)	0.122
6	0.50	6.40	0.438	0.268	(0.394)	0.170
7	0.58	7.90	0.540	0.268	(0.486)	0.273
8	0.67	9.10	0.622	0.268	(0.560)	0.355
9	0.75	12.80	0.875	0.268	(0.788)	0.608
10	0.83	25.60	1.751	0.268	(1.576)	1.483

```
 11   0.92     7.90      0.540          0.268    (  0.486)        0.273
 12   1.00     4.90      0.335          0.268    (  0.302)        0.068
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     3.6
    Flood volume = Effective rainfall      0.30(In)
     times area      15.5(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
    Total soil loss =      0.27(In)
    Total soil loss =     0.345(Ac.Ft)
    Total rainfall =      0.57(In)
    Flood volume =       16988.1 Cubic Feet
    Total soil loss =       15037.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     14.120(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0010      0.14  Q         |          |          |          |
   0+10       0.0038      0.42  Q         |          |          |          |
   0+15       0.0093      0.79  VQ        |          |          |          |
   0+20       0.0183      1.30  |VQ       |          |          |          |
   0+25       0.0289      1.54  | VQ      |          |          |          |
   0+30       0.0424      1.96  |  QV     |          |          |          |
   0+35       0.0618      2.83  |    QV   |          |          |          |
   0+40       0.0899      4.08  |       QV|          |          |          |
   0+45       0.1314      6.02  |         | QV       |          |          |
   0+50       0.2131     11.86  |         |          |V Q       |          |
   0+55       0.3104     14.12  |         |          |       Q  |V         |
   1+ 0       0.3528      6.17  |         | Q        |          |     V    |
   1+ 5       0.3725      2.86  |    Q    |          |          |       V  |
   1+10       0.3819      1.36  | Q       |          |          |        V |
   1+15       0.3869      0.72  |Q        |          |          |        V |
   1+20       0.3894      0.37  Q         |          |          |        V |
   1+25       0.3899      0.07  Q         |          |          |        V |
   1+30       0.3900      0.01  Q         |          |          |         V
-----------------------------------------------------------------------------
```

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

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Study date 08/15/22 File: THECOVE32.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
3-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.00	15.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	2.50	38.70

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.000(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum =	100.000 Sum=	15.601

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	1.30	0.156	(0.268)	0.140	0.016
2	0.17	1.30	0.156	(0.268)	0.140	0.016
3	0.25	1.10	0.132	(0.268)	0.119	0.013
4	0.33	1.50	0.180	(0.268)	0.162	0.018
5	0.42	1.50	0.180	(0.268)	0.162	0.018
6	0.50	1.80	0.216	(0.268)	0.194	0.022
7	0.58	1.50	0.180	(0.268)	0.162	0.018
8	0.67	1.80	0.216	(0.268)	0.194	0.022
9	0.75	1.80	0.216	(0.268)	0.194	0.022
10	0.83	1.50	0.180	(0.268)	0.162	0.018
11	0.92	1.60	0.192	(0.268)	0.173	0.019
12	1.00	1.80	0.216	(0.268)	0.194	0.022

13	1.08	2.20	0.264	(	0.268)	0.238	0.026
14	1.17	2.20	0.264	(	0.268)	0.238	0.026
15	1.25	2.20	0.264	(	0.268)	0.238	0.026
16	1.33	2.00	0.240	(	0.268)	0.216	0.024
17	1.42	2.60	0.312		0.268	(0.281)	0.044
18	1.50	2.70	0.324		0.268	(0.292)	0.056
19	1.58	2.40	0.288	(	0.268)	0.259	0.029
20	1.67	2.70	0.324		0.268	(0.292)	0.056
21	1.75	3.30	0.396		0.268	(0.356)	0.128
22	1.83	3.10	0.372		0.268	(0.335)	0.104
23	1.92	2.90	0.348		0.268	(0.313)	0.080
24	2.00	3.00	0.360		0.268	(0.324)	0.092
25	2.08	3.10	0.372		0.268	(0.335)	0.104
26	2.17	4.20	0.504		0.268	(0.454)	0.236
27	2.25	5.00	0.600		0.268	(0.540)	0.332
28	2.33	3.50	0.420		0.268	(0.378)	0.152
29	2.42	6.80	0.816		0.268	(0.734)	0.548
30	2.50	7.30	0.876		0.268	(0.788)	0.608
31	2.58	8.20	0.984		0.268	(0.886)	0.716
32	2.67	5.90	0.708		0.268	(0.637)	0.440
33	2.75	2.00	0.240	(	0.268)	0.216	0.024
34	2.83	1.80	0.216	(	0.268)	0.194	0.022
35	2.92	1.80	0.216	(	0.268)	0.194	0.022
36	3.00	0.60	0.072	(	0.268)	0.065	0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.1

Flood volume = Effective rainfall 0.34(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.66(In)
Total soil loss = 0.846(Ac.Ft)
Total rainfall = 1.00(In)
Flood volume = 19338.8 Cubic Feet
Total soil loss = 36849.8 Cubic Feet

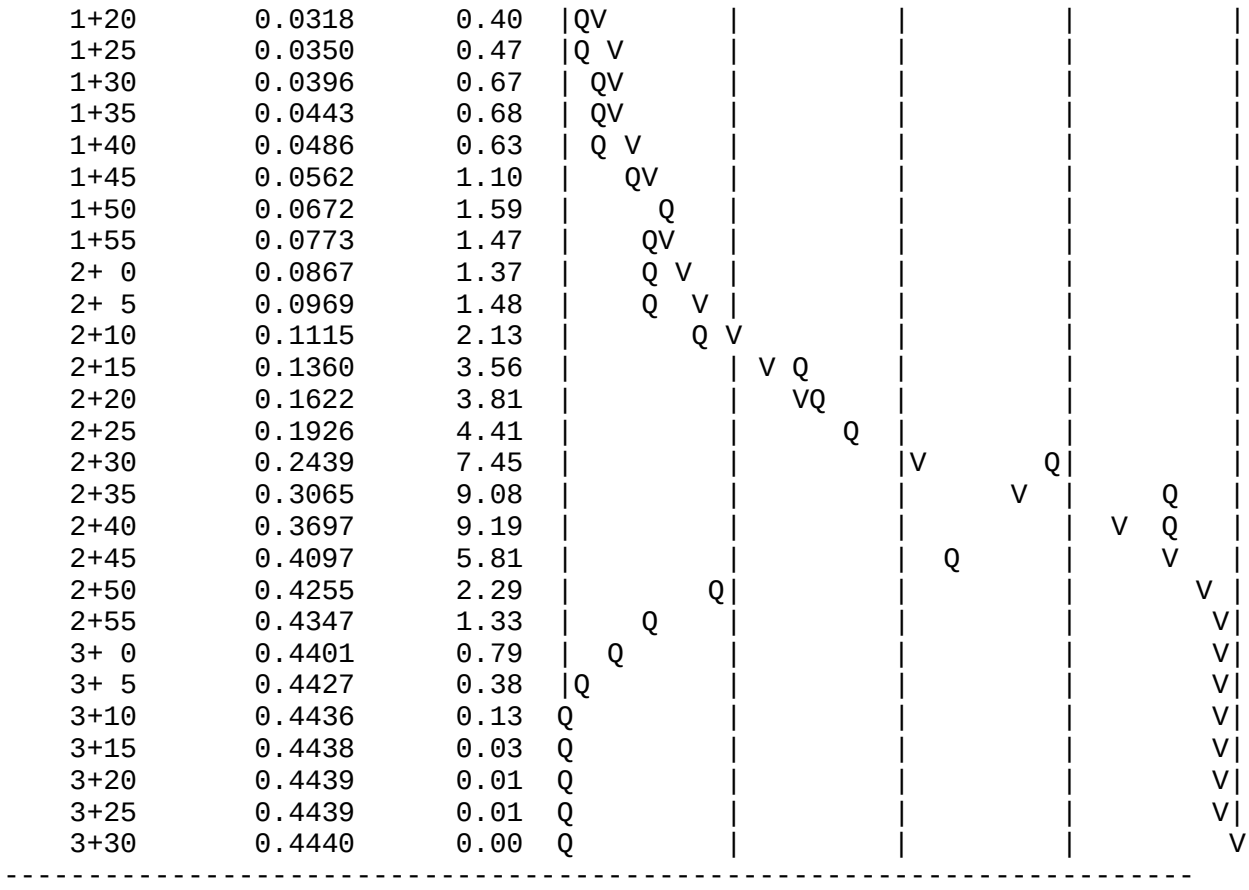
Peak flow rate of this hydrograph = 9.189(CFS)

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3 - 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	0.0004	0.06	Q				
0+10	0.0017	0.18	Q				
0+15	0.0031	0.20	Q				
0+20	0.0046	0.22	Q				
0+25	0.0064	0.26	VQ				
0+30	0.0084	0.29	VQ				
0+35	0.0105	0.30	VQ				
0+40	0.0126	0.30	|Q				
0+45	0.0148	0.33	|Q				
0+50	0.0170	0.32	|Q				
0+55	0.0190	0.30	|Q				
1+ 0	0.0212	0.31	|Q				
1+ 5	0.0236	0.35	|QV				
1+10	0.0263	0.39	|QV				
1+15	0.0290	0.40	|QV				


1+20 0.0318 0.40
1+25 0.0350 0.47
1+30 0.0396 0.67
1+35 0.0443 0.68
1+40 0.0486 0.63
1+45 0.0562 1.10
1+50 0.0672 1.59
1+55 0.0773 1.47
2+ 0 0.0867 1.37
2+ 5 0.0969 1.48
2+10 0.1115 2.13
2+15 0.1360 3.56
2+20 0.1622 3.81
2+25 0.1926 4.41
2+30 0.2439 7.45
2+35 0.3065 9.08
2+40 0.3697 9.19
2+45 0.4097 5.81
2+50 0.4255 2.29
2+55 0.4347 1.33
3+ 0 0.4401 0.79
3+ 5 0.4427 0.38
3+10 0.4436 0.13
3+15 0.4438 0.03
3+20 0.4439 0.01
3+25 0.4439 0.01
3+30 0.4440 0.00

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 08/15/22 File: THECOVE62.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
6-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.40	21.67

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	3.50	54.18

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.400(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
			Sum = 100.000	Sum= 15.601

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	0.50	0.084	(0.268)		0.076	0.008
2	0.17	0.60	0.101	(0.268)		0.091	0.010
3	0.25	0.60	0.101	(0.268)		0.091	0.010
4	0.33	0.60	0.101	(0.268)		0.091	0.010
5	0.42	0.60	0.101	(0.268)		0.091	0.010
6	0.50	0.70	0.118	(0.268)		0.106	0.012
7	0.58	0.70	0.118	(0.268)		0.106	0.012
8	0.67	0.70	0.118	(0.268)		0.106	0.012
9	0.75	0.70	0.118	(0.268)		0.106	0.012
10	0.83	0.70	0.118	(0.268)		0.106	0.012
11	0.92	0.70	0.118	(0.268)		0.106	0.012
12	1.00	0.80	0.134	(0.268)		0.121	0.013

13	1.08	0.80	0.134	(0.268)	0.121	0.013
14	1.17	0.80	0.134	(0.268)	0.121	0.013
15	1.25	0.80	0.134	(0.268)	0.121	0.013
16	1.33	0.80	0.134	(0.268)	0.121	0.013
17	1.42	0.80	0.134	(0.268)	0.121	0.013
18	1.50	0.80	0.134	(0.268)	0.121	0.013
19	1.58	0.80	0.134	(0.268)	0.121	0.013
20	1.67	0.80	0.134	(0.268)	0.121	0.013
21	1.75	0.80	0.134	(0.268)	0.121	0.013
22	1.83	0.80	0.134	(0.268)	0.121	0.013
23	1.92	0.80	0.134	(0.268)	0.121	0.013
24	2.00	0.90	0.151	(0.268)	0.136	0.015
25	2.08	0.80	0.134	(0.268)	0.121	0.013
26	2.17	0.90	0.151	(0.268)	0.136	0.015
27	2.25	0.90	0.151	(0.268)	0.136	0.015
28	2.33	0.90	0.151	(0.268)	0.136	0.015
29	2.42	0.90	0.151	(0.268)	0.136	0.015
30	2.50	0.90	0.151	(0.268)	0.136	0.015
31	2.58	0.90	0.151	(0.268)	0.136	0.015
32	2.67	0.90	0.151	(0.268)	0.136	0.015
33	2.75	1.00	0.168	(0.268)	0.151	0.017
34	2.83	1.00	0.168	(0.268)	0.151	0.017
35	2.92	1.00	0.168	(0.268)	0.151	0.017
36	3.00	1.00	0.168	(0.268)	0.151	0.017
37	3.08	1.00	0.168	(0.268)	0.151	0.017
38	3.17	1.10	0.185	(0.268)	0.166	0.018
39	3.25	1.10	0.185	(0.268)	0.166	0.018
40	3.33	1.10	0.185	(0.268)	0.166	0.018
41	3.42	1.20	0.202	(0.268)	0.181	0.020
42	3.50	1.30	0.218	(0.268)	0.197	0.022
43	3.58	1.40	0.235	(0.268)	0.212	0.024
44	3.67	1.40	0.235	(0.268)	0.212	0.024
45	3.75	1.50	0.252	(0.268)	0.227	0.025
46	3.83	1.50	0.252	(0.268)	0.227	0.025
47	3.92	1.60	0.269	(0.268)	0.242	0.027
48	4.00	1.60	0.269	(0.268)	0.242	0.027
49	4.08	1.70	0.286	(0.268)	0.257	0.029
50	4.17	1.80	0.302	0.268	(0.272)	0.035
51	4.25	1.90	0.319	0.268	(0.287)	0.052
52	4.33	2.00	0.336	0.268	(0.302)	0.068
53	4.42	2.10	0.353	0.268	(0.318)	0.085
54	4.50	2.10	0.353	0.268	(0.318)	0.085
55	4.58	2.20	0.370	0.268	(0.333)	0.102
56	4.67	2.30	0.386	0.268	(0.348)	0.119
57	4.75	2.40	0.403	0.268	(0.363)	0.136
58	4.83	2.40	0.403	0.268	(0.363)	0.136
59	4.92	2.50	0.420	0.268	(0.378)	0.152
60	5.00	2.60	0.437	0.268	(0.393)	0.169
61	5.08	3.10	0.521	0.268	(0.469)	0.253
62	5.17	3.60	0.605	0.268	(0.544)	0.337
63	5.25	3.90	0.655	0.268	(0.590)	0.388
64	5.33	4.20	0.706	0.268	(0.635)	0.438
65	5.42	4.70	0.790	0.268	(0.711)	0.522
66	5.50	5.60	0.941	0.268	(0.847)	0.673
67	5.58	1.90	0.319	0.268	(0.287)	0.052
68	5.67	0.90	0.151	(0.268)	0.136	0.015
69	5.75	0.60	0.101	(0.268)	0.091	0.010
70	5.83	0.50	0.084	(0.268)	0.076	0.008
71	5.92	0.30	0.050	(0.268)	0.045	0.005
72	6.00	0.20	0.034	(0.268)	0.030	0.003

(Loss Rate Not Used)
Sum = 100.0 Sum = 4.6
Flood volume = Effective rainfall 0.38(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 1.01(In)
Total soil loss = 1.309(Ac.Ft)
Total rainfall = 1.40(In)
Flood volume = 21630.6 Cubic Feet
Total soil loss = 57034.6 Cubic Feet

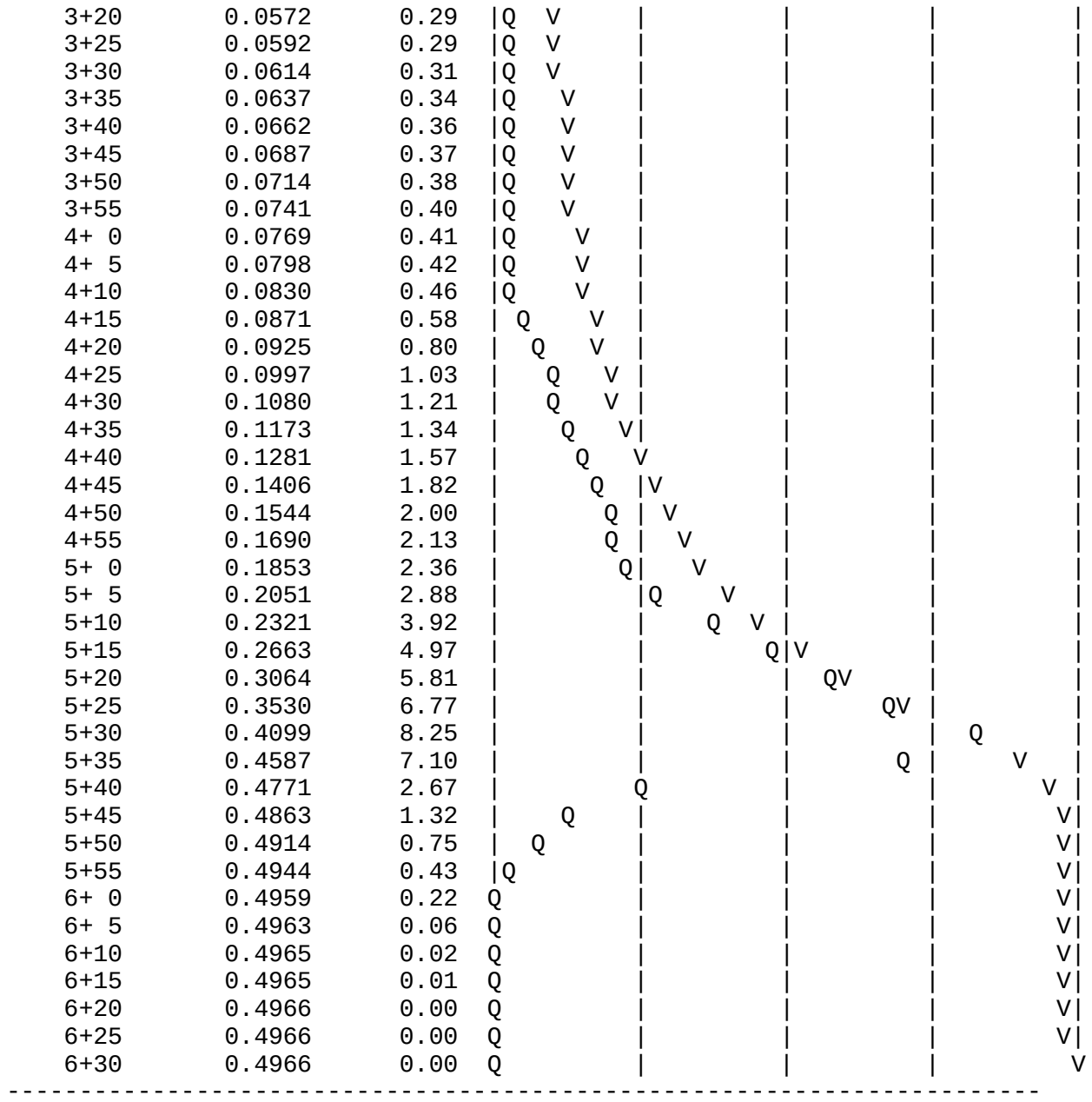
Peak flow rate of this hydrograph = 8.253(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0002	0.03	Q				
0+10	0.0010	0.11	Q				
0+15	0.0019	0.14	Q				
0+20	0.0029	0.15	Q				
0+25	0.0039	0.15	Q				
0+30	0.0051	0.16	Q				
0+35	0.0063	0.18	Q				
0+40	0.0075	0.18	Q				
0+45	0.0088	0.18	Q				
0+50	0.0100	0.18	Q				
0+55	0.0113	0.18	Q				
1+ 0	0.0126	0.19	QV				
1+ 5	0.0140	0.20	QV				
1+10	0.0154	0.21	QV				
1+15	0.0169	0.21	QV				
1+20	0.0183	0.21	QV				
1+25	0.0198	0.21	QV				
1+30	0.0212	0.21	QV				
1+35	0.0226	0.21	QV				
1+40	0.0241	0.21	QV				
1+45	0.0255	0.21	Q V				
1+50	0.0270	0.21	Q V				
1+55	0.0284	0.21	Q V				
2+ 0	0.0299	0.22	Q V				
2+ 5	0.0314	0.22	Q V				
2+10	0.0330	0.22	Q V				
2+15	0.0346	0.23	Q V				
2+20	0.0362	0.23	Q V				
2+25	0.0378	0.23	Q V				
2+30	0.0394	0.24	Q V				
2+35	0.0410	0.24	Q V				
2+40	0.0426	0.24	Q V				
2+45	0.0443	0.24	Q V				
2+50	0.0461	0.26	|Q V				
2+55	0.0479	0.26	|Q V				
3+ 0	0.0497	0.26	|Q V				
3+ 5	0.0515	0.26	|Q V				
3+10	0.0533	0.27	|Q V				
3+15	0.0553	0.28	|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 08/15/22 File: THECOVE242.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
24-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 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]
15.48	2.50	38.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	6.00	92.88

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	0.020	(0.474)	0.018	0.002
2	0.17	0.07	0.020	(0.473)	0.018	0.002
3	0.25	0.07	0.020	(0.471)	0.018	0.002
4	0.33	0.10	0.030	(0.469)	0.027	0.003
5	0.42	0.10	0.030	(0.467)	0.027	0.003
6	0.50	0.10	0.030	(0.465)	0.027	0.003
7	0.58	0.10	0.030	(0.463)	0.027	0.003
8	0.67	0.10	0.030	(0.462)	0.027	0.003
9	0.75	0.10	0.030	(0.460)	0.027	0.003
10	0.83	0.13	0.040	(0.458)	0.036	0.004
11	0.92	0.13	0.040	(0.456)	0.036	0.004
12	1.00	0.13	0.040	(0.454)	0.036	0.004

13	1.08	0.10	0.030	(0.453)	0.027	0.003
14	1.17	0.10	0.030	(0.451)	0.027	0.003
15	1.25	0.10	0.030	(0.449)	0.027	0.003
16	1.33	0.10	0.030	(0.447)	0.027	0.003
17	1.42	0.10	0.030	(0.445)	0.027	0.003
18	1.50	0.10	0.030	(0.444)	0.027	0.003
19	1.58	0.10	0.030	(0.442)	0.027	0.003
20	1.67	0.10	0.030	(0.440)	0.027	0.003
21	1.75	0.10	0.030	(0.438)	0.027	0.003
22	1.83	0.13	0.040	(0.437)	0.036	0.004
23	1.92	0.13	0.040	(0.435)	0.036	0.004
24	2.00	0.13	0.040	(0.433)	0.036	0.004
25	2.08	0.13	0.040	(0.431)	0.036	0.004
26	2.17	0.13	0.040	(0.430)	0.036	0.004
27	2.25	0.13	0.040	(0.428)	0.036	0.004
28	2.33	0.13	0.040	(0.426)	0.036	0.004
29	2.42	0.13	0.040	(0.424)	0.036	0.004
30	2.50	0.13	0.040	(0.423)	0.036	0.004
31	2.58	0.17	0.050	(0.421)	0.045	0.005
32	2.67	0.17	0.050	(0.419)	0.045	0.005
33	2.75	0.17	0.050	(0.417)	0.045	0.005
34	2.83	0.17	0.050	(0.416)	0.045	0.005
35	2.92	0.17	0.050	(0.414)	0.045	0.005
36	3.00	0.17	0.050	(0.412)	0.045	0.005
37	3.08	0.17	0.050	(0.411)	0.045	0.005
38	3.17	0.17	0.050	(0.409)	0.045	0.005
39	3.25	0.17	0.050	(0.407)	0.045	0.005
40	3.33	0.17	0.050	(0.405)	0.045	0.005
41	3.42	0.17	0.050	(0.404)	0.045	0.005
42	3.50	0.17	0.050	(0.402)	0.045	0.005
43	3.58	0.17	0.050	(0.400)	0.045	0.005
44	3.67	0.17	0.050	(0.399)	0.045	0.005
45	3.75	0.17	0.050	(0.397)	0.045	0.005
46	3.83	0.20	0.060	(0.395)	0.054	0.006
47	3.92	0.20	0.060	(0.394)	0.054	0.006
48	4.00	0.20	0.060	(0.392)	0.054	0.006
49	4.08	0.20	0.060	(0.390)	0.054	0.006
50	4.17	0.20	0.060	(0.389)	0.054	0.006
51	4.25	0.20	0.060	(0.387)	0.054	0.006
52	4.33	0.23	0.070	(0.385)	0.063	0.007
53	4.42	0.23	0.070	(0.384)	0.063	0.007
54	4.50	0.23	0.070	(0.382)	0.063	0.007
55	4.58	0.23	0.070	(0.381)	0.063	0.007
56	4.67	0.23	0.070	(0.379)	0.063	0.007
57	4.75	0.23	0.070	(0.377)	0.063	0.007
58	4.83	0.27	0.080	(0.376)	0.072	0.008
59	4.92	0.27	0.080	(0.374)	0.072	0.008
60	5.00	0.27	0.080	(0.372)	0.072	0.008
61	5.08	0.20	0.060	(0.371)	0.054	0.006
62	5.17	0.20	0.060	(0.369)	0.054	0.006
63	5.25	0.20	0.060	(0.368)	0.054	0.006
64	5.33	0.23	0.070	(0.366)	0.063	0.007
65	5.42	0.23	0.070	(0.364)	0.063	0.007
66	5.50	0.23	0.070	(0.363)	0.063	0.007
67	5.58	0.27	0.080	(0.361)	0.072	0.008
68	5.67	0.27	0.080	(0.360)	0.072	0.008
69	5.75	0.27	0.080	(0.358)	0.072	0.008
70	5.83	0.27	0.080	(0.356)	0.072	0.008
71	5.92	0.27	0.080	(0.355)	0.072	0.008
72	6.00	0.27	0.080	(0.353)	0.072	0.008

73	6.08	0.30	0.090	(0.352)	0.081	0.009
74	6.17	0.30	0.090	(0.350)	0.081	0.009
75	6.25	0.30	0.090	(0.349)	0.081	0.009
76	6.33	0.30	0.090	(0.347)	0.081	0.009
77	6.42	0.30	0.090	(0.345)	0.081	0.009
78	6.50	0.30	0.090	(0.344)	0.081	0.009
79	6.58	0.33	0.100	(0.342)	0.090	0.010
80	6.67	0.33	0.100	(0.341)	0.090	0.010
81	6.75	0.33	0.100	(0.339)	0.090	0.010
82	6.83	0.33	0.100	(0.338)	0.090	0.010
83	6.92	0.33	0.100	(0.336)	0.090	0.010
84	7.00	0.33	0.100	(0.335)	0.090	0.010
85	7.08	0.33	0.100	(0.333)	0.090	0.010
86	7.17	0.33	0.100	(0.332)	0.090	0.010
87	7.25	0.33	0.100	(0.330)	0.090	0.010
88	7.33	0.37	0.110	(0.329)	0.099	0.011
89	7.42	0.37	0.110	(0.327)	0.099	0.011
90	7.50	0.37	0.110	(0.326)	0.099	0.011
91	7.58	0.40	0.120	(0.324)	0.108	0.012
92	7.67	0.40	0.120	(0.323)	0.108	0.012
93	7.75	0.40	0.120	(0.321)	0.108	0.012
94	7.83	0.43	0.130	(0.320)	0.117	0.013
95	7.92	0.43	0.130	(0.318)	0.117	0.013
96	8.00	0.43	0.130	(0.317)	0.117	0.013
97	8.08	0.50	0.150	(0.315)	0.135	0.015
98	8.17	0.50	0.150	(0.314)	0.135	0.015
99	8.25	0.50	0.150	(0.312)	0.135	0.015
100	8.33	0.50	0.150	(0.311)	0.135	0.015
101	8.42	0.50	0.150	(0.309)	0.135	0.015
102	8.50	0.50	0.150	(0.308)	0.135	0.015
103	8.58	0.53	0.160	(0.306)	0.144	0.016
104	8.67	0.53	0.160	(0.305)	0.144	0.016
105	8.75	0.53	0.160	(0.304)	0.144	0.016
106	8.83	0.57	0.170	(0.302)	0.153	0.017
107	8.92	0.57	0.170	(0.301)	0.153	0.017
108	9.00	0.57	0.170	(0.299)	0.153	0.017
109	9.08	0.63	0.190	(0.298)	0.171	0.019
110	9.17	0.63	0.190	(0.296)	0.171	0.019
111	9.25	0.63	0.190	(0.295)	0.171	0.019
112	9.33	0.67	0.200	(0.294)	0.180	0.020
113	9.42	0.67	0.200	(0.292)	0.180	0.020
114	9.50	0.67	0.200	(0.291)	0.180	0.020
115	9.58	0.70	0.210	(0.289)	0.189	0.021
116	9.67	0.70	0.210	(0.288)	0.189	0.021
117	9.75	0.70	0.210	(0.287)	0.189	0.021
118	9.83	0.73	0.220	(0.285)	0.198	0.022
119	9.92	0.73	0.220	(0.284)	0.198	0.022
120	10.00	0.73	0.220	(0.283)	0.198	0.022
121	10.08	0.50	0.150	(0.281)	0.135	0.015
122	10.17	0.50	0.150	(0.280)	0.135	0.015
123	10.25	0.50	0.150	(0.278)	0.135	0.015
124	10.33	0.50	0.150	(0.277)	0.135	0.015
125	10.42	0.50	0.150	(0.276)	0.135	0.015
126	10.50	0.50	0.150	(0.274)	0.135	0.015
127	10.58	0.67	0.200	(0.273)	0.180	0.020
128	10.67	0.67	0.200	(0.272)	0.180	0.020
129	10.75	0.67	0.200	(0.270)	0.180	0.020
130	10.83	0.67	0.200	(0.269)	0.180	0.020
131	10.92	0.67	0.200	(0.268)	0.180	0.020
132	11.00	0.67	0.200	(0.266)	0.180	0.020

133	11.08	0.63	0.190	(0.265)	0.171	0.019
134	11.17	0.63	0.190	(0.264)	0.171	0.019
135	11.25	0.63	0.190	(0.263)	0.171	0.019
136	11.33	0.63	0.190	(0.261)	0.171	0.019
137	11.42	0.63	0.190	(0.260)	0.171	0.019
138	11.50	0.63	0.190	(0.259)	0.171	0.019
139	11.58	0.57	0.170	(0.257)	0.153	0.017
140	11.67	0.57	0.170	(0.256)	0.153	0.017
141	11.75	0.57	0.170	(0.255)	0.153	0.017
142	11.83	0.60	0.180	(0.254)	0.162	0.018
143	11.92	0.60	0.180	(0.252)	0.162	0.018
144	12.00	0.60	0.180	(0.251)	0.162	0.018
145	12.08	0.83	0.250	(0.250)	0.225	0.025
146	12.17	0.83	0.250	(0.249)	0.225	0.025
147	12.25	0.83	0.250	(0.247)	0.225	0.025
148	12.33	0.87	0.260	(0.246)	0.234	0.026
149	12.42	0.87	0.260	(0.245)	0.234	0.026
150	12.50	0.87	0.260	(0.244)	0.234	0.026
151	12.58	0.93	0.280	0.242	(0.252)	0.038
152	12.67	0.93	0.280	0.241	(0.252)	0.039
153	12.75	0.93	0.280	0.240	(0.252)	0.040
154	12.83	0.97	0.290	0.239	(0.261)	0.051
155	12.92	0.97	0.290	0.238	(0.261)	0.052
156	13.00	0.97	0.290	0.236	(0.261)	0.054
157	13.08	1.13	0.340	0.235	(0.306)	0.105
158	13.17	1.13	0.340	0.234	(0.306)	0.106
159	13.25	1.13	0.340	0.233	(0.306)	0.107
160	13.33	1.13	0.340	0.232	(0.306)	0.108
161	13.42	1.13	0.340	0.230	(0.306)	0.110
162	13.50	1.13	0.340	0.229	(0.306)	0.111
163	13.58	0.77	0.230	(0.228)	0.207	0.023
164	13.67	0.77	0.230	(0.227)	0.207	0.023
165	13.75	0.77	0.230	(0.226)	0.207	0.023
166	13.83	0.77	0.230	(0.225)	0.207	0.023
167	13.92	0.77	0.230	(0.223)	0.207	0.023
168	14.00	0.77	0.230	(0.222)	0.207	0.023
169	14.08	0.90	0.270	0.221	(0.243)	0.049
170	14.17	0.90	0.270	0.220	(0.243)	0.050
171	14.25	0.90	0.270	0.219	(0.243)	0.051
172	14.33	0.87	0.260	0.218	(0.234)	0.042
173	14.42	0.87	0.260	0.217	(0.234)	0.043
174	14.50	0.87	0.260	0.216	(0.234)	0.044
175	14.58	0.87	0.260	0.214	(0.234)	0.046
176	14.67	0.87	0.260	0.213	(0.234)	0.047
177	14.75	0.87	0.260	0.212	(0.234)	0.048
178	14.83	0.83	0.250	0.211	(0.225)	0.039
179	14.92	0.83	0.250	0.210	(0.225)	0.040
180	15.00	0.83	0.250	0.209	(0.225)	0.041
181	15.08	0.80	0.240	0.208	(0.216)	0.032
182	15.17	0.80	0.240	0.207	(0.216)	0.033
183	15.25	0.80	0.240	0.206	(0.216)	0.034
184	15.33	0.77	0.230	0.205	(0.207)	0.025
185	15.42	0.77	0.230	0.204	(0.207)	0.026
186	15.50	0.77	0.230	0.203	(0.207)	0.027
187	15.58	0.63	0.190	(0.202)	0.171	0.019
188	15.67	0.63	0.190	(0.201)	0.171	0.019
189	15.75	0.63	0.190	(0.200)	0.171	0.019
190	15.83	0.63	0.190	(0.199)	0.171	0.019
191	15.92	0.63	0.190	(0.198)	0.171	0.019
192	16.00	0.63	0.190	(0.197)	0.171	0.019

193	16.08	0.13	0.040	(0.196)	0.036	0.004
194	16.17	0.13	0.040	(0.195)	0.036	0.004
195	16.25	0.13	0.040	(0.194)	0.036	0.004
196	16.33	0.13	0.040	(0.193)	0.036	0.004
197	16.42	0.13	0.040	(0.192)	0.036	0.004
198	16.50	0.13	0.040	(0.191)	0.036	0.004
199	16.58	0.10	0.030	(0.190)	0.027	0.003
200	16.67	0.10	0.030	(0.189)	0.027	0.003
201	16.75	0.10	0.030	(0.188)	0.027	0.003
202	16.83	0.10	0.030	(0.187)	0.027	0.003
203	16.92	0.10	0.030	(0.186)	0.027	0.003
204	17.00	0.10	0.030	(0.185)	0.027	0.003
205	17.08	0.17	0.050	(0.184)	0.045	0.005
206	17.17	0.17	0.050	(0.183)	0.045	0.005
207	17.25	0.17	0.050	(0.182)	0.045	0.005
208	17.33	0.17	0.050	(0.181)	0.045	0.005
209	17.42	0.17	0.050	(0.180)	0.045	0.005
210	17.50	0.17	0.050	(0.179)	0.045	0.005
211	17.58	0.17	0.050	(0.178)	0.045	0.005
212	17.67	0.17	0.050	(0.178)	0.045	0.005
213	17.75	0.17	0.050	(0.177)	0.045	0.005
214	17.83	0.13	0.040	(0.176)	0.036	0.004
215	17.92	0.13	0.040	(0.175)	0.036	0.004
216	18.00	0.13	0.040	(0.174)	0.036	0.004
217	18.08	0.13	0.040	(0.173)	0.036	0.004
218	18.17	0.13	0.040	(0.172)	0.036	0.004
219	18.25	0.13	0.040	(0.172)	0.036	0.004
220	18.33	0.13	0.040	(0.171)	0.036	0.004
221	18.42	0.13	0.040	(0.170)	0.036	0.004
222	18.50	0.13	0.040	(0.169)	0.036	0.004
223	18.58	0.10	0.030	(0.168)	0.027	0.003
224	18.67	0.10	0.030	(0.167)	0.027	0.003
225	18.75	0.10	0.030	(0.167)	0.027	0.003
226	18.83	0.07	0.020	(0.166)	0.018	0.002
227	18.92	0.07	0.020	(0.165)	0.018	0.002
228	19.00	0.07	0.020	(0.164)	0.018	0.002
229	19.08	0.10	0.030	(0.163)	0.027	0.003
230	19.17	0.10	0.030	(0.163)	0.027	0.003
231	19.25	0.10	0.030	(0.162)	0.027	0.003
232	19.33	0.13	0.040	(0.161)	0.036	0.004
233	19.42	0.13	0.040	(0.160)	0.036	0.004
234	19.50	0.13	0.040	(0.160)	0.036	0.004
235	19.58	0.10	0.030	(0.159)	0.027	0.003
236	19.67	0.10	0.030	(0.158)	0.027	0.003
237	19.75	0.10	0.030	(0.157)	0.027	0.003
238	19.83	0.07	0.020	(0.157)	0.018	0.002
239	19.92	0.07	0.020	(0.156)	0.018	0.002
240	20.00	0.07	0.020	(0.155)	0.018	0.002
241	20.08	0.10	0.030	(0.155)	0.027	0.003
242	20.17	0.10	0.030	(0.154)	0.027	0.003
243	20.25	0.10	0.030	(0.153)	0.027	0.003
244	20.33	0.10	0.030	(0.153)	0.027	0.003
245	20.42	0.10	0.030	(0.152)	0.027	0.003
246	20.50	0.10	0.030	(0.151)	0.027	0.003
247	20.58	0.10	0.030	(0.151)	0.027	0.003
248	20.67	0.10	0.030	(0.150)	0.027	0.003
249	20.75	0.10	0.030	(0.150)	0.027	0.003
250	20.83	0.07	0.020	(0.149)	0.018	0.002
251	20.92	0.07	0.020	(0.148)	0.018	0.002
252	21.00	0.07	0.020	(0.148)	0.018	0.002

253	21.08	0.10	0.030	(0.147)	0.027	0.003
254	21.17	0.10	0.030	(0.147)	0.027	0.003
255	21.25	0.10	0.030	(0.146)	0.027	0.003
256	21.33	0.07	0.020	(0.145)	0.018	0.002
257	21.42	0.07	0.020	(0.145)	0.018	0.002
258	21.50	0.07	0.020	(0.144)	0.018	0.002
259	21.58	0.10	0.030	(0.144)	0.027	0.003
260	21.67	0.10	0.030	(0.143)	0.027	0.003
261	21.75	0.10	0.030	(0.143)	0.027	0.003
262	21.83	0.07	0.020	(0.142)	0.018	0.002
263	21.92	0.07	0.020	(0.142)	0.018	0.002
264	22.00	0.07	0.020	(0.141)	0.018	0.002
265	22.08	0.10	0.030	(0.141)	0.027	0.003
266	22.17	0.10	0.030	(0.140)	0.027	0.003
267	22.25	0.10	0.030	(0.140)	0.027	0.003
268	22.33	0.07	0.020	(0.139)	0.018	0.002
269	22.42	0.07	0.020	(0.139)	0.018	0.002
270	22.50	0.07	0.020	(0.139)	0.018	0.002
271	22.58	0.07	0.020	(0.138)	0.018	0.002
272	22.67	0.07	0.020	(0.138)	0.018	0.002
273	22.75	0.07	0.020	(0.137)	0.018	0.002
274	22.83	0.07	0.020	(0.137)	0.018	0.002
275	22.92	0.07	0.020	(0.137)	0.018	0.002
276	23.00	0.07	0.020	(0.136)	0.018	0.002
277	23.08	0.07	0.020	(0.136)	0.018	0.002
278	23.17	0.07	0.020	(0.136)	0.018	0.002
279	23.25	0.07	0.020	(0.136)	0.018	0.002
280	23.33	0.07	0.020	(0.135)	0.018	0.002
281	23.42	0.07	0.020	(0.135)	0.018	0.002
282	23.50	0.07	0.020	(0.135)	0.018	0.002
283	23.58	0.07	0.020	(0.135)	0.018	0.002
284	23.67	0.07	0.020	(0.134)	0.018	0.002
285	23.75	0.07	0.020	(0.134)	0.018	0.002
286	23.83	0.07	0.020	(0.134)	0.018	0.002
287	23.92	0.07	0.020	(0.134)	0.018	0.002
288	24.00	0.07	0.020	(0.134)	0.018	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 3.8

Flood volume = Effective rainfall 0.32(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 2.18(In)
Total soil loss = 2.815(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 17844.6 Cubic Feet
Total soil loss = 122632.2 Cubic Feet

Peak flow rate of this hydrograph = 1.698(CFS)

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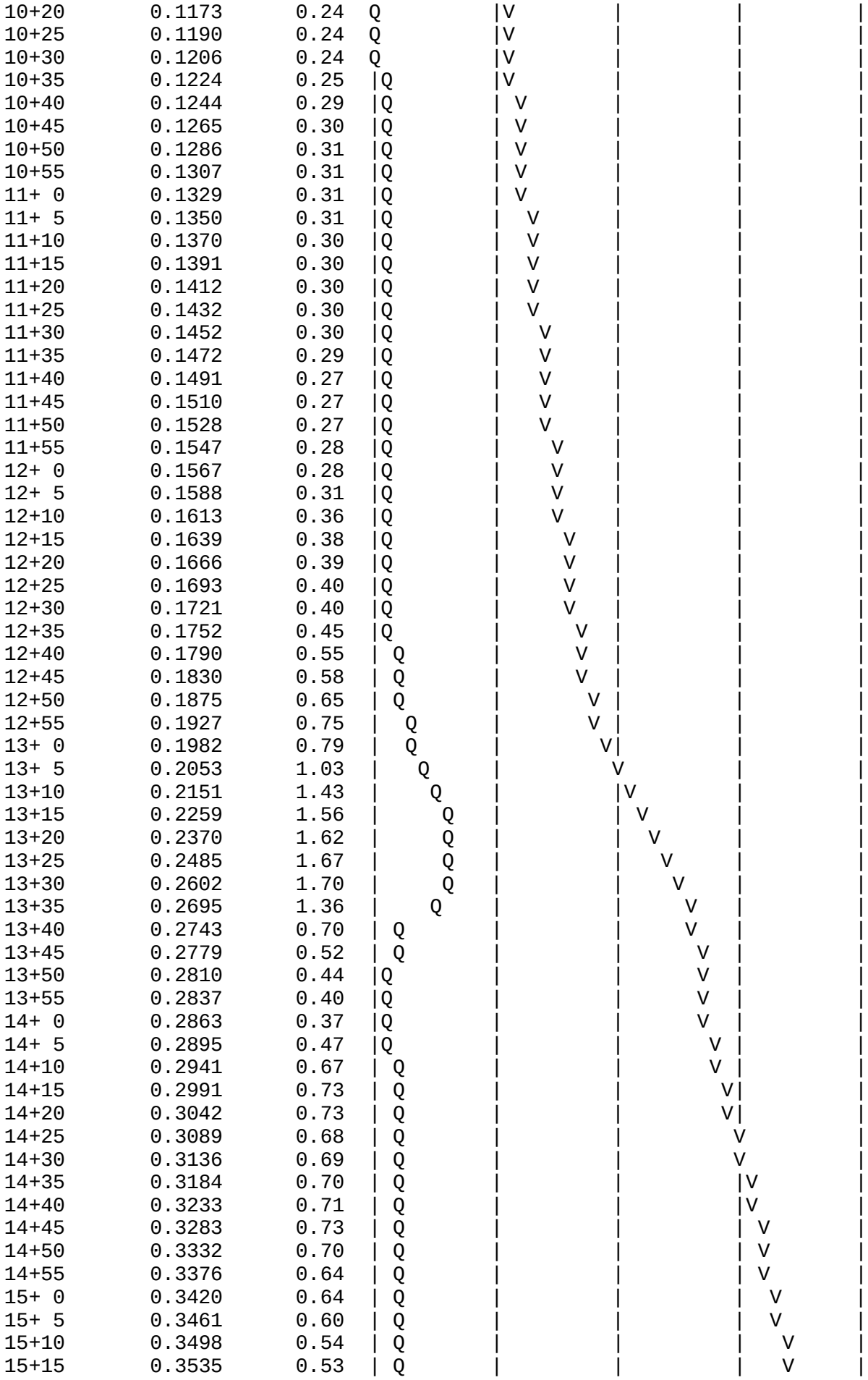
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	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	0.0016	0.05	Q	|	|	|	|
0+40	0.0019	0.05	Q	|	|	|	|
0+45	0.0022	0.05	Q	|	|	|	|
0+50	0.0025	0.05	Q	|	|	|	|
0+55	0.0029	0.06	Q	|	|	|	|
1+ 0	0.0034	0.06	Q	|	|	|	|
1+ 5	0.0038	0.06	Q	|	|	|	|
1+10	0.0041	0.05	Q	|	|	|	|
1+15	0.0044	0.05	Q	|	|	|	|
1+20	0.0048	0.05	Q	|	|	|	|
1+25	0.0051	0.05	Q	|	|	|	|
1+30	0.0054	0.05	Q	|	|	|	|
1+35	0.0057	0.05	Q	|	|	|	|
1+40	0.0061	0.05	Q	|	|	|	|
1+45	0.0064	0.05	Q	|	|	|	|
1+50	0.0067	0.05	Q	|	|	|	|
1+55	0.0071	0.06	Q	|	|	|	|
2+ 0	0.0076	0.06	Q	|	|	|	|
2+ 5	0.0080	0.06	Q	|	|	|	|
2+10	0.0084	0.06	Q	|	|	|	|
2+15	0.0088	0.06	Q	|	|	|	|
2+20	0.0093	0.06	Q	|	|	|	|
2+25	0.0097	0.06	Q	|	|	|	|
2+30	0.0101	0.06	Q	|	|	|	|
2+35	0.0106	0.07	QV	|	|	|	|
2+40	0.0111	0.07	QV	|	|	|	|
2+45	0.0116	0.08	QV	|	|	|	|
2+50	0.0121	0.08	QV	|	|	|	|
2+55	0.0127	0.08	QV	|	|	|	|
3+ 0	0.0132	0.08	QV	|	|	|	|
3+ 5	0.0138	0.08	QV	|	|	|	|
3+10	0.0143	0.08	QV	|	|	|	|
3+15	0.0148	0.08	QV	|	|	|	|
3+20	0.0154	0.08	QV	|	|	|	|
3+25	0.0159	0.08	QV	|	|	|	|
3+30	0.0164	0.08	QV	|	|	|	|
3+35	0.0170	0.08	QV	|	|	|	|
3+40	0.0175	0.08	QV	|	|	|	|
3+45	0.0181	0.08	QV	|	|	|	|
3+50	0.0186	0.08	QV	|	|	|	|
3+55	0.0192	0.09	QV	|	|	|	|
4+ 0	0.0199	0.09	QV	|	|	|	|
4+ 5	0.0205	0.09	Q V	|	|	|	|
4+10	0.0212	0.09	Q V	|	|	|	|
4+15	0.0218	0.09	Q V	|	|	|	|
4+20	0.0225	0.10	Q V	|	|	|	|
4+25	0.0232	0.11	Q V	|	|	|	|
4+30	0.0239	0.11	Q V	|	|	|	|
4+35	0.0247	0.11	Q V	|	|	|	|
4+40	0.0254	0.11	Q V	|	|	|	|
4+45	0.0262	0.11	Q V	|	|	|	|
4+50	0.0270	0.11	Q V	|	|	|	|
4+55	0.0278	0.12	Q V	|	|	|	|
5+ 0	0.0286	0.12	Q V	|	|	|	|
5+ 5	0.0294	0.12	Q V	|	|	|	|
5+10	0.0301	0.10	Q V	|	|	|	|
5+15	0.0308	0.10	Q V	|	|	|	|

```
 5+20       0.0315      0.10  Q  V       |          |          |          |
 5+25       0.0322      0.11  Q  V       |          |          |          |
 5+30       0.0330      0.11  Q  V       |          |          |          |
 5+35       0.0337      0.11  Q  V       |          |          |          |
 5+40       0.0346      0.12  Q  V       |          |          |          |
 5+45       0.0354      0.12  Q  V       |          |          |          |
 5+50       0.0363      0.12  Q  V       |          |          |          |
 5+55       0.0371      0.12  Q  V       |          |          |          |
 6+ 0       0.0380      0.12  Q  V       |          |          |          |
 6+ 5       0.0389      0.13  Q  V       |          |          |          |
 6+10       0.0398      0.14  Q  V       |          |          |          |
 6+15       0.0408      0.14  Q  V       |          |          |          |
 6+20       0.0417      0.14  Q   V      |          |          |          |
 6+25       0.0427      0.14  Q   V      |          |          |          |
 6+30       0.0437      0.14  Q   V      |          |          |          |
 6+35       0.0447      0.14  Q   V      |          |          |          |
 6+40       0.0457      0.15  Q   V      |          |          |          |
 6+45       0.0468      0.15  Q   V      |          |          |          |
 6+50       0.0478      0.16  Q   V      |          |          |          |
 6+55       0.0489      0.16  Q   V      |          |          |          |
 7+ 0       0.0500      0.16  Q   V      |          |          |          |
 7+ 5       0.0511      0.16  Q   V      |          |          |          |
 7+10       0.0521      0.16  Q    V     |          |          |          |
 7+15       0.0532      0.16  Q    V     |          |          |          |
 7+20       0.0543      0.16  Q    V     |          |          |          |
 7+25       0.0555      0.17  Q    V     |          |          |          |
 7+30       0.0566      0.17  Q    V     |          |          |          |
 7+35       0.0578      0.17  Q    V     |          |          |          |
 7+40       0.0591      0.18  Q    V     |          |          |          |
 7+45       0.0604      0.19  Q    V     |          |          |          |
 7+50       0.0617      0.19  Q     V    |          |          |          |
 7+55       0.0631      0.20  Q     V    |          |          |          |
 8+ 0       0.0644      0.20  Q     V    |          |          |          |
 8+ 5       0.0659      0.21  Q     V    |          |          |          |
 8+10       0.0674      0.23  Q     V    |          |          |          |
 8+15       0.0690      0.23  Q     V    |          |          |          |
 8+20       0.0706      0.23  Q     V    |          |          |          |
 8+25       0.0722      0.23  Q      V   |          |          |          |
 8+30       0.0738      0.23  Q      V   |          |          |          |
 8+35       0.0755      0.24  Q      V   |          |          |          |
 8+40       0.0772      0.25  Q      V   |          |          |          |
 8+45       0.0789      0.25  Q      V   |          |          |          |
 8+50       0.0806      0.25  |Q     V   |          |          |          |
 8+55       0.0824      0.26  |Q      V  |          |          |          |
 9+ 0       0.0842      0.26  |Q      V  |          |          |          |
 9+ 5       0.0861      0.27  |Q      V  |          |          |          |
 9+10       0.0881      0.29  |Q      V  |          |          |          |
 9+15       0.0901      0.29  |Q      V  |          |          |          |
 9+20       0.0922      0.30  |Q       V|          |          |          |
 9+25       0.0943      0.31  |Q       V|          |          |          |
 9+30       0.0964      0.31  |Q       V|          |          |          |
 9+35       0.0986      0.32  |Q       V|          |          |          |
 9+40       0.1008      0.32  |Q       V|          |          |          |
 9+45       0.1031      0.33  |Q        V          |          |          |
 9+50       0.1053      0.33  |Q        V          |          |          |
 9+55       0.1077      0.34  |Q        V          |          |          |
10+ 0       0.1100      0.34  |Q        V          |          |          |
10+ 5       0.1122      0.31  |Q        V          |          |          |
10+10       0.1140      0.26  |Q        |V         |          |          |
10+15       0.1157      0.25  Q         |V         |          |          |
```



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15+20       0.3570      0.50  |Q        |         |         |   V     |
15+25       0.3599      0.43  |Q        |         |         |    V    |
15+30       0.3629      0.43  |Q        |         |         |    V    |
15+35       0.3656      0.39  |Q        |         |         |    V    |
15+40       0.3679      0.33  |Q        |         |         |    V    |
15+45       0.3700      0.31  |Q        |         |         |     V   |
15+50       0.3721      0.30  |Q        |         |         |     V   |
15+55       0.3742      0.30  |Q        |         |         |     V   |
16+ 0       0.3762      0.30  |Q        |         |         |     V   |
16+ 5       0.3778      0.23  Q         |         |         |     V   |
16+10       0.3787      0.12  Q         |         |         |     V   |
16+15       0.3793      0.09  Q         |         |         |      V  |
16+20       0.3798      0.08  Q         |         |         |      V  |
16+25       0.3803      0.07  Q         |         |         |      V  |
16+30       0.3808      0.07  Q         |         |         |      V  |
16+35       0.3812      0.06  Q         |         |         |      V  |
16+40       0.3815      0.05  Q         |         |         |      V  |
16+45       0.3818      0.05  Q         |         |         |      V  |
16+50       0.3822      0.05  Q         |         |         |      V  |
16+55       0.3825      0.05  Q         |         |         |      V  |
17+ 0       0.3828      0.05  Q         |         |         |      V  |
17+ 5       0.3832      0.06  Q         |         |         |      V  |
17+10       0.3837      0.07  Q         |         |         |      V  |
17+15       0.3842      0.07  Q         |         |         |      V  |
17+20       0.3847      0.08  Q         |         |         |      V  |
17+25       0.3853      0.08  Q         |         |         |      V  |
17+30       0.3858      0.08  Q         |         |         |      V  |
17+35       0.3863      0.08  Q         |         |         |      V  |
17+40       0.3869      0.08  Q         |         |         |      V  |
17+45       0.3874      0.08  Q         |         |         |      V  |
17+50       0.3879      0.07  Q         |         |         |      V  |
17+55       0.3884      0.07  Q         |         |         |      V  |
18+ 0       0.3888      0.06  Q         |         |         |      V  |
18+ 5       0.3892      0.06  Q         |         |         |       V |
18+10       0.3897      0.06  Q         |         |         |       V |
18+15       0.3901      0.06  Q         |         |         |       V |
18+20       0.3905      0.06  Q         |         |         |       V |
18+25       0.3910      0.06  Q         |         |         |       V |
18+30       0.3914      0.06  Q         |         |         |       V |
18+35       0.3918      0.06  Q         |         |         |       V |
18+40       0.3922      0.05  Q         |         |         |       V |
18+45       0.3925      0.05  Q         |         |         |       V |
18+50       0.3928      0.04  Q         |         |         |       V |
18+55       0.3930      0.04  Q         |         |         |       V |
19+ 0       0.3933      0.03  Q         |         |         |       V |
19+ 5       0.3935      0.04  Q         |         |         |       V |
19+10       0.3938      0.04  Q         |         |         |       V |
19+15       0.3941      0.05  Q         |         |         |       V |
19+20       0.3945      0.05  Q         |         |         |       V |
19+25       0.3949      0.06  Q         |         |         |       V |
19+30       0.3953      0.06  Q         |         |         |       V |
19+35       0.3957      0.06  Q         |         |         |       V |
19+40       0.3960      0.05  Q         |         |         |       V |
19+45       0.3964      0.05  Q         |         |         |       V |
19+50       0.3967      0.04  Q         |         |         |       V |
19+55       0.3969      0.04  Q         |         |         |       V |
20+ 0       0.3971      0.03  Q         |         |         |       V |
20+ 5       0.3974      0.04  Q         |         |         |       V |
20+10       0.3977      0.04  Q         |         |         |       V |
20+15       0.3980      0.05  Q         |         |         |       V |
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  20+20       0.3983      0.05  Q          |           |           |        V |
  20+25       0.3986      0.05  Q          |           |           |        V |
  20+30       0.3989      0.05  Q          |           |           |        V |
  20+35       0.3993      0.05  Q          |           |           |        V |
  20+40       0.3996      0.05  Q          |           |           |         V|
  20+45       0.3999      0.05  Q          |           |           |         V|
  20+50       0.4002      0.04  Q          |           |           |         V|
  20+55       0.4005      0.04  Q          |           |           |         V|
  21+ 0       0.4007      0.03  Q          |           |           |         V|
  21+ 5       0.4009      0.04  Q          |           |           |         V|
  21+10       0.4012      0.04  Q          |           |           |         V|
  21+15       0.4015      0.05  Q          |           |           |         V|
  21+20       0.4018      0.04  Q          |           |           |         V|
  21+25       0.4021      0.03  Q          |           |           |         V|
  21+30       0.4023      0.03  Q          |           |           |         V|
  21+35       0.4025      0.04  Q          |           |           |         V|
  21+40       0.4028      0.04  Q          |           |           |         V|
  21+45       0.4032      0.05  Q          |           |           |         V|
  21+50       0.4034      0.04  Q          |           |           |         V|
  21+55       0.4037      0.03  Q          |           |           |         V|
  22+ 0       0.4039      0.03  Q          |           |           |         V|
  22+ 5       0.4042      0.04  Q          |           |           |         V|
  22+10       0.4045      0.04  Q          |           |           |         V|
  22+15       0.4048      0.05  Q          |           |           |         V|
  22+20       0.4051      0.04  Q          |           |           |         V|
  22+25       0.4053      0.03  Q          |           |           |         V|
  22+30       0.4055      0.03  Q          |           |           |         V|
  22+35       0.4057      0.03  Q          |           |           |         V|
  22+40       0.4060      0.03  Q          |           |           |         V|
  22+45       0.4062      0.03  Q          |           |           |         V|
  22+50       0.4064      0.03  Q          |           |           |         V|
  22+55       0.4066      0.03  Q          |           |           |         V|
  23+ 0       0.4068      0.03  Q          |           |           |         V|
  23+ 5       0.4070      0.03  Q          |           |           |         V|
  23+10       0.4072      0.03  Q          |           |           |         V|
  23+15       0.4075      0.03  Q          |           |           |         V|
  23+20       0.4077      0.03  Q          |           |           |         V|
  23+25       0.4079      0.03  Q          |           |           |         V|
  23+30       0.4081      0.03  Q          |           |           |         V|
  23+35       0.4083      0.03  Q          |           |           |         V|
  23+40       0.4085      0.03  Q          |           |           |         V|
  23+45       0.4088      0.03  Q          |           |           |         V|
  23+50       0.4090      0.03  Q          |           |           |         V|
  23+55       0.4092      0.03  Q          |           |           |         V|
  24+ 0       0.4094      0.03  Q          |           |           |         V|
  24+ 5       0.4096      0.02  Q          |           |           |         V|
  24+10       0.4096      0.01  Q          |           |           |         V|
  24+15       0.4096      0.00  Q          |           |           |         V|
  24+20       0.4096      0.00  Q          |           |           |         V|
  24+25       0.4097      0.00  Q          |           |           |         V|
  24+30       0.4097      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 09/12/22 File: DAC212.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
2-YR
1-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	0.59	4.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.45	10.82

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.590(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.590(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	4.40	0.311	0.268	(	0.280)	0.044
2	0.17	4.50	0.319	0.268	(	0.287)	0.051
3	0.25	5.40	0.382	0.268	(	0.344)	0.115
4	0.33	5.40	0.382	0.268	(	0.344)	0.115
5	0.42	5.70	0.404	0.268	(	0.363)	0.136
6	0.50	6.40	0.453	0.268	(	0.408)	0.185
7	0.58	7.90	0.559	0.268	(	0.503)	0.292
8	0.67	9.10	0.644	0.268	(	0.580)	0.377
9	0.75	12.80	0.906	0.268	(	0.816)	0.639
10	0.83	25.60	1.812	0.268	(	1.631)	1.545
11	0.92	7.90	0.559	0.268	(	0.503)	0.292

```
 12   1.00     4.90      0.347          0.268    (  0.312)        0.079
           (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     3.9
     Flood volume = Effective rainfall      0.32(In)
      times area       7.5(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
     Total soil loss =      0.27(In)
     Total soil loss =     0.166(Ac.Ft)
     Total rainfall =      0.59(In)
     Flood volume =        8729.4 Cubic Feet
     Total soil loss =        7246.6 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      6.956(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          1 - 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       0.0007      0.11  Q         |         |         |         |
    0+10       0.0027      0.28  VQ        |         |         |         |
    0+15       0.0061      0.50  |Q        |         |         |         |
    0+20       0.0113      0.75  | Q       |         |         |         |
    0+25       0.0172      0.87  |  Q      |         |         |         |
    0+30       0.0248      1.09  |   Q     |         |         |         |
    0+35       0.0355      1.56  |     QV  |         |         |         |
    0+40       0.0507      2.20  |       Q V         |         |         |
    0+45       0.0731      3.26  |         |  QV     |         |         |
    0+50       0.1181      6.54  |         |         |  V  Q   |         |
    0+55       0.1660      6.96  |         |         |     Q   |  V      |
    1+ 0       0.1859      2.88  |         |Q        |         |      V  |
    1+ 5       0.1946      1.27  |    Q    |         |         |       V |
    1+10       0.1983      0.54  | Q       |         |         |        V|
    1+15       0.2000      0.25  Q         |         |         |        V|
    1+20       0.2003      0.05  Q         |         |         |        V|
    1+25       0.2004      0.01  Q         |         |         |         V
------------------------------------------------------------------------
```

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

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Study date 09/12/22 File: DAC232.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
2-YR
3-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.00	7.46

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	2.50	18.65

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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

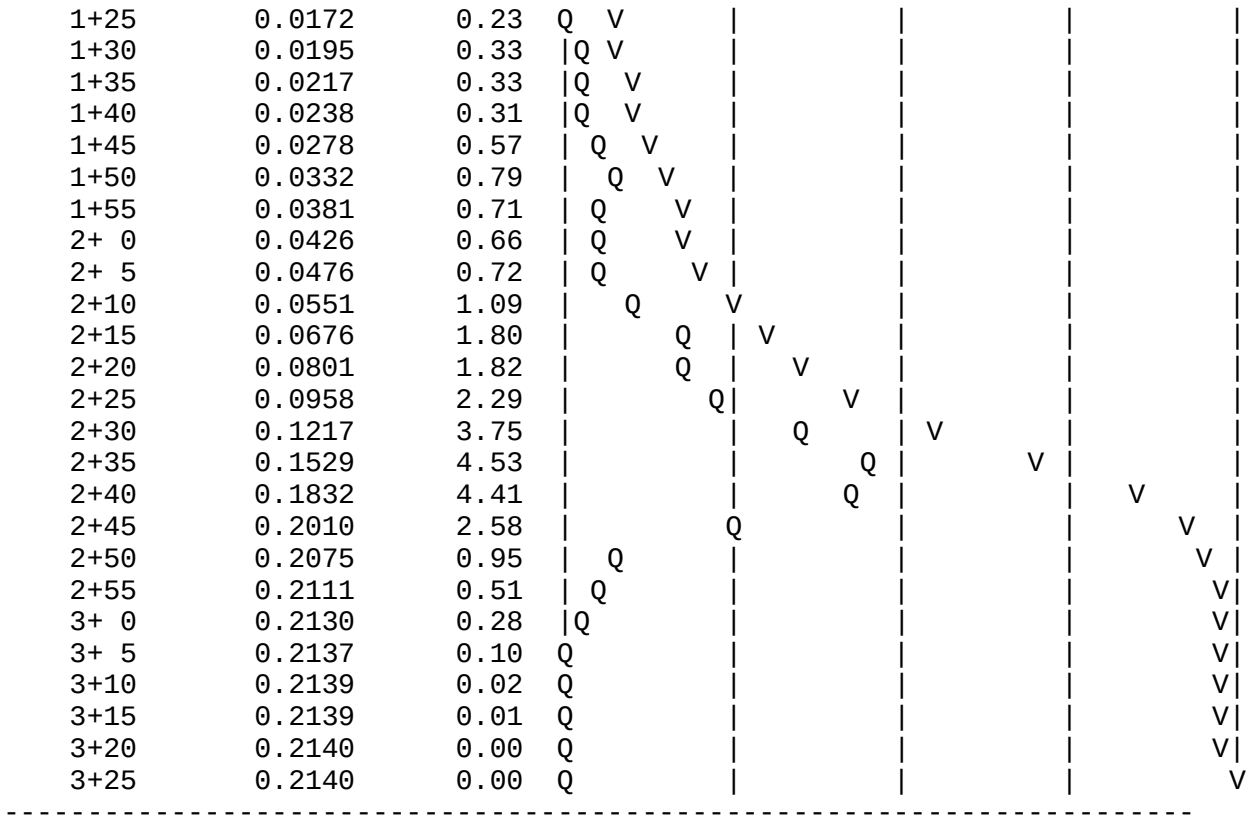
Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	1.30	0.156	(0.268)		0.140	0.016
2	0.17	1.30	0.156	(0.268)		0.140	0.016
3	0.25	1.10	0.132	(0.268)		0.119	0.013
4	0.33	1.50	0.180	(0.268)		0.162	0.018
5	0.42	1.50	0.180	(0.268)		0.162	0.018
6	0.50	1.80	0.216	(0.268)		0.194	0.022
7	0.58	1.50	0.180	(0.268)		0.162	0.018
8	0.67	1.80	0.216	(0.268)		0.194	0.022
9	0.75	1.80	0.216	(0.268)		0.194	0.022
10	0.83	1.50	0.180	(0.268)		0.162	0.018
11	0.92	1.60	0.192	(0.268)		0.173	0.019
12	1.00	1.80	0.216	(0.268)		0.194	0.022
13	1.08	2.20	0.264	(0.268)		0.238	0.026

```
14   1.17     2.20      0.264       (  0.268)       0.238        0.026
15   1.25     2.20      0.264       (  0.268)       0.238        0.026
16   1.33     2.00      0.240       (  0.268)       0.216        0.024
17   1.42     2.60      0.312          0.268    (  0.281)        0.044
18   1.50     2.70      0.324          0.268    (  0.292)        0.056
19   1.58     2.40      0.288       (  0.268)       0.259        0.029
20   1.67     2.70      0.324          0.268    (  0.292)        0.056
21   1.75     3.30      0.396          0.268    (  0.356)        0.128
22   1.83     3.10      0.372          0.268    (  0.335)        0.104
23   1.92     2.90      0.348          0.268    (  0.313)        0.080
24   2.00     3.00      0.360          0.268    (  0.324)        0.092
25   2.08     3.10      0.372          0.268    (  0.335)        0.104
26   2.17     4.20      0.504          0.268    (  0.454)        0.236
27   2.25     5.00      0.600          0.268    (  0.540)        0.332
28   2.33     3.50      0.420          0.268    (  0.378)        0.152
29   2.42     6.80      0.816          0.268    (  0.734)        0.548
30   2.50     7.30      0.876          0.268    (  0.788)        0.608
31   2.58     8.20      0.984          0.268    (  0.886)        0.716
32   2.67     5.90      0.708          0.268    (  0.637)        0.440
33   2.75     2.00      0.240       (  0.268)       0.216        0.024
34   2.83     1.80      0.216       (  0.268)       0.194        0.022
35   2.92     1.80      0.216       (  0.268)       0.194        0.022
36   3.00     0.60      0.072       (  0.268)       0.065        0.007
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     4.1
    Flood volume = Effective rainfall      0.34(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
    Total soil loss =      0.66(In)
    Total soil loss =     0.408(Ac.Ft)
    Total rainfall =      1.00(In)
    Flood volume =        9320.3 Cubic Feet
    Total soil loss =       17758.6 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      4.529(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        3 - 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      0.04  Q         |         |         |         |
  0+10       0.0009      0.09  Q         |         |         |         |
  0+15       0.0016      0.10  Q         |         |         |         |
  0+20       0.0024      0.11  Q         |         |         |         |
  0+25       0.0032      0.13  Q         |         |         |         |
  0+30       0.0042      0.14  Q         |         |         |         |
  0+35       0.0052      0.15  Q         |         |         |         |
  0+40       0.0062      0.15  QV        |         |         |         |
  0+45       0.0073      0.16  QV        |         |         |         |
  0+50       0.0084      0.15  QV        |         |         |         |
  0+55       0.0094      0.14  QV        |         |         |         |
  1+ 0       0.0104      0.15  QV        |         |         |         |
  1+ 5       0.0116      0.17  Q V       |         |         |         |
  1+10       0.0129      0.19  Q V       |         |         |         |
  1+15       0.0142      0.19  Q V       |         |         |         |
  1+20       0.0155      0.19  Q V       |         |         |         |
```


1+25 0.0172 0.23
1+30 0.0195 0.33
1+35 0.0217 0.33
1+40 0.0238 0.31
1+45 0.0278 0.57
1+50 0.0332 0.79
1+55 0.0381 0.71
2+ 0 0.0426 0.66
2+ 5 0.0476 0.72
2+10 0.0551 1.09
2+15 0.0676 1.80
2+20 0.0801 1.82
2+25 0.0958 2.29
2+30 0.1217 3.75
2+35 0.1529 4.53
2+40 0.1832 4.41
2+45 0.2010 2.58
2+50 0.2075 0.95
2+55 0.2111 0.51
3+ 0 0.2130 0.28
3+ 5 0.2137 0.10
3+10 0.2139 0.02
3+15 0.2139 0.01
3+20 0.2140 0.00
3+25 0.2140 0.00

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 09/12/22 File: DAC262.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
2-YR
6-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.40	10.44

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	3.50	26.11

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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

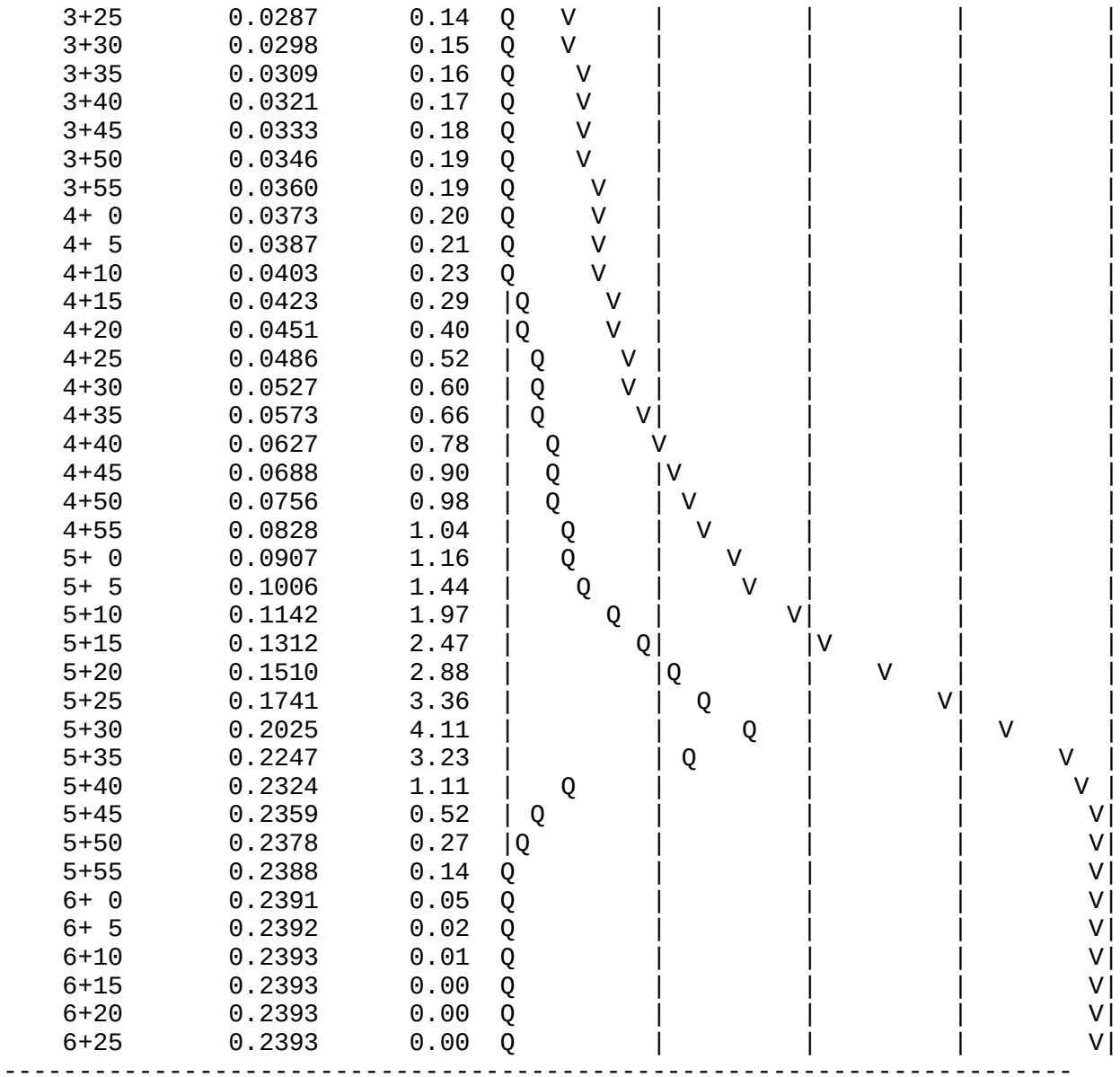
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.084	(0.268)		0.076	0.008
2	0.17	0.60	0.101	(0.268)		0.091	0.010
3	0.25	0.60	0.101	(0.268)		0.091	0.010
4	0.33	0.60	0.101	(0.268)		0.091	0.010
5	0.42	0.60	0.101	(0.268)		0.091	0.010
6	0.50	0.70	0.118	(0.268)		0.106	0.012
7	0.58	0.70	0.118	(0.268)		0.106	0.012
8	0.67	0.70	0.118	(0.268)		0.106	0.012
9	0.75	0.70	0.118	(0.268)		0.106	0.012
10	0.83	0.70	0.118	(0.268)		0.106	0.012
11	0.92	0.70	0.118	(0.268)		0.106	0.012
12	1.00	0.80	0.134	(0.268)		0.121	0.013
13	1.08	0.80	0.134	(0.268)		0.121	0.013

14	1.17	0.80	0.134	(0.268)	0.121	0.013
15	1.25	0.80	0.134	(0.268)	0.121	0.013
16	1.33	0.80	0.134	(0.268)	0.121	0.013
17	1.42	0.80	0.134	(0.268)	0.121	0.013
18	1.50	0.80	0.134	(0.268)	0.121	0.013
19	1.58	0.80	0.134	(0.268)	0.121	0.013
20	1.67	0.80	0.134	(0.268)	0.121	0.013
21	1.75	0.80	0.134	(0.268)	0.121	0.013
22	1.83	0.80	0.134	(0.268)	0.121	0.013
23	1.92	0.80	0.134	(0.268)	0.121	0.013
24	2.00	0.90	0.151	(0.268)	0.136	0.015
25	2.08	0.80	0.134	(0.268)	0.121	0.013
26	2.17	0.90	0.151	(0.268)	0.136	0.015
27	2.25	0.90	0.151	(0.268)	0.136	0.015
28	2.33	0.90	0.151	(0.268)	0.136	0.015
29	2.42	0.90	0.151	(0.268)	0.136	0.015
30	2.50	0.90	0.151	(0.268)	0.136	0.015
31	2.58	0.90	0.151	(0.268)	0.136	0.015
32	2.67	0.90	0.151	(0.268)	0.136	0.015
33	2.75	1.00	0.168	(0.268)	0.151	0.017
34	2.83	1.00	0.168	(0.268)	0.151	0.017
35	2.92	1.00	0.168	(0.268)	0.151	0.017
36	3.00	1.00	0.168	(0.268)	0.151	0.017
37	3.08	1.00	0.168	(0.268)	0.151	0.017
38	3.17	1.10	0.185	(0.268)	0.166	0.018
39	3.25	1.10	0.185	(0.268)	0.166	0.018
40	3.33	1.10	0.185	(0.268)	0.166	0.018
41	3.42	1.20	0.202	(0.268)	0.181	0.020
42	3.50	1.30	0.218	(0.268)	0.197	0.022
43	3.58	1.40	0.235	(0.268)	0.212	0.024
44	3.67	1.40	0.235	(0.268)	0.212	0.024
45	3.75	1.50	0.252	(0.268)	0.227	0.025
46	3.83	1.50	0.252	(0.268)	0.227	0.025
47	3.92	1.60	0.269	(0.268)	0.242	0.027
48	4.00	1.60	0.269	(0.268)	0.242	0.027
49	4.08	1.70	0.286	(0.268)	0.257	0.029
50	4.17	1.80	0.302	0.268	(0.272)	0.035
51	4.25	1.90	0.319	0.268	(0.287)	0.052
52	4.33	2.00	0.336	0.268	(0.302)	0.068
53	4.42	2.10	0.353	0.268	(0.318)	0.085
54	4.50	2.10	0.353	0.268	(0.318)	0.085
55	4.58	2.20	0.370	0.268	(0.333)	0.102
56	4.67	2.30	0.386	0.268	(0.348)	0.119
57	4.75	2.40	0.403	0.268	(0.363)	0.136
58	4.83	2.40	0.403	0.268	(0.363)	0.136
59	4.92	2.50	0.420	0.268	(0.378)	0.152
60	5.00	2.60	0.437	0.268	(0.393)	0.169
61	5.08	3.10	0.521	0.268	(0.469)	0.253
62	5.17	3.60	0.605	0.268	(0.544)	0.337
63	5.25	3.90	0.655	0.268	(0.590)	0.388
64	5.33	4.20	0.706	0.268	(0.635)	0.438
65	5.42	4.70	0.790	0.268	(0.711)	0.522
66	5.50	5.60	0.941	0.268	(0.847)	0.673
67	5.58	1.90	0.319	0.268	(0.287)	0.052
68	5.67	0.90	0.151	(0.268)	0.136	0.015
69	5.75	0.60	0.101	(0.268)	0.091	0.010
70	5.83	0.50	0.084	(0.268)	0.076	0.008
71	5.92	0.30	0.050	(0.268)	0.045	0.005
72	6.00	0.20	0.034	(0.268)	0.030	0.003

(Loss Rate Not Used)

```
   Sum =     100.0                                        Sum =     4.6
    Flood volume = Effective rainfall      0.38(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
    Total soil loss =      1.02(In)
    Total soil loss =     0.631(Ac.Ft)
    Total rainfall =      1.40(In)
    Flood volume =       10424.6 Cubic Feet
    Total soil loss =       27486.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      4.112(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        6 - 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      0.05  Q         |         |         |         |
  0+15       0.0010      0.07  Q         |         |         |         |
  0+20       0.0015      0.07  Q         |         |         |         |
  0+25       0.0020      0.07  Q         |         |         |         |
  0+30       0.0025      0.08  Q         |         |         |         |
  0+35       0.0031      0.09  Q         |         |         |         |
  0+40       0.0037      0.09  Q         |         |         |         |
  0+45       0.0043      0.09  Q         |         |         |         |
  0+50       0.0049      0.09  Q         |         |         |         |
  0+55       0.0056      0.09  Q         |         |         |         |
  1+ 0       0.0062      0.09  QV        |         |         |         |
  1+ 5       0.0069      0.10  QV        |         |         |         |
  1+10       0.0076      0.10  QV        |         |         |         |
  1+15       0.0083      0.10  QV        |         |         |         |
  1+20       0.0090      0.10  QV        |         |         |         |
  1+25       0.0096      0.10  QV        |         |         |         |
  1+30       0.0103      0.10  QV        |         |         |         |
  1+35       0.0110      0.10  QV        |         |         |         |
  1+40       0.0117      0.10  QV        |         |         |         |
  1+45       0.0124      0.10  Q V       |         |         |         |
  1+50       0.0131      0.10  Q V       |         |         |         |
  1+55       0.0138      0.10  Q V       |         |         |         |
  2+ 0       0.0146      0.11  Q V       |         |         |         |
  2+ 5       0.0153      0.11  Q V       |         |         |         |
  2+10       0.0160      0.11  Q V       |         |         |         |
  2+15       0.0168      0.11  Q V       |         |         |         |
  2+20       0.0176      0.11  Q V       |         |         |         |
  2+25       0.0184      0.11  Q  V      |         |         |         |
  2+30       0.0191      0.11  Q  V      |         |         |         |
  2+35       0.0199      0.11  Q  V      |         |         |         |
  2+40       0.0207      0.11  Q  V      |         |         |         |
  2+45       0.0215      0.12  Q  V      |         |         |         |
  2+50       0.0224      0.12  Q  V      |         |         |         |
  2+55       0.0232      0.13  Q  V      |         |         |         |
  3+ 0       0.0241      0.13  Q   V     |         |         |         |
  3+ 5       0.0250      0.13  Q   V     |         |         |         |
  3+10       0.0259      0.13  Q   V     |         |         |         |
  3+15       0.0268      0.14  Q   V     |         |         |         |
  3+20       0.0278      0.14  Q   V     |         |         |         |
```


3+25 0.0287 0.14
3+30 0.0298 0.15
3+35 0.0309 0.16
3+40 0.0321 0.17
3+45 0.0333 0.18
3+50 0.0346 0.19
3+55 0.0360 0.19
4+ 0 0.0373 0.20
4+ 5 0.0387 0.21
4+10 0.0403 0.23
4+15 0.0423 0.29
4+20 0.0451 0.40
4+25 0.0486 0.52
4+30 0.0527 0.60
4+35 0.0573 0.66
4+40 0.0627 0.78
4+45 0.0688 0.90
4+50 0.0756 0.98
4+55 0.0828 1.04
5+ 0 0.0907 1.16
5+ 5 0.1006 1.44
5+10 0.1142 1.97
5+15 0.1312 2.47
5+20 0.1510 2.88
5+25 0.1741 3.36
5+30 0.2025 4.11
5+35 0.2247 3.23
5+40 0.2324 1.11
5+45 0.2359 0.52
5+50 0.2378 0.27
5+55 0.2388 0.14
6+ 0 0.2391 0.05
6+ 5 0.2392 0.02
6+10 0.2393 0.01
6+15 0.2393 0.00
6+20 0.2393 0.00
6+25 0.2393 0.00

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 09/12/22 File: DAC2242.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
2-YR
24-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 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]
7.46	2.50	18.65

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	6.00	44.76

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	0.020	(0.474)		0.018	0.002
2	0.17	0.07	0.020	(0.473)		0.018	0.002
3	0.25	0.07	0.020	(0.471)		0.018	0.002
4	0.33	0.10	0.030	(0.469)		0.027	0.003
5	0.42	0.10	0.030	(0.467)		0.027	0.003
6	0.50	0.10	0.030	(0.465)		0.027	0.003
7	0.58	0.10	0.030	(0.463)		0.027	0.003
8	0.67	0.10	0.030	(0.462)		0.027	0.003
9	0.75	0.10	0.030	(0.460)		0.027	0.003
10	0.83	0.13	0.040	(0.458)		0.036	0.004
11	0.92	0.13	0.040	(0.456)		0.036	0.004
12	1.00	0.13	0.040	(0.454)		0.036	0.004
13	1.08	0.10	0.030	(0.453)		0.027	0.003

14	1.17	0.10	0.030	(0.451)	0.027	0.003
15	1.25	0.10	0.030	(0.449)	0.027	0.003
16	1.33	0.10	0.030	(0.447)	0.027	0.003
17	1.42	0.10	0.030	(0.445)	0.027	0.003
18	1.50	0.10	0.030	(0.444)	0.027	0.003
19	1.58	0.10	0.030	(0.442)	0.027	0.003
20	1.67	0.10	0.030	(0.440)	0.027	0.003
21	1.75	0.10	0.030	(0.438)	0.027	0.003
22	1.83	0.13	0.040	(0.437)	0.036	0.004
23	1.92	0.13	0.040	(0.435)	0.036	0.004
24	2.00	0.13	0.040	(0.433)	0.036	0.004
25	2.08	0.13	0.040	(0.431)	0.036	0.004
26	2.17	0.13	0.040	(0.430)	0.036	0.004
27	2.25	0.13	0.040	(0.428)	0.036	0.004
28	2.33	0.13	0.040	(0.426)	0.036	0.004
29	2.42	0.13	0.040	(0.424)	0.036	0.004
30	2.50	0.13	0.040	(0.423)	0.036	0.004
31	2.58	0.17	0.050	(0.421)	0.045	0.005
32	2.67	0.17	0.050	(0.419)	0.045	0.005
33	2.75	0.17	0.050	(0.417)	0.045	0.005
34	2.83	0.17	0.050	(0.416)	0.045	0.005
35	2.92	0.17	0.050	(0.414)	0.045	0.005
36	3.00	0.17	0.050	(0.412)	0.045	0.005
37	3.08	0.17	0.050	(0.411)	0.045	0.005
38	3.17	0.17	0.050	(0.409)	0.045	0.005
39	3.25	0.17	0.050	(0.407)	0.045	0.005
40	3.33	0.17	0.050	(0.405)	0.045	0.005
41	3.42	0.17	0.050	(0.404)	0.045	0.005
42	3.50	0.17	0.050	(0.402)	0.045	0.005
43	3.58	0.17	0.050	(0.400)	0.045	0.005
44	3.67	0.17	0.050	(0.399)	0.045	0.005
45	3.75	0.17	0.050	(0.397)	0.045	0.005
46	3.83	0.20	0.060	(0.395)	0.054	0.006
47	3.92	0.20	0.060	(0.394)	0.054	0.006
48	4.00	0.20	0.060	(0.392)	0.054	0.006
49	4.08	0.20	0.060	(0.390)	0.054	0.006
50	4.17	0.20	0.060	(0.389)	0.054	0.006
51	4.25	0.20	0.060	(0.387)	0.054	0.006
52	4.33	0.23	0.070	(0.385)	0.063	0.007
53	4.42	0.23	0.070	(0.384)	0.063	0.007
54	4.50	0.23	0.070	(0.382)	0.063	0.007
55	4.58	0.23	0.070	(0.381)	0.063	0.007
56	4.67	0.23	0.070	(0.379)	0.063	0.007
57	4.75	0.23	0.070	(0.377)	0.063	0.007
58	4.83	0.27	0.080	(0.376)	0.072	0.008
59	4.92	0.27	0.080	(0.374)	0.072	0.008
60	5.00	0.27	0.080	(0.372)	0.072	0.008
61	5.08	0.20	0.060	(0.371)	0.054	0.006
62	5.17	0.20	0.060	(0.369)	0.054	0.006
63	5.25	0.20	0.060	(0.368)	0.054	0.006
64	5.33	0.23	0.070	(0.366)	0.063	0.007
65	5.42	0.23	0.070	(0.364)	0.063	0.007
66	5.50	0.23	0.070	(0.363)	0.063	0.007
67	5.58	0.27	0.080	(0.361)	0.072	0.008
68	5.67	0.27	0.080	(0.360)	0.072	0.008
69	5.75	0.27	0.080	(0.358)	0.072	0.008
70	5.83	0.27	0.080	(0.356)	0.072	0.008
71	5.92	0.27	0.080	(0.355)	0.072	0.008
72	6.00	0.27	0.080	(0.353)	0.072	0.008
73	6.08	0.30	0.090	(0.352)	0.081	0.009

74	6.17	0.30	0.090	(0.350)	0.081	0.009
75	6.25	0.30	0.090	(0.349)	0.081	0.009
76	6.33	0.30	0.090	(0.347)	0.081	0.009
77	6.42	0.30	0.090	(0.345)	0.081	0.009
78	6.50	0.30	0.090	(0.344)	0.081	0.009
79	6.58	0.33	0.100	(0.342)	0.090	0.010
80	6.67	0.33	0.100	(0.341)	0.090	0.010
81	6.75	0.33	0.100	(0.339)	0.090	0.010
82	6.83	0.33	0.100	(0.338)	0.090	0.010
83	6.92	0.33	0.100	(0.336)	0.090	0.010
84	7.00	0.33	0.100	(0.335)	0.090	0.010
85	7.08	0.33	0.100	(0.333)	0.090	0.010
86	7.17	0.33	0.100	(0.332)	0.090	0.010
87	7.25	0.33	0.100	(0.330)	0.090	0.010
88	7.33	0.37	0.110	(0.329)	0.099	0.011
89	7.42	0.37	0.110	(0.327)	0.099	0.011
90	7.50	0.37	0.110	(0.326)	0.099	0.011
91	7.58	0.40	0.120	(0.324)	0.108	0.012
92	7.67	0.40	0.120	(0.323)	0.108	0.012
93	7.75	0.40	0.120	(0.321)	0.108	0.012
94	7.83	0.43	0.130	(0.320)	0.117	0.013
95	7.92	0.43	0.130	(0.318)	0.117	0.013
96	8.00	0.43	0.130	(0.317)	0.117	0.013
97	8.08	0.50	0.150	(0.315)	0.135	0.015
98	8.17	0.50	0.150	(0.314)	0.135	0.015
99	8.25	0.50	0.150	(0.312)	0.135	0.015
100	8.33	0.50	0.150	(0.311)	0.135	0.015
101	8.42	0.50	0.150	(0.309)	0.135	0.015
102	8.50	0.50	0.150	(0.308)	0.135	0.015
103	8.58	0.53	0.160	(0.306)	0.144	0.016
104	8.67	0.53	0.160	(0.305)	0.144	0.016
105	8.75	0.53	0.160	(0.304)	0.144	0.016
106	8.83	0.57	0.170	(0.302)	0.153	0.017
107	8.92	0.57	0.170	(0.301)	0.153	0.017
108	9.00	0.57	0.170	(0.299)	0.153	0.017
109	9.08	0.63	0.190	(0.298)	0.171	0.019
110	9.17	0.63	0.190	(0.296)	0.171	0.019
111	9.25	0.63	0.190	(0.295)	0.171	0.019
112	9.33	0.67	0.200	(0.294)	0.180	0.020
113	9.42	0.67	0.200	(0.292)	0.180	0.020
114	9.50	0.67	0.200	(0.291)	0.180	0.020
115	9.58	0.70	0.210	(0.289)	0.189	0.021
116	9.67	0.70	0.210	(0.288)	0.189	0.021
117	9.75	0.70	0.210	(0.287)	0.189	0.021
118	9.83	0.73	0.220	(0.285)	0.198	0.022
119	9.92	0.73	0.220	(0.284)	0.198	0.022
120	10.00	0.73	0.220	(0.283)	0.198	0.022
121	10.08	0.50	0.150	(0.281)	0.135	0.015
122	10.17	0.50	0.150	(0.280)	0.135	0.015
123	10.25	0.50	0.150	(0.278)	0.135	0.015
124	10.33	0.50	0.150	(0.277)	0.135	0.015
125	10.42	0.50	0.150	(0.276)	0.135	0.015
126	10.50	0.50	0.150	(0.274)	0.135	0.015
127	10.58	0.67	0.200	(0.273)	0.180	0.020
128	10.67	0.67	0.200	(0.272)	0.180	0.020
129	10.75	0.67	0.200	(0.270)	0.180	0.020
130	10.83	0.67	0.200	(0.269)	0.180	0.020
131	10.92	0.67	0.200	(0.268)	0.180	0.020
132	11.00	0.67	0.200	(0.266)	0.180	0.020
133	11.08	0.63	0.190	(0.265)	0.171	0.019

134	11.17	0.63	0.190	(0.264)	0.171	0.019
135	11.25	0.63	0.190	(0.263)	0.171	0.019
136	11.33	0.63	0.190	(0.261)	0.171	0.019
137	11.42	0.63	0.190	(0.260)	0.171	0.019
138	11.50	0.63	0.190	(0.259)	0.171	0.019
139	11.58	0.57	0.170	(0.257)	0.153	0.017
140	11.67	0.57	0.170	(0.256)	0.153	0.017
141	11.75	0.57	0.170	(0.255)	0.153	0.017
142	11.83	0.60	0.180	(0.254)	0.162	0.018
143	11.92	0.60	0.180	(0.252)	0.162	0.018
144	12.00	0.60	0.180	(0.251)	0.162	0.018
145	12.08	0.83	0.250	(0.250)	0.225	0.025
146	12.17	0.83	0.250	(0.249)	0.225	0.025
147	12.25	0.83	0.250	(0.247)	0.225	0.025
148	12.33	0.87	0.260	(0.246)	0.234	0.026
149	12.42	0.87	0.260	(0.245)	0.234	0.026
150	12.50	0.87	0.260	(0.244)	0.234	0.026
151	12.58	0.93	0.280	0.242	(0.252)	0.038
152	12.67	0.93	0.280	0.241	(0.252)	0.039
153	12.75	0.93	0.280	0.240	(0.252)	0.040
154	12.83	0.97	0.290	0.239	(0.261)	0.051
155	12.92	0.97	0.290	0.238	(0.261)	0.052
156	13.00	0.97	0.290	0.236	(0.261)	0.054
157	13.08	1.13	0.340	0.235	(0.306)	0.105
158	13.17	1.13	0.340	0.234	(0.306)	0.106
159	13.25	1.13	0.340	0.233	(0.306)	0.107
160	13.33	1.13	0.340	0.232	(0.306)	0.108
161	13.42	1.13	0.340	0.230	(0.306)	0.110
162	13.50	1.13	0.340	0.229	(0.306)	0.111
163	13.58	0.77	0.230	(0.228)	0.207	0.023
164	13.67	0.77	0.230	(0.227)	0.207	0.023
165	13.75	0.77	0.230	(0.226)	0.207	0.023
166	13.83	0.77	0.230	(0.225)	0.207	0.023
167	13.92	0.77	0.230	(0.223)	0.207	0.023
168	14.00	0.77	0.230	(0.222)	0.207	0.023
169	14.08	0.90	0.270	0.221	(0.243)	0.049
170	14.17	0.90	0.270	0.220	(0.243)	0.050
171	14.25	0.90	0.270	0.219	(0.243)	0.051
172	14.33	0.87	0.260	0.218	(0.234)	0.042
173	14.42	0.87	0.260	0.217	(0.234)	0.043
174	14.50	0.87	0.260	0.216	(0.234)	0.044
175	14.58	0.87	0.260	0.214	(0.234)	0.046
176	14.67	0.87	0.260	0.213	(0.234)	0.047
177	14.75	0.87	0.260	0.212	(0.234)	0.048
178	14.83	0.83	0.250	0.211	(0.225)	0.039
179	14.92	0.83	0.250	0.210	(0.225)	0.040
180	15.00	0.83	0.250	0.209	(0.225)	0.041
181	15.08	0.80	0.240	0.208	(0.216)	0.032
182	15.17	0.80	0.240	0.207	(0.216)	0.033
183	15.25	0.80	0.240	0.206	(0.216)	0.034
184	15.33	0.77	0.230	0.205	(0.207)	0.025
185	15.42	0.77	0.230	0.204	(0.207)	0.026
186	15.50	0.77	0.230	0.203	(0.207)	0.027
187	15.58	0.63	0.190	(0.202)	0.171	0.019
188	15.67	0.63	0.190	(0.201)	0.171	0.019
189	15.75	0.63	0.190	(0.200)	0.171	0.019
190	15.83	0.63	0.190	(0.199)	0.171	0.019
191	15.92	0.63	0.190	(0.198)	0.171	0.019
192	16.00	0.63	0.190	(0.197)	0.171	0.019
193	16.08	0.13	0.040	(0.196)	0.036	0.004

194	16.17	0.13	0.040	(0.195)	0.036	0.004
195	16.25	0.13	0.040	(0.194)	0.036	0.004
196	16.33	0.13	0.040	(0.193)	0.036	0.004
197	16.42	0.13	0.040	(0.192)	0.036	0.004
198	16.50	0.13	0.040	(0.191)	0.036	0.004
199	16.58	0.10	0.030	(0.190)	0.027	0.003
200	16.67	0.10	0.030	(0.189)	0.027	0.003
201	16.75	0.10	0.030	(0.188)	0.027	0.003
202	16.83	0.10	0.030	(0.187)	0.027	0.003
203	16.92	0.10	0.030	(0.186)	0.027	0.003
204	17.00	0.10	0.030	(0.185)	0.027	0.003
205	17.08	0.17	0.050	(0.184)	0.045	0.005
206	17.17	0.17	0.050	(0.183)	0.045	0.005
207	17.25	0.17	0.050	(0.182)	0.045	0.005
208	17.33	0.17	0.050	(0.181)	0.045	0.005
209	17.42	0.17	0.050	(0.180)	0.045	0.005
210	17.50	0.17	0.050	(0.179)	0.045	0.005
211	17.58	0.17	0.050	(0.178)	0.045	0.005
212	17.67	0.17	0.050	(0.178)	0.045	0.005
213	17.75	0.17	0.050	(0.177)	0.045	0.005
214	17.83	0.13	0.040	(0.176)	0.036	0.004
215	17.92	0.13	0.040	(0.175)	0.036	0.004
216	18.00	0.13	0.040	(0.174)	0.036	0.004
217	18.08	0.13	0.040	(0.173)	0.036	0.004
218	18.17	0.13	0.040	(0.172)	0.036	0.004
219	18.25	0.13	0.040	(0.172)	0.036	0.004
220	18.33	0.13	0.040	(0.171)	0.036	0.004
221	18.42	0.13	0.040	(0.170)	0.036	0.004
222	18.50	0.13	0.040	(0.169)	0.036	0.004
223	18.58	0.10	0.030	(0.168)	0.027	0.003
224	18.67	0.10	0.030	(0.167)	0.027	0.003
225	18.75	0.10	0.030	(0.167)	0.027	0.003
226	18.83	0.07	0.020	(0.166)	0.018	0.002
227	18.92	0.07	0.020	(0.165)	0.018	0.002
228	19.00	0.07	0.020	(0.164)	0.018	0.002
229	19.08	0.10	0.030	(0.163)	0.027	0.003
230	19.17	0.10	0.030	(0.163)	0.027	0.003
231	19.25	0.10	0.030	(0.162)	0.027	0.003
232	19.33	0.13	0.040	(0.161)	0.036	0.004
233	19.42	0.13	0.040	(0.160)	0.036	0.004
234	19.50	0.13	0.040	(0.160)	0.036	0.004
235	19.58	0.10	0.030	(0.159)	0.027	0.003
236	19.67	0.10	0.030	(0.158)	0.027	0.003
237	19.75	0.10	0.030	(0.157)	0.027	0.003
238	19.83	0.07	0.020	(0.157)	0.018	0.002
239	19.92	0.07	0.020	(0.156)	0.018	0.002
240	20.00	0.07	0.020	(0.155)	0.018	0.002
241	20.08	0.10	0.030	(0.155)	0.027	0.003
242	20.17	0.10	0.030	(0.154)	0.027	0.003
243	20.25	0.10	0.030	(0.153)	0.027	0.003
244	20.33	0.10	0.030	(0.153)	0.027	0.003
245	20.42	0.10	0.030	(0.152)	0.027	0.003
246	20.50	0.10	0.030	(0.151)	0.027	0.003
247	20.58	0.10	0.030	(0.151)	0.027	0.003
248	20.67	0.10	0.030	(0.150)	0.027	0.003
249	20.75	0.10	0.030	(0.150)	0.027	0.003
250	20.83	0.07	0.020	(0.149)	0.018	0.002
251	20.92	0.07	0.020	(0.148)	0.018	0.002
252	21.00	0.07	0.020	(0.148)	0.018	0.002
253	21.08	0.10	0.030	(0.147)	0.027	0.003

254	21.17	0.10	0.030	(0.147)	0.027	0.003
255	21.25	0.10	0.030	(0.146)	0.027	0.003
256	21.33	0.07	0.020	(0.145)	0.018	0.002
257	21.42	0.07	0.020	(0.145)	0.018	0.002
258	21.50	0.07	0.020	(0.144)	0.018	0.002
259	21.58	0.10	0.030	(0.144)	0.027	0.003
260	21.67	0.10	0.030	(0.143)	0.027	0.003
261	21.75	0.10	0.030	(0.143)	0.027	0.003
262	21.83	0.07	0.020	(0.142)	0.018	0.002
263	21.92	0.07	0.020	(0.142)	0.018	0.002
264	22.00	0.07	0.020	(0.141)	0.018	0.002
265	22.08	0.10	0.030	(0.141)	0.027	0.003
266	22.17	0.10	0.030	(0.140)	0.027	0.003
267	22.25	0.10	0.030	(0.140)	0.027	0.003
268	22.33	0.07	0.020	(0.139)	0.018	0.002
269	22.42	0.07	0.020	(0.139)	0.018	0.002
270	22.50	0.07	0.020	(0.139)	0.018	0.002
271	22.58	0.07	0.020	(0.138)	0.018	0.002
272	22.67	0.07	0.020	(0.138)	0.018	0.002
273	22.75	0.07	0.020	(0.137)	0.018	0.002
274	22.83	0.07	0.020	(0.137)	0.018	0.002
275	22.92	0.07	0.020	(0.137)	0.018	0.002
276	23.00	0.07	0.020	(0.136)	0.018	0.002
277	23.08	0.07	0.020	(0.136)	0.018	0.002
278	23.17	0.07	0.020	(0.136)	0.018	0.002
279	23.25	0.07	0.020	(0.136)	0.018	0.002
280	23.33	0.07	0.020	(0.135)	0.018	0.002
281	23.42	0.07	0.020	(0.135)	0.018	0.002
282	23.50	0.07	0.020	(0.135)	0.018	0.002
283	23.58	0.07	0.020	(0.135)	0.018	0.002
284	23.67	0.07	0.020	(0.134)	0.018	0.002
285	23.75	0.07	0.020	(0.134)	0.018	0.002
286	23.83	0.07	0.020	(0.134)	0.018	0.002
287	23.92	0.07	0.020	(0.134)	0.018	0.002
288	24.00	0.07	0.020	(0.134)	0.018	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 3.8

Flood volume = Effective rainfall 0.32(In)
times area 7.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 2.18(In)
Total soil loss = 1.357(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 8599.9 Cubic Feet
Total soil loss = 59098.6 Cubic Feet

Peak flow rate of this hydrograph = 0.824(CFS)

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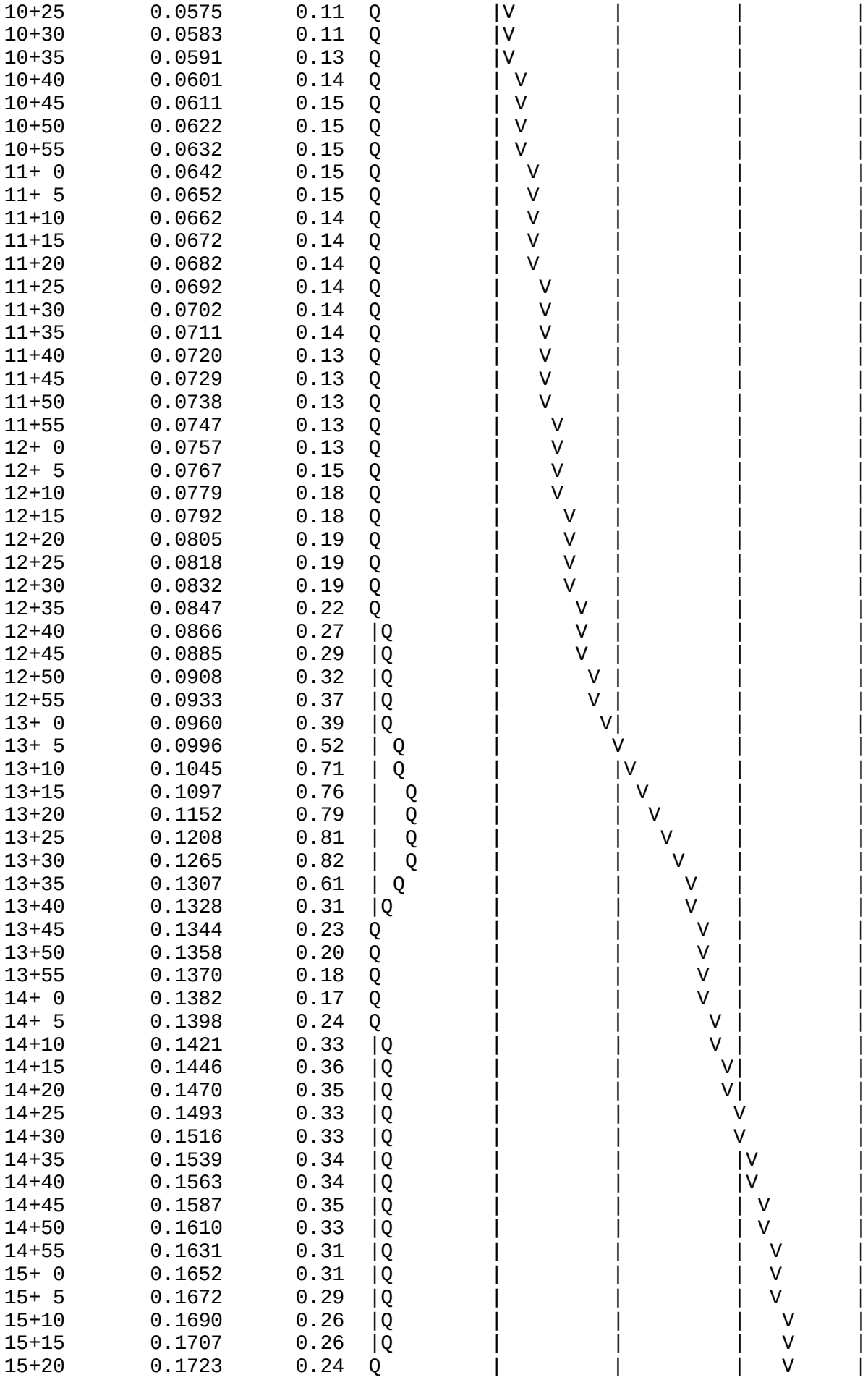
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q	|	|	|	|
0+10	0.0001	0.01	Q	|	|	|	|
0+15	0.0002	0.01	Q	|	|	|	|
0+20	0.0003	0.02	Q	|	|	|	|

0+25	0.0005	0.02	Q	|	|	|	|
0+30	0.0006	0.02	Q	|	|	|	|
0+35	0.0008	0.02	Q	|	|	|	|
0+40	0.0009	0.02	Q	|	|	|	|
0+45	0.0011	0.02	Q	|	|	|	|
0+50	0.0013	0.03	Q	|	|	|	|
0+55	0.0015	0.03	Q	|	|	|	|
1+ 0	0.0017	0.03	Q	|	|	|	|
1+ 5	0.0018	0.03	Q	|	|	|	|
1+10	0.0020	0.02	Q	|	|	|	|
1+15	0.0022	0.02	Q	|	|	|	|
1+20	0.0023	0.02	Q	|	|	|	|
1+25	0.0025	0.02	Q	|	|	|	|
1+30	0.0026	0.02	Q	|	|	|	|
1+35	0.0028	0.02	Q	|	|	|	|
1+40	0.0030	0.02	Q	|	|	|	|
1+45	0.0031	0.02	Q	|	|	|	|
1+50	0.0033	0.03	Q	|	|	|	|
1+55	0.0035	0.03	Q	|	|	|	|
2+ 0	0.0037	0.03	Q	|	|	|	|
2+ 5	0.0039	0.03	Q	|	|	|	|
2+10	0.0041	0.03	Q	|	|	|	|
2+15	0.0043	0.03	Q	|	|	|	|
2+20	0.0045	0.03	Q	|	|	|	|
2+25	0.0047	0.03	Q	|	|	|	|
2+30	0.0049	0.03	Q	|	|	|	|
2+35	0.0051	0.03	QV	|	|	|	|
2+40	0.0054	0.04	QV	|	|	|	|
2+45	0.0056	0.04	QV	|	|	|	|
2+50	0.0059	0.04	QV	|	|	|	|
2+55	0.0062	0.04	QV	|	|	|	|
3+ 0	0.0064	0.04	QV	|	|	|	|
3+ 5	0.0067	0.04	QV	|	|	|	|
3+10	0.0069	0.04	QV	|	|	|	|
3+15	0.0072	0.04	QV	|	|	|	|
3+20	0.0075	0.04	QV	|	|	|	|
3+25	0.0077	0.04	QV	|	|	|	|
3+30	0.0080	0.04	QV	|	|	|	|
3+35	0.0082	0.04	QV	|	|	|	|
3+40	0.0085	0.04	QV	|	|	|	|
3+45	0.0088	0.04	QV	|	|	|	|
3+50	0.0090	0.04	QV	|	|	|	|
3+55	0.0093	0.04	QV	|	|	|	|
4+ 0	0.0096	0.04	QV	|	|	|	|
4+ 5	0.0099	0.04	Q V	|	|	|	|
4+10	0.0103	0.05	Q V	|	|	|	|
4+15	0.0106	0.05	Q V	|	|	|	|
4+20	0.0109	0.05	Q V	|	|	|	|
4+25	0.0112	0.05	Q V	|	|	|	|
4+30	0.0116	0.05	Q V	|	|	|	|
4+35	0.0120	0.05	Q V	|	|	|	|
4+40	0.0123	0.05	Q V	|	|	|	|
4+45	0.0127	0.05	Q V	|	|	|	|
4+50	0.0131	0.06	Q V	|	|	|	|
4+55	0.0135	0.06	Q V	|	|	|	|
5+ 0	0.0139	0.06	Q V	|	|	|	|
5+ 5	0.0143	0.05	Q V	|	|	|	|
5+10	0.0146	0.05	Q V	|	|	|	|
5+15	0.0149	0.05	Q V	|	|	|	|
5+20	0.0152	0.05	Q V	|	|	|	|

5+25	0.0156	0.05	Q	V	|	|	|	|
5+30	0.0160	0.05	Q	V	|	|	|	|
5+35	0.0163	0.05	Q	V	|	|	|	|
5+40	0.0167	0.06	Q	V	|	|	|	|
5+45	0.0171	0.06	Q	V	|	|	|	|
5+50	0.0176	0.06	Q	V	|	|	|	|
5+55	0.0180	0.06	Q	V	|	|	|	|
6+ 0	0.0184	0.06	Q	V	|	|	|	|
6+ 5	0.0188	0.06	Q	V	|	|	|	|
6+10	0.0193	0.07	Q	V	|	|	|	|
6+15	0.0197	0.07	Q	V	|	|	|	|
6+20	0.0202	0.07	Q	V	|	|	|	|
6+25	0.0207	0.07	Q	V	|	|	|	|
6+30	0.0211	0.07	Q	V	|	|	|	|
6+35	0.0216	0.07	Q	V	|	|	|	|
6+40	0.0221	0.07	Q	V	|	|	|	|
6+45	0.0226	0.07	Q	V	|	|	|	|
6+50	0.0231	0.07	Q	V	|	|	|	|
6+55	0.0237	0.08	Q	V	|	|	|	|
7+ 0	0.0242	0.08	Q	V	|	|	|	|
7+ 5	0.0247	0.08	Q	V	|	|	|	|
7+10	0.0252	0.08	Q	V	|	|	|	|
7+15	0.0257	0.08	Q	V	|	|	|	|
7+20	0.0263	0.08	Q	V	|	|	|	|
7+25	0.0268	0.08	Q	V	|	|	|	|
7+30	0.0274	0.08	Q	V	|	|	|	|
7+35	0.0280	0.08	Q	V	|	|	|	|
7+40	0.0286	0.09	Q	V	|	|	|	|
7+45	0.0292	0.09	Q	V	|	|	|	|
7+50	0.0298	0.09	Q	V	|	|	|	|
7+55	0.0305	0.10	Q	V	|	|	|	|
8+ 0	0.0312	0.10	Q	V	|	|	|	|
8+ 5	0.0319	0.10	Q	V	|	|	|	|
8+10	0.0326	0.11	Q	V	|	|	|	|
8+15	0.0334	0.11	Q	V	|	|	|	|
8+20	0.0342	0.11	Q	V	|	|	|	|
8+25	0.0350	0.11	Q	V	|	|	|	|
8+30	0.0357	0.11	Q	V	|	|	|	|
8+35	0.0365	0.12	Q	V	|	|	|	|
8+40	0.0373	0.12	Q	V	|	|	|	|
8+45	0.0382	0.12	Q	V	|	|	|	|
8+50	0.0390	0.12	Q	V	|	|	|	|
8+55	0.0399	0.13	Q	V	|	|	|	|
9+ 0	0.0408	0.13	Q	V	|	|	|	|
9+ 5	0.0417	0.13	Q	V	|	|	|	|
9+10	0.0426	0.14	Q	V	|	|	|	|
9+15	0.0436	0.14	Q	V	|	|	|	|
9+20	0.0446	0.14	Q	V	|	|	|	|
9+25	0.0456	0.15	Q	V	|	|	|	|
9+30	0.0467	0.15	Q	V	|	|	|	|
9+35	0.0477	0.15	Q	V	|	|	|	|
9+40	0.0488	0.16	Q	V	|	|	|	|
9+45	0.0499	0.16	Q	V	|	|	|	|
9+50	0.0510	0.16	Q	V	|	|	|	|
9+55	0.0521	0.16	Q	V	|	|	|	|
10+ 0	0.0532	0.16	Q	V	|	|	|	|
10+ 5	0.0543	0.15	Q	V	|	|	|	|
10+10	0.0551	0.12	Q	V	|	|	|	|
10+15	0.0559	0.12	Q	V	|	|	|	|
10+20	0.0567	0.11	Q	V	|	|	|	|



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15+25       0.1738      0.21  Q        |          |          |    V     |
15+30       0.1752      0.20  Q        |          |          |    V     |
15+35       0.1764      0.19  Q        |          |          |    V     |
15+40       0.1775      0.16  Q        |          |          |    V     |
15+45       0.1785      0.15  Q        |          |          |     V    |
15+50       0.1795      0.15  Q        |          |          |     V    |
15+55       0.1805      0.14  Q        |          |          |     V    |
16+ 0       0.1815      0.14  Q        |          |          |     V    |
16+ 5       0.1822      0.11  Q        |          |          |     V    |
16+10       0.1826      0.05  Q        |          |          |     V    |
16+15       0.1829      0.04  Q        |          |          |      V   |
16+20       0.1831      0.03  Q        |          |          |      V   |
16+25       0.1833      0.03  Q        |          |          |      V   |
16+30       0.1835      0.03  Q        |          |          |      V   |
16+35       0.1837      0.03  Q        |          |          |      V   |
16+40       0.1839      0.02  Q        |          |          |      V   |
16+45       0.1841      0.02  Q        |          |          |      V   |
16+50       0.1842      0.02  Q        |          |          |      V   |
16+55       0.1844      0.02  Q        |          |          |      V   |
17+ 0       0.1845      0.02  Q        |          |          |      V   |
17+ 5       0.1847      0.03  Q        |          |          |      V   |
17+10       0.1850      0.03  Q        |          |          |      V   |
17+15       0.1852      0.04  Q        |          |          |      V   |
17+20       0.1855      0.04  Q        |          |          |      V   |
17+25       0.1857      0.04  Q        |          |          |      V   |
17+30       0.1860      0.04  Q        |          |          |      V   |
17+35       0.1862      0.04  Q        |          |          |      V   |
17+40       0.1865      0.04  Q        |          |          |      V   |
17+45       0.1867      0.04  Q        |          |          |      V   |
17+50       0.1870      0.04  Q        |          |          |      V   |
17+55       0.1872      0.03  Q        |          |          |      V   |
18+ 0       0.1874      0.03  Q        |          |          |      V   |
18+ 5       0.1876      0.03  Q        |          |          |       V  |
18+10       0.1878      0.03  Q        |          |          |       V  |
18+15       0.1880      0.03  Q        |          |          |       V  |
18+20       0.1883      0.03  Q        |          |          |       V  |
18+25       0.1885      0.03  Q        |          |          |       V  |
18+30       0.1887      0.03  Q        |          |          |       V  |
18+35       0.1889      0.03  Q        |          |          |       V  |
18+40       0.1890      0.02  Q        |          |          |       V  |
18+45       0.1892      0.02  Q        |          |          |       V  |
18+50       0.1893      0.02  Q        |          |          |       V  |
18+55       0.1894      0.02  Q        |          |          |       V  |
19+ 0       0.1895      0.02  Q        |          |          |       V  |
19+ 5       0.1897      0.02  Q        |          |          |       V  |
19+10       0.1898      0.02  Q        |          |          |       V  |
19+15       0.1900      0.02  Q        |          |          |       V  |
19+20       0.1901      0.02  Q        |          |          |       V  |
19+25       0.1903      0.03  Q        |          |          |       V  |
19+30       0.1905      0.03  Q        |          |          |       V  |
19+35       0.1907      0.03  Q        |          |          |       V  |
19+40       0.1909      0.02  Q        |          |          |       V  |
19+45       0.1910      0.02  Q        |          |          |       V  |
19+50       0.1912      0.02  Q        |          |          |       V  |
19+55       0.1913      0.02  Q        |          |          |       V  |
20+ 0       0.1914      0.02  Q        |          |          |       V  |
20+ 5       0.1915      0.02  Q        |          |          |       V  |
20+10       0.1917      0.02  Q        |          |          |       V  |
20+15       0.1918      0.02  Q        |          |          |       V  |
20+20       0.1920      0.02  Q        |          |          |       V  |
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  20+25       0.1921      0.02  Q          |          |          |        V |
  20+30       0.1923      0.02  Q          |          |          |        V |
  20+35       0.1925      0.02  Q          |          |          |        V |
  20+40       0.1926      0.02  Q          |          |          |         V|
  20+45       0.1928      0.02  Q          |          |          |         V|
  20+50       0.1929      0.02  Q          |          |          |         V|
  20+55       0.1930      0.02  Q          |          |          |         V|
  21+ 0       0.1931      0.02  Q          |          |          |         V|
  21+ 5       0.1932      0.02  Q          |          |          |         V|
  21+10       0.1934      0.02  Q          |          |          |         V|
  21+15       0.1935      0.02  Q          |          |          |         V|
  21+20       0.1937      0.02  Q          |          |          |         V|
  21+25       0.1938      0.02  Q          |          |          |         V|
  21+30       0.1939      0.02  Q          |          |          |         V|
  21+35       0.1940      0.02  Q          |          |          |         V|
  21+40       0.1942      0.02  Q          |          |          |         V|
  21+45       0.1943      0.02  Q          |          |          |         V|
  21+50       0.1945      0.02  Q          |          |          |         V|
  21+55       0.1946      0.02  Q          |          |          |         V|
  22+ 0       0.1947      0.02  Q          |          |          |         V|
  22+ 5       0.1948      0.02  Q          |          |          |         V|
  22+10       0.1949      0.02  Q          |          |          |         V|
  22+15       0.1951      0.02  Q          |          |          |         V|
  22+20       0.1952      0.02  Q          |          |          |         V|
  22+25       0.1953      0.02  Q          |          |          |         V|
  22+30       0.1955      0.02  Q          |          |          |         V|
  22+35       0.1956      0.02  Q          |          |          |         V|
  22+40       0.1957      0.02  Q          |          |          |         V|
  22+45       0.1958      0.02  Q          |          |          |         V|
  22+50       0.1959      0.02  Q          |          |          |         V|
  22+55       0.1960      0.02  Q          |          |          |         V|
  23+ 0       0.1961      0.02  Q          |          |          |         V|
  23+ 5       0.1962      0.02  Q          |          |          |         V|
  23+10       0.1963      0.02  Q          |          |          |         V|
  23+15       0.1964      0.02  Q          |          |          |         V|
  23+20       0.1965      0.02  Q          |          |          |         V|
  23+25       0.1966      0.02  Q          |          |          |         V|
  23+30       0.1967      0.02  Q          |          |          |         V|
  23+35       0.1968      0.02  Q          |          |          |         V|
  23+40       0.1969      0.02  Q          |          |          |         V|
  23+45       0.1970      0.02  Q          |          |          |         V|
  23+50       0.1971      0.02  Q          |          |          |         V|
  23+55       0.1972      0.02  Q          |          |          |         V|
  24+ 0       0.1973      0.02  Q          |          |          |         V|
  24+ 5       0.1974      0.01  Q          |          |          |         V|
  24+10       0.1974      0.00  Q          |          |          |         V|
  24+15       0.1974      0.00  Q          |          |          |         V|
  24+20       0.1974      0.00  Q          |          |          |         V|
  24+25       0.1974      0.00  Q          |          |          |          V
-------------------------------------------------------------------------
```

5-YEAR STORM

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 08/15/22 File: THECOVE15.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
1-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	0.57	8.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.45	22.45

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.776(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.776(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	4.40	0.410	0.268	(0.369)	0.142
2	0.17	4.50	0.419	0.268	(0.377)	0.151
3	0.25	5.40	0.503	0.268	(0.453)	0.235
4	0.33	5.40	0.503	0.268	(0.453)	0.235
5	0.42	5.70	0.531	0.268	(0.478)	0.263
6	0.50	6.40	0.596	0.268	(0.536)	0.328
7	0.58	7.90	0.736	0.268	(0.662)	0.468
8	0.67	9.10	0.847	0.268	(0.763)	0.580
9	0.75	12.80	1.192	0.268	(1.073)	0.924
10	0.83	25.60	2.384	0.268	(2.146)	2.116

```
 11   0.92     7.90      0.736          0.268    (  0.662)        0.468
 12   1.00     4.90      0.456          0.268    (  0.411)        0.189
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     6.1
    Flood volume = Effective rainfall      0.51(In)
     times area      15.5(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
    Total soil loss =      0.27(In)
    Total soil loss =     0.345(Ac.Ft)
    Total rainfall =      0.78(In)
    Flood volume =       28568.7 Cubic Feet
    Total soil loss =       15037.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     20.737(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ------------------------------------------------------------------------
   0+ 5       0.0041      0.59  Q         |         |         |         |
   0+10       0.0158      1.71  V Q       |         |         |         |
   0+15       0.0324      2.41  |V Q      |         |         |         |
   0+20       0.0544      3.19  |  VQ     |         |         |         |
   0+25       0.0789      3.56  |   Q     |         |         |         |
   0+30       0.1076      4.16  |    QV   |         |         |         |
   0+35       0.1445      5.36  |      QV |         |         |         |
   0+40       0.1931      7.06  |        Q|V        |         |         |
   0+45       0.2600      9.71  |         | Q  V    |         |         |
   0+50       0.3817     17.66  |         |         |  Q      |         |
   0+55       0.5245     20.74  |         |         |      Q  |V        |
   1+ 0       0.5927      9.91  |         |  Q      |         |     V   |
   1+ 5       0.6271      5.00  |     Q   |         |         |       V |
   1+10       0.6425      2.23  | Q       |         |         |        V|
   1+15       0.6505      1.16  |Q        |         |         |        V|
   1+20       0.6547      0.60  Q         |         |         |        V|
   1+25       0.6556      0.14  Q         |         |         |        V|
   1+30       0.6558      0.03  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 08/15/22 File: THECOVE35.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
3-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.00	15.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	2.50	38.70

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	1.30	0.211	(0.268)	0.190	0.021
2	0.17	1.30	0.211	(0.268)	0.190	0.021
3	0.25	1.10	0.178	(0.268)	0.161	0.018
4	0.33	1.50	0.243	(0.268)	0.219	0.024
5	0.42	1.50	0.243	(0.268)	0.219	0.024
6	0.50	1.80	0.292	(0.268)	0.263	0.029
7	0.58	1.50	0.243	(0.268)	0.219	0.024
8	0.67	1.80	0.292	(0.268)	0.263	0.029
9	0.75	1.80	0.292	(0.268)	0.263	0.029
10	0.83	1.50	0.243	(0.268)	0.219	0.024
11	0.92	1.60	0.259	(0.268)	0.233	0.026
12	1.00	1.80	0.292	(0.268)	0.263	0.029

13	1.08	2.20	0.357	0.268	(0.321)		0.089
14	1.17	2.20	0.357	0.268	(0.321)		0.089
15	1.25	2.20	0.357	0.268	(0.321)		0.089
16	1.33	2.00	0.324	0.268	(0.292)		0.057
17	1.42	2.60	0.422	0.268	(0.379)		0.154
18	1.50	2.70	0.438	0.268	(0.394)		0.170
19	1.58	2.40	0.389	0.268	(0.350)		0.122
20	1.67	2.70	0.438	0.268	(0.394)		0.170
21	1.75	3.30	0.535	0.268	(0.482)		0.267
22	1.83	3.10	0.503	0.268	(0.452)		0.235
23	1.92	2.90	0.470	0.268	(0.423)		0.203
24	2.00	3.00	0.486	0.268	(0.438)		0.219
25	2.08	3.10	0.503	0.268	(0.452)		0.235
26	2.17	4.20	0.681	0.268	(0.613)		0.413
27	2.25	5.00	0.811	0.268	(0.730)		0.543
28	2.33	3.50	0.568	0.268	(0.511)		0.300
29	2.42	6.80	1.103	0.268	(0.992)		0.835
30	2.50	7.30	1.184	0.268	(1.065)		0.916
31	2.58	8.20	1.330	0.268	(1.197)		1.062
32	2.67	5.90	0.957	0.268	(0.861)		0.689
33	2.75	2.00	0.324	0.268	(0.292)		0.057
34	2.83	1.80	0.292	(0.268)	0.263		0.029
35	2.92	1.80	0.292	(0.268)	0.263		0.029
36	3.00	0.60	0.097	(0.268)	0.088		0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 7.3

Flood volume = Effective rainfall 0.61(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 0.74(In)
Total soil loss = 0.960(Ac.Ft)
Total rainfall = 1.35(In)
Flood volume = 34102.4 Cubic Feet
Total soil loss = 41827.3 Cubic Feet

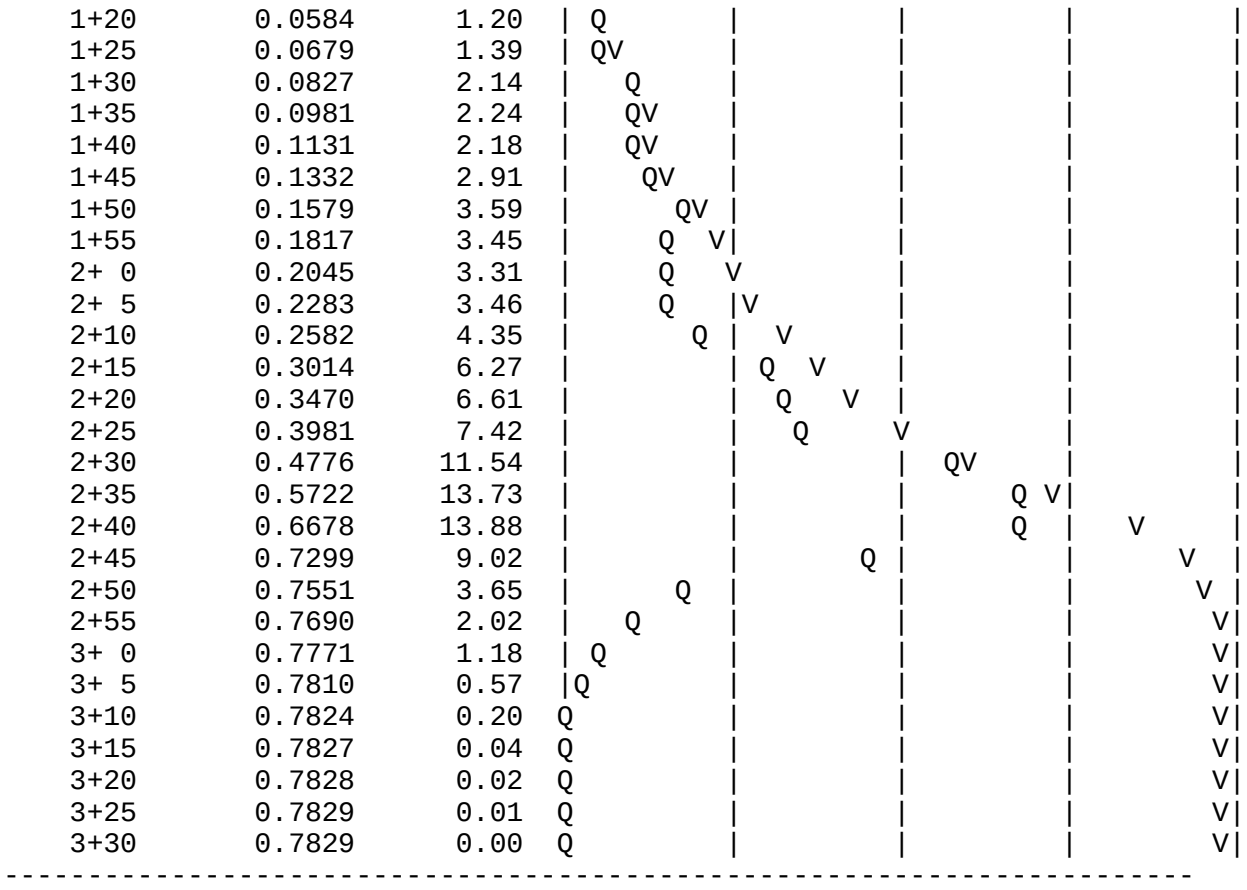
Peak flow rate of this hydrograph = 13.884(CFS)

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3 - 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	0.0006	0.09	Q				
0+10	0.0023	0.25	Q				
0+15	0.0042	0.28	Q				
0+20	0.0063	0.30	Q				
0+25	0.0087	0.35	Q				
0+30	0.0113	0.39	Q				
0+35	0.0142	0.41	Q				
0+40	0.0170	0.41	Q				
0+45	0.0200	0.44	QV				
0+50	0.0230	0.43	QV				
0+55	0.0257	0.40	QV				
1+ 0	0.0286	0.42	QV				
1+ 5	0.0334	0.69	|Q				
1+10	0.0413	1.15	| Q				
1+15	0.0501	1.28	| Q				



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 08/15/22 File: THECOVE65.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
6-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.40	21.67

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	3.50	54.18

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.892(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.892(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
			Sum = 100.000	Sum= 15.601

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	0.50	0.114	(0.268)		0.102	0.011
2	0.17	0.60	0.136	(0.268)		0.123	0.014
3	0.25	0.60	0.136	(0.268)		0.123	0.014
4	0.33	0.60	0.136	(0.268)		0.123	0.014
5	0.42	0.60	0.136	(0.268)		0.123	0.014
6	0.50	0.70	0.159	(0.268)		0.143	0.016
7	0.58	0.70	0.159	(0.268)		0.143	0.016
8	0.67	0.70	0.159	(0.268)		0.143	0.016
9	0.75	0.70	0.159	(0.268)		0.143	0.016
10	0.83	0.70	0.159	(0.268)		0.143	0.016
11	0.92	0.70	0.159	(0.268)		0.143	0.016
12	1.00	0.80	0.182	(0.268)		0.163	0.018

13	1.08	0.80	0.182	(0.268)	0.163	0.018
14	1.17	0.80	0.182	(0.268)	0.163	0.018
15	1.25	0.80	0.182	(0.268)	0.163	0.018
16	1.33	0.80	0.182	(0.268)	0.163	0.018
17	1.42	0.80	0.182	(0.268)	0.163	0.018
18	1.50	0.80	0.182	(0.268)	0.163	0.018
19	1.58	0.80	0.182	(0.268)	0.163	0.018
20	1.67	0.80	0.182	(0.268)	0.163	0.018
21	1.75	0.80	0.182	(0.268)	0.163	0.018
22	1.83	0.80	0.182	(0.268)	0.163	0.018
23	1.92	0.80	0.182	(0.268)	0.163	0.018
24	2.00	0.90	0.204	(0.268)	0.184	0.020
25	2.08	0.80	0.182	(0.268)	0.163	0.018
26	2.17	0.90	0.204	(0.268)	0.184	0.020
27	2.25	0.90	0.204	(0.268)	0.184	0.020
28	2.33	0.90	0.204	(0.268)	0.184	0.020
29	2.42	0.90	0.204	(0.268)	0.184	0.020
30	2.50	0.90	0.204	(0.268)	0.184	0.020
31	2.58	0.90	0.204	(0.268)	0.184	0.020
32	2.67	0.90	0.204	(0.268)	0.184	0.020
33	2.75	1.00	0.227	(0.268)	0.204	0.023
34	2.83	1.00	0.227	(0.268)	0.204	0.023
35	2.92	1.00	0.227	(0.268)	0.204	0.023
36	3.00	1.00	0.227	(0.268)	0.204	0.023
37	3.08	1.00	0.227	(0.268)	0.204	0.023
38	3.17	1.10	0.250	(0.268)	0.225	0.025
39	3.25	1.10	0.250	(0.268)	0.225	0.025
40	3.33	1.10	0.250	(0.268)	0.225	0.025
41	3.42	1.20	0.272	(0.268)	0.245	0.027
42	3.50	1.30	0.295	(0.268)	0.266	0.030
43	3.58	1.40	0.318	0.268	(0.286)	0.050
44	3.67	1.40	0.318	0.268	(0.286)	0.050
45	3.75	1.50	0.341	0.268	(0.306)	0.073
46	3.83	1.50	0.341	0.268	(0.306)	0.073
47	3.92	1.60	0.363	0.268	(0.327)	0.096
48	4.00	1.60	0.363	0.268	(0.327)	0.096
49	4.08	1.70	0.386	0.268	(0.347)	0.118
50	4.17	1.80	0.409	0.268	(0.368)	0.141
51	4.25	1.90	0.431	0.268	(0.388)	0.164
52	4.33	2.00	0.454	0.268	(0.409)	0.186
53	4.42	2.10	0.477	0.268	(0.429)	0.209
54	4.50	2.10	0.477	0.268	(0.429)	0.209
55	4.58	2.20	0.499	0.268	(0.449)	0.232
56	4.67	2.30	0.522	0.268	(0.470)	0.255
57	4.75	2.40	0.545	0.268	(0.490)	0.277
58	4.83	2.40	0.545	0.268	(0.490)	0.277
59	4.92	2.50	0.568	0.268	(0.511)	0.300
60	5.00	2.60	0.590	0.268	(0.531)	0.323
61	5.08	3.10	0.704	0.268	(0.633)	0.436
62	5.17	3.60	0.817	0.268	(0.736)	0.550
63	5.25	3.90	0.885	0.268	(0.797)	0.618
64	5.33	4.20	0.953	0.268	(0.858)	0.686
65	5.42	4.70	1.067	0.268	(0.960)	0.799
66	5.50	5.60	1.271	0.268	(1.144)	1.004
67	5.58	1.90	0.431	0.268	(0.388)	0.164
68	5.67	0.90	0.204	(0.268)	0.184	0.020
69	5.75	0.60	0.136	(0.268)	0.123	0.014
70	5.83	0.50	0.114	(0.268)	0.102	0.011
71	5.92	0.30	0.068	(0.268)	0.061	0.007
72	6.00	0.20	0.045	(0.268)	0.041	0.005

(Loss Rate Not Used)
Sum = 100.0 Sum = 8.2
Flood volume = Effective rainfall 0.69(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.9(Ac.Ft)
Total soil loss = 1.20(In)
Total soil loss = 1.554(Ac.Ft)
Total rainfall = 1.89(In)
Flood volume = 38620.2 Cubic Feet
Total soil loss = 67682.9 Cubic Feet

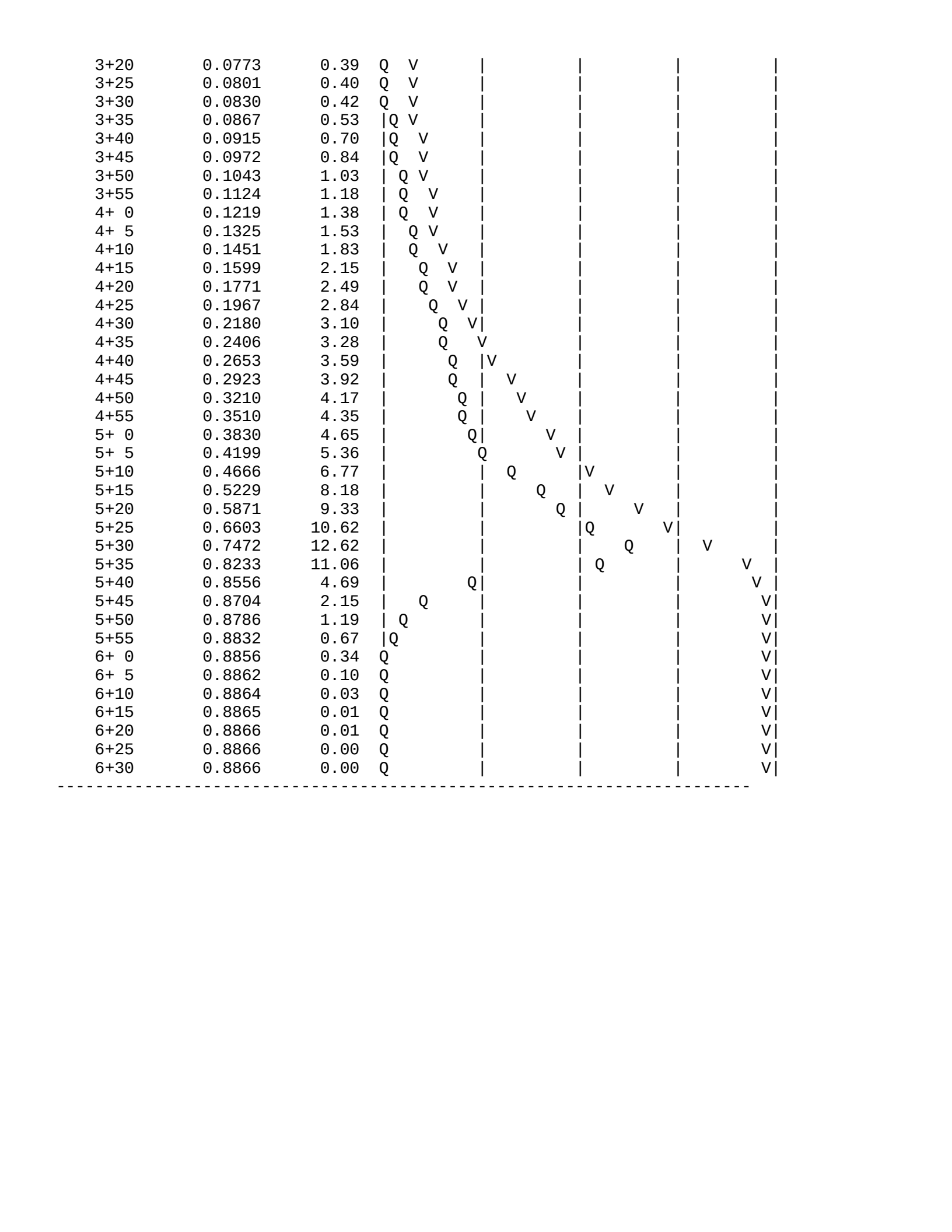
Peak flow rate of this hydrograph = 12.620(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0003	0.05	Q				
0+10	0.0013	0.14	Q				
0+15	0.0026	0.18	Q				
0+20	0.0039	0.20	Q				
0+25	0.0053	0.21	Q				
0+30	0.0068	0.22	Q				
0+35	0.0085	0.24	Q				
0+40	0.0102	0.24	Q				
0+45	0.0119	0.25	Q				
0+50	0.0136	0.25	Q				
0+55	0.0153	0.25	Q				
1+ 0	0.0170	0.26	Q				
1+ 5	0.0189	0.27	Q				
1+10	0.0209	0.28	Q				
1+15	0.0228	0.28	QV				
1+20	0.0247	0.28	QV				
1+25	0.0267	0.28	QV				
1+30	0.0286	0.28	QV				
1+35	0.0306	0.28	QV				
1+40	0.0325	0.28	QV				
1+45	0.0345	0.28	QV				
1+50	0.0365	0.28	QV				
1+55	0.0384	0.28	QV				
2+ 0	0.0404	0.29	QV				
2+ 5	0.0425	0.30	QV				
2+10	0.0445	0.30	Q V				
2+15	0.0467	0.31	Q V				
2+20	0.0489	0.32	Q V				
2+25	0.0511	0.32	Q V				
2+30	0.0532	0.32	Q V				
2+35	0.0554	0.32	Q V				
2+40	0.0576	0.32	Q V				
2+45	0.0599	0.33	Q V				
2+50	0.0623	0.35	Q V				
2+55	0.0647	0.35	Q V				
3+ 0	0.0671	0.35	Q V				
3+ 5	0.0695	0.35	Q V				
3+10	0.0720	0.36	Q V				
3+15	0.0747	0.38	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 08/15/22 File: THECOVE245.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
24-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 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]
15.48	2.50	38.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	6.00	92.88

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.320(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.320(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	0.027	(0.474)		0.024	0.003
2	0.17	0.07	0.027	(0.473)		0.024	0.003
3	0.25	0.07	0.027	(0.471)		0.024	0.003
4	0.33	0.10	0.040	(0.469)		0.036	0.004
5	0.42	0.10	0.040	(0.467)		0.036	0.004
6	0.50	0.10	0.040	(0.465)		0.036	0.004
7	0.58	0.10	0.040	(0.463)		0.036	0.004
8	0.67	0.10	0.040	(0.462)		0.036	0.004
9	0.75	0.10	0.040	(0.460)		0.036	0.004
10	0.83	0.13	0.053	(0.458)		0.048	0.005
11	0.92	0.13	0.053	(0.456)		0.048	0.005
12	1.00	0.13	0.053	(0.454)		0.048	0.005

13	1.08	0.10	0.040	(0.453)	0.036	0.004
14	1.17	0.10	0.040	(0.451)	0.036	0.004
15	1.25	0.10	0.040	(0.449)	0.036	0.004
16	1.33	0.10	0.040	(0.447)	0.036	0.004
17	1.42	0.10	0.040	(0.445)	0.036	0.004
18	1.50	0.10	0.040	(0.444)	0.036	0.004
19	1.58	0.10	0.040	(0.442)	0.036	0.004
20	1.67	0.10	0.040	(0.440)	0.036	0.004
21	1.75	0.10	0.040	(0.438)	0.036	0.004
22	1.83	0.13	0.053	(0.437)	0.048	0.005
23	1.92	0.13	0.053	(0.435)	0.048	0.005
24	2.00	0.13	0.053	(0.433)	0.048	0.005
25	2.08	0.13	0.053	(0.431)	0.048	0.005
26	2.17	0.13	0.053	(0.430)	0.048	0.005
27	2.25	0.13	0.053	(0.428)	0.048	0.005
28	2.33	0.13	0.053	(0.426)	0.048	0.005
29	2.42	0.13	0.053	(0.424)	0.048	0.005
30	2.50	0.13	0.053	(0.423)	0.048	0.005
31	2.58	0.17	0.066	(0.421)	0.060	0.007
32	2.67	0.17	0.066	(0.419)	0.060	0.007
33	2.75	0.17	0.066	(0.417)	0.060	0.007
34	2.83	0.17	0.066	(0.416)	0.060	0.007
35	2.92	0.17	0.066	(0.414)	0.060	0.007
36	3.00	0.17	0.066	(0.412)	0.060	0.007
37	3.08	0.17	0.066	(0.411)	0.060	0.007
38	3.17	0.17	0.066	(0.409)	0.060	0.007
39	3.25	0.17	0.066	(0.407)	0.060	0.007
40	3.33	0.17	0.066	(0.405)	0.060	0.007
41	3.42	0.17	0.066	(0.404)	0.060	0.007
42	3.50	0.17	0.066	(0.402)	0.060	0.007
43	3.58	0.17	0.066	(0.400)	0.060	0.007
44	3.67	0.17	0.066	(0.399)	0.060	0.007
45	3.75	0.17	0.066	(0.397)	0.060	0.007
46	3.83	0.20	0.080	(0.395)	0.072	0.008
47	3.92	0.20	0.080	(0.394)	0.072	0.008
48	4.00	0.20	0.080	(0.392)	0.072	0.008
49	4.08	0.20	0.080	(0.390)	0.072	0.008
50	4.17	0.20	0.080	(0.389)	0.072	0.008
51	4.25	0.20	0.080	(0.387)	0.072	0.008
52	4.33	0.23	0.093	(0.385)	0.084	0.009
53	4.42	0.23	0.093	(0.384)	0.084	0.009
54	4.50	0.23	0.093	(0.382)	0.084	0.009
55	4.58	0.23	0.093	(0.381)	0.084	0.009
56	4.67	0.23	0.093	(0.379)	0.084	0.009
57	4.75	0.23	0.093	(0.377)	0.084	0.009
58	4.83	0.27	0.106	(0.376)	0.096	0.011
59	4.92	0.27	0.106	(0.374)	0.096	0.011
60	5.00	0.27	0.106	(0.372)	0.096	0.011
61	5.08	0.20	0.080	(0.371)	0.072	0.008
62	5.17	0.20	0.080	(0.369)	0.072	0.008
63	5.25	0.20	0.080	(0.368)	0.072	0.008
64	5.33	0.23	0.093	(0.366)	0.084	0.009
65	5.42	0.23	0.093	(0.364)	0.084	0.009
66	5.50	0.23	0.093	(0.363)	0.084	0.009
67	5.58	0.27	0.106	(0.361)	0.096	0.011
68	5.67	0.27	0.106	(0.360)	0.096	0.011
69	5.75	0.27	0.106	(0.358)	0.096	0.011
70	5.83	0.27	0.106	(0.356)	0.096	0.011
71	5.92	0.27	0.106	(0.355)	0.096	0.011
72	6.00	0.27	0.106	(0.353)	0.096	0.011

73	6.08	0.30	0.120	(0.352)	0.108	0.012
74	6.17	0.30	0.120	(0.350)	0.108	0.012
75	6.25	0.30	0.120	(0.349)	0.108	0.012
76	6.33	0.30	0.120	(0.347)	0.108	0.012
77	6.42	0.30	0.120	(0.345)	0.108	0.012
78	6.50	0.30	0.120	(0.344)	0.108	0.012
79	6.58	0.33	0.133	(0.342)	0.120	0.013
80	6.67	0.33	0.133	(0.341)	0.120	0.013
81	6.75	0.33	0.133	(0.339)	0.120	0.013
82	6.83	0.33	0.133	(0.338)	0.120	0.013
83	6.92	0.33	0.133	(0.336)	0.120	0.013
84	7.00	0.33	0.133	(0.335)	0.120	0.013
85	7.08	0.33	0.133	(0.333)	0.120	0.013
86	7.17	0.33	0.133	(0.332)	0.120	0.013
87	7.25	0.33	0.133	(0.330)	0.120	0.013
88	7.33	0.37	0.146	(0.329)	0.131	0.015
89	7.42	0.37	0.146	(0.327)	0.131	0.015
90	7.50	0.37	0.146	(0.326)	0.131	0.015
91	7.58	0.40	0.159	(0.324)	0.143	0.016
92	7.67	0.40	0.159	(0.323)	0.143	0.016
93	7.75	0.40	0.159	(0.321)	0.143	0.016
94	7.83	0.43	0.173	(0.320)	0.155	0.017
95	7.92	0.43	0.173	(0.318)	0.155	0.017
96	8.00	0.43	0.173	(0.317)	0.155	0.017
97	8.08	0.50	0.199	(0.315)	0.179	0.020
98	8.17	0.50	0.199	(0.314)	0.179	0.020
99	8.25	0.50	0.199	(0.312)	0.179	0.020
100	8.33	0.50	0.199	(0.311)	0.179	0.020
101	8.42	0.50	0.199	(0.309)	0.179	0.020
102	8.50	0.50	0.199	(0.308)	0.179	0.020
103	8.58	0.53	0.212	(0.306)	0.191	0.021
104	8.67	0.53	0.212	(0.305)	0.191	0.021
105	8.75	0.53	0.212	(0.304)	0.191	0.021
106	8.83	0.57	0.226	(0.302)	0.203	0.023
107	8.92	0.57	0.226	(0.301)	0.203	0.023
108	9.00	0.57	0.226	(0.299)	0.203	0.023
109	9.08	0.63	0.252	(0.298)	0.227	0.025
110	9.17	0.63	0.252	(0.296)	0.227	0.025
111	9.25	0.63	0.252	(0.295)	0.227	0.025
112	9.33	0.67	0.266	(0.294)	0.239	0.027
113	9.42	0.67	0.266	(0.292)	0.239	0.027
114	9.50	0.67	0.266	(0.291)	0.239	0.027
115	9.58	0.70	0.279	(0.289)	0.251	0.028
116	9.67	0.70	0.279	(0.288)	0.251	0.028
117	9.75	0.70	0.279	(0.287)	0.251	0.028
118	9.83	0.73	0.292	(0.285)	0.263	0.029
119	9.92	0.73	0.292	(0.284)	0.263	0.029
120	10.00	0.73	0.292	(0.283)	0.263	0.029
121	10.08	0.50	0.199	(0.281)	0.179	0.020
122	10.17	0.50	0.199	(0.280)	0.179	0.020
123	10.25	0.50	0.199	(0.278)	0.179	0.020
124	10.33	0.50	0.199	(0.277)	0.179	0.020
125	10.42	0.50	0.199	(0.276)	0.179	0.020
126	10.50	0.50	0.199	(0.274)	0.179	0.020
127	10.58	0.67	0.266	(0.273)	0.239	0.027
128	10.67	0.67	0.266	(0.272)	0.239	0.027
129	10.75	0.67	0.266	(0.270)	0.239	0.027
130	10.83	0.67	0.266	(0.269)	0.239	0.027
131	10.92	0.67	0.266	(0.268)	0.239	0.027
132	11.00	0.67	0.266	(0.266)	0.239	0.027

133	11.08	0.63	0.252	(0.265)	0.227	0.025
134	11.17	0.63	0.252	(0.264)	0.227	0.025
135	11.25	0.63	0.252	(0.263)	0.227	0.025
136	11.33	0.63	0.252	(0.261)	0.227	0.025
137	11.42	0.63	0.252	(0.260)	0.227	0.025
138	11.50	0.63	0.252	(0.259)	0.227	0.025
139	11.58	0.57	0.226	(0.257)	0.203	0.023
140	11.67	0.57	0.226	(0.256)	0.203	0.023
141	11.75	0.57	0.226	(0.255)	0.203	0.023
142	11.83	0.60	0.239	(0.254)	0.215	0.024
143	11.92	0.60	0.239	(0.252)	0.215	0.024
144	12.00	0.60	0.239	(0.251)	0.215	0.024
145	12.08	0.83	0.332	0.250	(0.299)	0.082
146	12.17	0.83	0.332	0.249	(0.299)	0.083
147	12.25	0.83	0.332	0.247	(0.299)	0.085
148	12.33	0.87	0.345	0.246	(0.311)	0.099
149	12.42	0.87	0.345	0.245	(0.311)	0.100
150	12.50	0.87	0.345	0.244	(0.311)	0.102
151	12.58	0.93	0.372	0.242	(0.335)	0.129
152	12.67	0.93	0.372	0.241	(0.335)	0.131
153	12.75	0.93	0.372	0.240	(0.335)	0.132
154	12.83	0.97	0.385	0.239	(0.347)	0.146
155	12.92	0.97	0.385	0.238	(0.347)	0.148
156	13.00	0.97	0.385	0.236	(0.347)	0.149
157	13.08	1.13	0.451	0.235	(0.406)	0.216
158	13.17	1.13	0.451	0.234	(0.406)	0.218
159	13.25	1.13	0.451	0.233	(0.406)	0.219
160	13.33	1.13	0.451	0.232	(0.406)	0.220
161	13.42	1.13	0.451	0.230	(0.406)	0.221
162	13.50	1.13	0.451	0.229	(0.406)	0.222
163	13.58	0.77	0.305	0.228	(0.275)	0.077
164	13.67	0.77	0.305	0.227	(0.275)	0.079
165	13.75	0.77	0.305	0.226	(0.275)	0.080
166	13.83	0.77	0.305	0.225	(0.275)	0.081
167	13.92	0.77	0.305	0.223	(0.275)	0.082
168	14.00	0.77	0.305	0.222	(0.275)	0.083
169	14.08	0.90	0.359	0.221	(0.323)	0.137
170	14.17	0.90	0.359	0.220	(0.323)	0.139
171	14.25	0.90	0.359	0.219	(0.323)	0.140
172	14.33	0.87	0.345	0.218	(0.311)	0.127
173	14.42	0.87	0.345	0.217	(0.311)	0.129
174	14.50	0.87	0.345	0.216	(0.311)	0.130
175	14.58	0.87	0.345	0.214	(0.311)	0.131
176	14.67	0.87	0.345	0.213	(0.311)	0.132
177	14.75	0.87	0.345	0.212	(0.311)	0.133
178	14.83	0.83	0.332	0.211	(0.299)	0.121
179	14.92	0.83	0.332	0.210	(0.299)	0.122
180	15.00	0.83	0.332	0.209	(0.299)	0.123
181	15.08	0.80	0.319	0.208	(0.287)	0.111
182	15.17	0.80	0.319	0.207	(0.287)	0.112
183	15.25	0.80	0.319	0.206	(0.287)	0.113
184	15.33	0.77	0.305	0.205	(0.275)	0.101
185	15.42	0.77	0.305	0.204	(0.275)	0.102
186	15.50	0.77	0.305	0.203	(0.275)	0.103
187	15.58	0.63	0.252	0.202	(0.227)	0.051
188	15.67	0.63	0.252	0.201	(0.227)	0.052
189	15.75	0.63	0.252	0.200	(0.227)	0.053
190	15.83	0.63	0.252	0.199	(0.227)	0.054
191	15.92	0.63	0.252	0.198	(0.227)	0.055
192	16.00	0.63	0.252	0.197	(0.227)	0.056

193	16.08	0.13	0.053	(0.196)	0.048	0.005
194	16.17	0.13	0.053	(0.195)	0.048	0.005
195	16.25	0.13	0.053	(0.194)	0.048	0.005
196	16.33	0.13	0.053	(0.193)	0.048	0.005
197	16.42	0.13	0.053	(0.192)	0.048	0.005
198	16.50	0.13	0.053	(0.191)	0.048	0.005
199	16.58	0.10	0.040	(0.190)	0.036	0.004
200	16.67	0.10	0.040	(0.189)	0.036	0.004
201	16.75	0.10	0.040	(0.188)	0.036	0.004
202	16.83	0.10	0.040	(0.187)	0.036	0.004
203	16.92	0.10	0.040	(0.186)	0.036	0.004
204	17.00	0.10	0.040	(0.185)	0.036	0.004
205	17.08	0.17	0.066	(0.184)	0.060	0.007
206	17.17	0.17	0.066	(0.183)	0.060	0.007
207	17.25	0.17	0.066	(0.182)	0.060	0.007
208	17.33	0.17	0.066	(0.181)	0.060	0.007
209	17.42	0.17	0.066	(0.180)	0.060	0.007
210	17.50	0.17	0.066	(0.179)	0.060	0.007
211	17.58	0.17	0.066	(0.178)	0.060	0.007
212	17.67	0.17	0.066	(0.178)	0.060	0.007
213	17.75	0.17	0.066	(0.177)	0.060	0.007
214	17.83	0.13	0.053	(0.176)	0.048	0.005
215	17.92	0.13	0.053	(0.175)	0.048	0.005
216	18.00	0.13	0.053	(0.174)	0.048	0.005
217	18.08	0.13	0.053	(0.173)	0.048	0.005
218	18.17	0.13	0.053	(0.172)	0.048	0.005
219	18.25	0.13	0.053	(0.172)	0.048	0.005
220	18.33	0.13	0.053	(0.171)	0.048	0.005
221	18.42	0.13	0.053	(0.170)	0.048	0.005
222	18.50	0.13	0.053	(0.169)	0.048	0.005
223	18.58	0.10	0.040	(0.168)	0.036	0.004
224	18.67	0.10	0.040	(0.167)	0.036	0.004
225	18.75	0.10	0.040	(0.167)	0.036	0.004
226	18.83	0.07	0.027	(0.166)	0.024	0.003
227	18.92	0.07	0.027	(0.165)	0.024	0.003
228	19.00	0.07	0.027	(0.164)	0.024	0.003
229	19.08	0.10	0.040	(0.163)	0.036	0.004
230	19.17	0.10	0.040	(0.163)	0.036	0.004
231	19.25	0.10	0.040	(0.162)	0.036	0.004
232	19.33	0.13	0.053	(0.161)	0.048	0.005
233	19.42	0.13	0.053	(0.160)	0.048	0.005
234	19.50	0.13	0.053	(0.160)	0.048	0.005
235	19.58	0.10	0.040	(0.159)	0.036	0.004
236	19.67	0.10	0.040	(0.158)	0.036	0.004
237	19.75	0.10	0.040	(0.157)	0.036	0.004
238	19.83	0.07	0.027	(0.157)	0.024	0.003
239	19.92	0.07	0.027	(0.156)	0.024	0.003
240	20.00	0.07	0.027	(0.155)	0.024	0.003
241	20.08	0.10	0.040	(0.155)	0.036	0.004
242	20.17	0.10	0.040	(0.154)	0.036	0.004
243	20.25	0.10	0.040	(0.153)	0.036	0.004
244	20.33	0.10	0.040	(0.153)	0.036	0.004
245	20.42	0.10	0.040	(0.152)	0.036	0.004
246	20.50	0.10	0.040	(0.151)	0.036	0.004
247	20.58	0.10	0.040	(0.151)	0.036	0.004
248	20.67	0.10	0.040	(0.150)	0.036	0.004
249	20.75	0.10	0.040	(0.150)	0.036	0.004
250	20.83	0.07	0.027	(0.149)	0.024	0.003
251	20.92	0.07	0.027	(0.148)	0.024	0.003
252	21.00	0.07	0.027	(0.148)	0.024	0.003

253	21.08	0.10	0.040	(0.147)	0.036	0.004
254	21.17	0.10	0.040	(0.147)	0.036	0.004
255	21.25	0.10	0.040	(0.146)	0.036	0.004
256	21.33	0.07	0.027	(0.145)	0.024	0.003
257	21.42	0.07	0.027	(0.145)	0.024	0.003
258	21.50	0.07	0.027	(0.144)	0.024	0.003
259	21.58	0.10	0.040	(0.144)	0.036	0.004
260	21.67	0.10	0.040	(0.143)	0.036	0.004
261	21.75	0.10	0.040	(0.143)	0.036	0.004
262	21.83	0.07	0.027	(0.142)	0.024	0.003
263	21.92	0.07	0.027	(0.142)	0.024	0.003
264	22.00	0.07	0.027	(0.141)	0.024	0.003
265	22.08	0.10	0.040	(0.141)	0.036	0.004
266	22.17	0.10	0.040	(0.140)	0.036	0.004
267	22.25	0.10	0.040	(0.140)	0.036	0.004
268	22.33	0.07	0.027	(0.139)	0.024	0.003
269	22.42	0.07	0.027	(0.139)	0.024	0.003
270	22.50	0.07	0.027	(0.139)	0.024	0.003
271	22.58	0.07	0.027	(0.138)	0.024	0.003
272	22.67	0.07	0.027	(0.138)	0.024	0.003
273	22.75	0.07	0.027	(0.137)	0.024	0.003
274	22.83	0.07	0.027	(0.137)	0.024	0.003
275	22.92	0.07	0.027	(0.137)	0.024	0.003
276	23.00	0.07	0.027	(0.136)	0.024	0.003
277	23.08	0.07	0.027	(0.136)	0.024	0.003
278	23.17	0.07	0.027	(0.136)	0.024	0.003
279	23.25	0.07	0.027	(0.136)	0.024	0.003
280	23.33	0.07	0.027	(0.135)	0.024	0.003
281	23.42	0.07	0.027	(0.135)	0.024	0.003
282	23.50	0.07	0.027	(0.135)	0.024	0.003
283	23.58	0.07	0.027	(0.135)	0.024	0.003
284	23.67	0.07	0.027	(0.134)	0.024	0.003
285	23.75	0.07	0.027	(0.134)	0.024	0.003
286	23.83	0.07	0.027	(0.134)	0.024	0.003
287	23.92	0.07	0.027	(0.134)	0.024	0.003
288	24.00	0.07	0.027	(0.134)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 8.1

Flood volume = Effective rainfall 0.67(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 0.9(Ac.Ft)
Total soil loss = 2.65(In)
Total soil loss = 3.417(Ac.Ft)
Total rainfall = 3.32(In)
Flood volume = 37708.5 Cubic Feet
Total soil loss = 148832.6 Cubic Feet

Peak flow rate of this hydrograph = 3.436(CFS)

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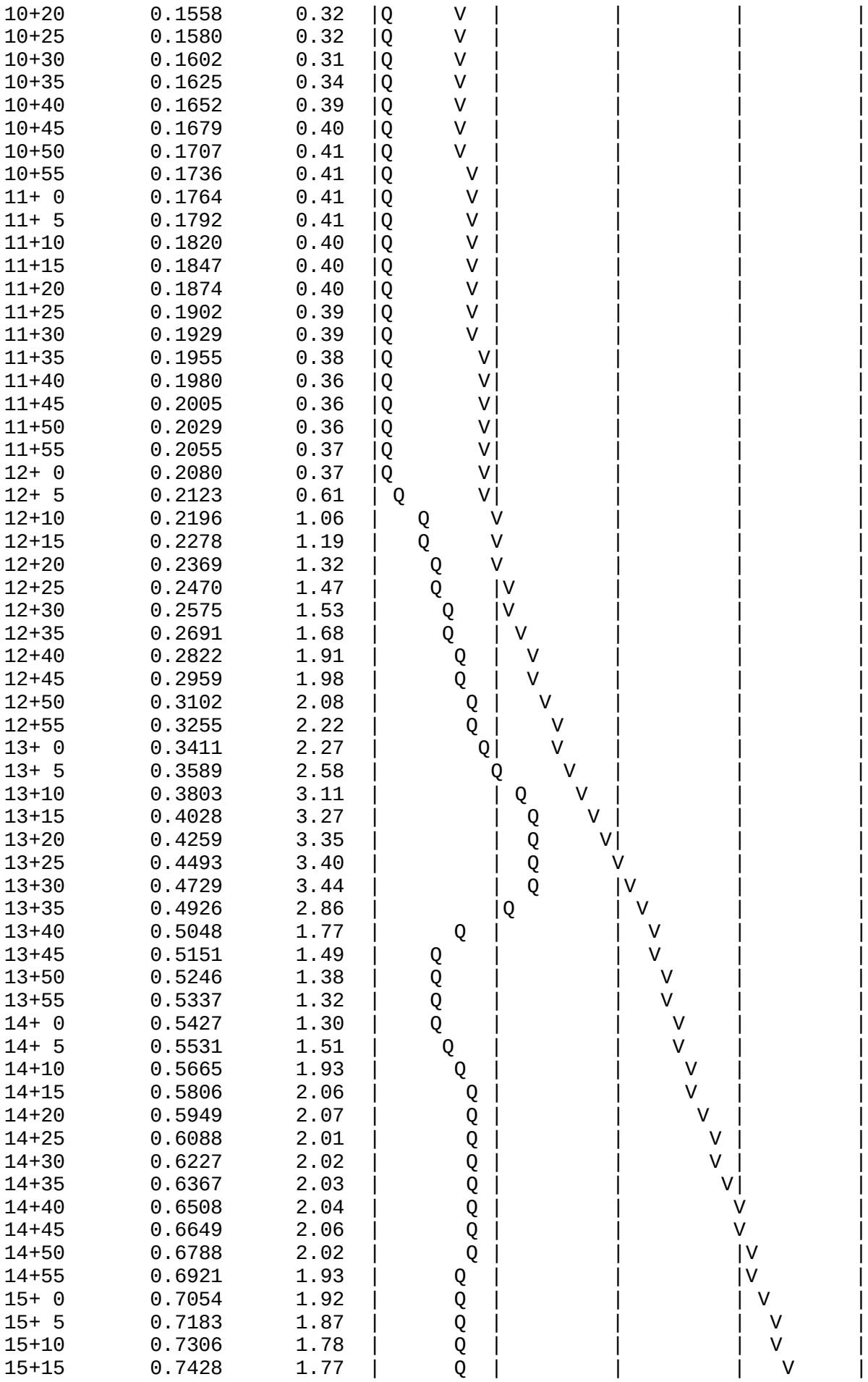
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q	|	|	|	|
0+10	0.0003	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	0.06	Q	|	|	|	|
0+45	0.0029	0.06	Q	|	|	|	|
0+50	0.0034	0.07	Q	|	|	|	|
0+55	0.0039	0.08	Q	|	|	|	|
1+ 0	0.0045	0.08	Q	|	|	|	|
1+ 5	0.0050	0.08	Q	|	|	|	|
1+10	0.0054	0.07	Q	|	|	|	|
1+15	0.0059	0.06	Q	|	|	|	|
1+20	0.0063	0.06	Q	|	|	|	|
1+25	0.0068	0.06	Q	|	|	|	|
1+30	0.0072	0.06	Q	|	|	|	|
1+35	0.0076	0.06	Q	|	|	|	|
1+40	0.0080	0.06	Q	|	|	|	|
1+45	0.0085	0.06	Q	|	|	|	|
1+50	0.0089	0.07	Q	|	|	|	|
1+55	0.0095	0.08	Q	|	|	|	|
2+ 0	0.0100	0.08	Q	|	|	|	|
2+ 5	0.0106	0.08	Q	|	|	|	|
2+10	0.0112	0.08	Q	|	|	|	|
2+15	0.0117	0.08	Q	|	|	|	|
2+20	0.0123	0.08	Q	|	|	|	|
2+25	0.0129	0.08	Q	|	|	|	|
2+30	0.0134	0.08	Q	|	|	|	|
2+35	0.0141	0.09	Q	|	|	|	|
2+40	0.0147	0.10	Q	|	|	|	|
2+45	0.0154	0.10	Q	|	|	|	|
2+50	0.0161	0.10	Q	|	|	|	|
2+55	0.0168	0.10	Q	|	|	|	|
3+ 0	0.0176	0.10	Q	|	|	|	|
3+ 5	0.0183	0.10	Q	|	|	|	|
3+10	0.0190	0.10	Q	|	|	|	|
3+15	0.0197	0.10	Q	|	|	|	|
3+20	0.0204	0.10	Q	|	|	|	|
3+25	0.0211	0.10	Q	|	|	|	|
3+30	0.0218	0.10	QV	|	|	|	|
3+35	0.0226	0.10	QV	|	|	|	|
3+40	0.0233	0.10	QV	|	|	|	|
3+45	0.0240	0.10	QV	|	|	|	|
3+50	0.0247	0.11	QV	|	|	|	|
3+55	0.0256	0.12	QV	|	|	|	|
4+ 0	0.0264	0.12	QV	|	|	|	|
4+ 5	0.0272	0.12	QV	|	|	|	|
4+10	0.0281	0.12	QV	|	|	|	|
4+15	0.0289	0.12	QV	|	|	|	|
4+20	0.0298	0.13	QV	|	|	|	|
4+25	0.0308	0.14	QV	|	|	|	|
4+30	0.0318	0.14	QV	|	|	|	|
4+35	0.0328	0.14	QV	|	|	|	|
4+40	0.0338	0.14	QV	|	|	|	|
4+45	0.0348	0.14	QV	|	|	|	|
4+50	0.0358	0.15	QV	|	|	|	|
4+55	0.0369	0.16	QV	|	|	|	|
5+ 0	0.0380	0.16	QV	|	|	|	|
5+ 5	0.0391	0.15	QV	|	|	|	|
5+10	0.0400	0.13	QV	|	|	|	|
5+15	0.0409	0.13	QV	|	|	|	|

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 5+20       0.0418      0.13  QV        |         |         |         |
 5+25       0.0428      0.14  QV        |         |         |         |
 5+30       0.0438      0.14  Q V       |         |         |         |
 5+35       0.0448      0.15  Q V       |         |         |         |
 5+40       0.0459      0.16  Q V       |         |         |         |
 5+45       0.0470      0.16  Q V       |         |         |         |
 5+50       0.0482      0.16  Q V       |         |         |         |
 5+55       0.0493      0.17  Q V       |         |         |         |
 6+ 0       0.0504      0.17  Q V       |         |         |         |
 6+ 5       0.0516      0.17  Q V       |         |         |         |
 6+10       0.0529      0.18  Q V       |         |         |         |
 6+15       0.0541      0.18  Q V       |         |         |         |
 6+20       0.0554      0.19  Q V       |         |         |         |
 6+25       0.0567      0.19  Q V       |         |         |         |
 6+30       0.0580      0.19  Q V       |         |         |         |
 6+35       0.0593      0.19  Q V       |         |         |         |
 6+40       0.0607      0.20  Q V       |         |         |         |
 6+45       0.0621      0.20  Q V       |         |         |         |
 6+50       0.0635      0.21  Q V       |         |         |         |
 6+55       0.0649      0.21  Q  V      |         |         |         |
 7+ 0       0.0664      0.21  Q  V      |         |         |         |
 7+ 5       0.0678      0.21  Q  V      |         |         |         |
 7+10       0.0692      0.21  Q  V      |         |         |         |
 7+15       0.0707      0.21  Q  V      |         |         |         |
 7+20       0.0721      0.21  Q  V      |         |         |         |
 7+25       0.0737      0.22  Q  V      |         |         |         |
 7+30       0.0752      0.23  Q  V      |         |         |         |
 7+35       0.0768      0.23  Q  V      |         |         |         |
 7+40       0.0785      0.24  Q  V      |         |         |         |
 7+45       0.0802      0.25  Q  V      |         |         |         |
 7+50       0.0819      0.25  |Q V       |         |         |         |
 7+55       0.0837      0.26  |Q V       |         |         |         |
 8+ 0       0.0856      0.27  |Q V       |         |         |         |
 8+ 5       0.0875      0.28  |Q  V      |         |         |         |
 8+10       0.0896      0.30  |Q  V      |         |         |         |
 8+15       0.0917      0.31  |Q  V      |         |         |         |
 8+20       0.0938      0.31  |Q  V      |         |         |         |
 8+25       0.0959      0.31  |Q  V      |         |         |         |
 8+30       0.0981      0.31  |Q  V      |         |         |         |
 8+35       0.1002      0.32  |Q  V      |         |         |         |
 8+40       0.1025      0.33  |Q  V      |         |         |         |
 8+45       0.1048      0.33  |Q  V      |         |         |         |
 8+50       0.1071      0.34  |Q  V      |         |         |         |
 8+55       0.1095      0.35  |Q   V     |         |         |         |
 9+ 0       0.1119      0.35  |Q   V     |         |         |         |
 9+ 5       0.1144      0.36  |Q   V     |         |         |         |
 9+10       0.1170      0.38  |Q   V     |         |         |         |
 9+15       0.1197      0.39  |Q   V     |         |         |         |
 9+20       0.1224      0.40  |Q   V     |         |         |         |
 9+25       0.1252      0.41  |Q   V     |         |         |         |
 9+30       0.1280      0.41  |Q   V     |         |         |         |
 9+35       0.1309      0.42  |Q    V    |         |         |         |
 9+40       0.1339      0.43  |Q    V    |         |         |         |
 9+45       0.1369      0.43  |Q    V    |         |         |         |
 9+50       0.1399      0.44  |Q    V    |         |         |         |
 9+55       0.1430      0.45  |Q    V    |         |         |         |
10+ 0       0.1461      0.45  |Q    V    |         |         |         |
10+ 5       0.1490      0.42  |Q    V    |         |         |         |
10+10       0.1514      0.35  |Q    V    |         |         |         |
10+15       0.1536      0.33  |Q     V   |         |         |         |
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15+20       0.7546      1.72  |     Q   |         |         |   V     |
15+25       0.7658      1.63  |     Q   |         |         |    V    |
15+30       0.7769      1.61  |     Q   |         |         |    V    |
15+35       0.7865      1.39  |    Q    |         |         |     V   |
15+40       0.7933      1.00  |  Q      |         |         |     V   |
15+45       0.7996      0.91  |  Q      |         |         |     V   |
15+50       0.8056      0.87  |  Q      |         |         |      V  |
15+55       0.8115      0.86  |  Q      |         |         |      V  |
16+ 0       0.8174      0.86  |  Q      |         |         |      V  |
16+ 5       0.8219      0.65  | Q       |         |         |      V  |
16+10       0.8238      0.28  |Q        |         |         |       V |
16+15       0.8250      0.18  Q         |         |         |       V |
16+20       0.8259      0.13  Q         |         |         |       V |
16+25       0.8267      0.11  Q         |         |         |       V |
16+30       0.8273      0.09  Q         |         |         |       V |
16+35       0.8278      0.08  Q         |         |         |       V |
16+40       0.8283      0.07  Q         |         |         |       V |
16+45       0.8287      0.06  Q         |         |         |       V |
16+50       0.8292      0.06  Q         |         |         |       V |
16+55       0.8296      0.06  Q         |         |         |       V |
17+ 0       0.8300      0.06  Q         |         |         |       V |
17+ 5       0.8305      0.07  Q         |         |         |       V |
17+10       0.8312      0.09  Q         |         |         |       V |
17+15       0.8319      0.10  Q         |         |         |       V |
17+20       0.8326      0.10  Q         |         |         |       V |
17+25       0.8333      0.10  Q         |         |         |       V |
17+30       0.8340      0.10  Q         |         |         |       V |
17+35       0.8347      0.10  Q         |         |         |       V |
17+40       0.8354      0.10  Q         |         |         |       V |
17+45       0.8361      0.10  Q         |         |         |       V |
17+50       0.8368      0.10  Q         |         |         |       V |
17+55       0.8374      0.09  Q         |         |         |       V |
18+ 0       0.8380      0.09  Q         |         |         |       V |
18+ 5       0.8386      0.08  Q         |         |         |       V |
18+10       0.8391      0.08  Q         |         |         |       V |
18+15       0.8397      0.08  Q         |         |         |       V |
18+20       0.8403      0.08  Q         |         |         |       V |
18+25       0.8409      0.08  Q         |         |         |       V |
18+30       0.8414      0.08  Q         |         |         |       V |
18+35       0.8420      0.08  Q         |         |         |       V |
18+40       0.8424      0.07  Q         |         |         |       V |
18+45       0.8429      0.06  Q         |         |         |       V |
18+50       0.8433      0.06  Q         |         |         |       V |
18+55       0.8436      0.05  Q         |         |         |       V |
19+ 0       0.8439      0.04  Q         |         |         |       V |
19+ 5       0.8442      0.05  Q         |         |         |        V|
19+10       0.8446      0.06  Q         |         |         |        V|
19+15       0.8450      0.06  Q         |         |         |        V|
19+20       0.8455      0.07  Q         |         |         |        V|
19+25       0.8460      0.08  Q         |         |         |        V|
19+30       0.8466      0.08  Q         |         |         |        V|
19+35       0.8471      0.08  Q         |         |         |        V|
19+40       0.8476      0.07  Q         |         |         |        V|
19+45       0.8480      0.06  Q         |         |         |        V|
19+50       0.8484      0.06  Q         |         |         |        V|
19+55       0.8487      0.05  Q         |         |         |        V|
20+ 0       0.8490      0.04  Q         |         |         |        V|
20+ 5       0.8494      0.05  Q         |         |         |        V|
20+10       0.8498      0.06  Q         |         |         |        V|
20+15       0.8502      0.06  Q         |         |         |        V|
```

20+20	0.8506	0.06	Q	|	|	|	V|
20+25	0.8510	0.06	Q	|	|	|	V|
20+30	0.8514	0.06	Q	|	|	|	V|
20+35	0.8519	0.06	Q	|	|	|	V|
20+40	0.8523	0.06	Q	|	|	|	V|
20+45	0.8527	0.06	Q	|	|	|	V|
20+50	0.8531	0.06	Q	|	|	|	V|
20+55	0.8534	0.05	Q	|	|	|	V|
21+ 0	0.8537	0.04	Q	|	|	|	V|
21+ 5	0.8541	0.05	Q	|	|	|	V|
21+10	0.8545	0.06	Q	|	|	|	V|
21+15	0.8549	0.06	Q	|	|	|	V|
21+20	0.8553	0.06	Q	|	|	|	V|
21+25	0.8556	0.05	Q	|	|	|	V|
21+30	0.8559	0.04	Q	|	|	|	V|
21+35	0.8562	0.05	Q	|	|	|	V|
21+40	0.8566	0.06	Q	|	|	|	V|
21+45	0.8570	0.06	Q	|	|	|	V|
21+50	0.8574	0.06	Q	|	|	|	V|
21+55	0.8577	0.05	Q	|	|	|	V|
22+ 0	0.8580	0.04	Q	|	|	|	V|
22+ 5	0.8584	0.05	Q	|	|	|	V|
22+10	0.8588	0.06	Q	|	|	|	V|
22+15	0.8592	0.06	Q	|	|	|	V|
22+20	0.8596	0.06	Q	|	|	|	V|
22+25	0.8599	0.05	Q	|	|	|	V|
22+30	0.8602	0.04	Q	|	|	|	V|
22+35	0.8605	0.04	Q	|	|	|	V|
22+40	0.8608	0.04	Q	|	|	|	V|
22+45	0.8610	0.04	Q	|	|	|	V|
22+50	0.8613	0.04	Q	|	|	|	V|
22+55	0.8616	0.04	Q	|	|	|	V|
23+ 0	0.8619	0.04	Q	|	|	|	V|
23+ 5	0.8622	0.04	Q	|	|	|	V|
23+10	0.8625	0.04	Q	|	|	|	V|
23+15	0.8628	0.04	Q	|	|	|	V|
23+20	0.8630	0.04	Q	|	|	|	V|
23+25	0.8633	0.04	Q	|	|	|	V|
23+30	0.8636	0.04	Q	|	|	|	V|
23+35	0.8639	0.04	Q	|	|	|	V|
23+40	0.8642	0.04	Q	|	|	|	V|
23+45	0.8645	0.04	Q	|	|	|	V|
23+50	0.8648	0.04	Q	|	|	|	V|
23+55	0.8650	0.04	Q	|	|	|	V|
24+ 0	0.8653	0.04	Q	|	|	|	V|
24+ 5	0.8655	0.03	Q	|	|	|	V|
24+10	0.8656	0.01	Q	|	|	|	V|
24+15	0.8656	0.00	Q	|	|	|	V|
24+20	0.8657	0.00	Q	|	|	|	V|
24+25	0.8657	0.00	Q	|	|	|	V|
24+30	0.8657	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 09/12/22 File: DAC215.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
5-YR
1-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	0.59	4.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.45	10.82

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.791(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.791(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum = 100.000	Sum=	7.518

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	4.40	0.418	0.268	(	0.376)	0.150
2	0.17	4.50	0.427	0.268	(	0.385)	0.160
3	0.25	5.40	0.513	0.268	(	0.462)	0.245
4	0.33	5.40	0.513	0.268	(	0.462)	0.245
5	0.42	5.70	0.541	0.268	(	0.487)	0.274
6	0.50	6.40	0.608	0.268	(	0.547)	0.340
7	0.58	7.90	0.750	0.268	(	0.675)	0.483
8	0.67	9.10	0.864	0.268	(	0.778)	0.597
9	0.75	12.80	1.216	0.268	(	1.094)	0.948
10	0.83	25.60	2.431	0.268	(	2.188)	2.164
11	0.92	7.90	0.750	0.268	(	0.675)	0.483

```
 12   1.00     4.90      0.465          0.268    (  0.419)        0.198
          (Loss Rate Not Used)
    Sum =     100.0                                    Sum =     6.3
     Flood volume = Effective rainfall      0.52(In)
      times area       7.5(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
     Total soil loss =      0.27(In)
     Total soil loss =     0.166(Ac.Ft)
     Total rainfall =      0.79(In)
     Flood volume =       14183.8 Cubic Feet
     Total soil loss =        7246.6 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =     10.018(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                         1 - 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       0.0025      0.37  Q         |         |         |         |
    0+10       0.0089      0.93  |Q        |         |         |         |
    0+15       0.0178      1.30  | Q       |         |         |         |
    0+20       0.0293      1.66  |  Q      |         |         |         |
    0+25       0.0420      1.84  |  Q V    |         |         |         |
    0+30       0.0568      2.15  |   Q V   |         |         |         |
    0+35       0.0759      2.78  |    Q   V|         |         |         |
    0+40       0.1010      3.64  |      Q  | V       |         |         |
    0+45       0.1358      5.06  |         Q     V   |         |         |
    0+50       0.2010      9.46  |         |       Q |   V     |         |
    0+55       0.2700     10.02  |         |         Q         |  V      |
    1+ 0       0.3013      4.56  |        Q|         |         |      V  |
    1+ 5       0.3162      2.16  |   Q     |         |         |       V |
    1+10       0.3222      0.86  |Q        |         |         |        V|
    1+15       0.3249      0.39  Q         |         |         |        V|
    1+20       0.3255      0.09  Q         |         |         |        V|
    1+25       0.3256      0.02  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 09/12/22 File: DAC235.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
5-YR
3-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.00	7.46

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	2.50	18.65

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	1.30	0.211	(0.268)	0.190	0.021
2	0.17	1.30	0.211	(0.268)	0.190	0.021
3	0.25	1.10	0.178	(0.268)	0.161	0.018
4	0.33	1.50	0.243	(0.268)	0.219	0.024
5	0.42	1.50	0.243	(0.268)	0.219	0.024
6	0.50	1.80	0.292	(0.268)	0.263	0.029
7	0.58	1.50	0.243	(0.268)	0.219	0.024
8	0.67	1.80	0.292	(0.268)	0.263	0.029
9	0.75	1.80	0.292	(0.268)	0.263	0.029
10	0.83	1.50	0.243	(0.268)	0.219	0.024
11	0.92	1.60	0.259	(0.268)	0.234	0.026
12	1.00	1.80	0.292	(0.268)	0.263	0.029
13	1.08	2.20	0.357	0.268	(0.321)	0.089

14	1.17	2.20	0.357	0.268	(0.321)	0.089	
15	1.25	2.20	0.357	0.268	(0.321)	0.089	
16	1.33	2.00	0.324	0.268	(0.292)	0.057	
17	1.42	2.60	0.422	0.268	(0.379)	0.154	
18	1.50	2.70	0.438	0.268	(0.394)	0.170	
19	1.58	2.40	0.389	0.268	(0.350)	0.122	
20	1.67	2.70	0.438	0.268	(0.394)	0.170	
21	1.75	3.30	0.535	0.268	(0.482)	0.268	
22	1.83	3.10	0.503	0.268	(0.452)	0.235	
23	1.92	2.90	0.470	0.268	(0.423)	0.203	
24	2.00	3.00	0.486	0.268	(0.438)	0.219	
25	2.08	3.10	0.503	0.268	(0.452)	0.235	
26	2.17	4.20	0.681	0.268	(0.613)	0.413	
27	2.25	5.00	0.811	0.268	(0.730)	0.543	
28	2.33	3.50	0.568	0.268	(0.511)	0.300	
29	2.42	6.80	1.103	0.268	(0.992)	0.835	
30	2.50	7.30	1.184	0.268	(1.065)	0.916	
31	2.58	8.20	1.330	0.268	(1.197)	1.062	
32	2.67	5.90	0.957	0.268	(0.861)	0.689	
33	2.75	2.00	0.324	0.268	(0.292)	0.057	
34	2.83	1.80	0.292	(0.268)	0.263	0.029	
35	2.92	1.80	0.292	(0.268)	0.263	0.029	
36	3.00	0.60	0.097	(0.268)	0.088	0.010	

(Loss Rate Not Used)

Sum = 100.0 Sum = 7.3

Flood volume = Effective rainfall 0.61(In)
times area 7.5(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.74(In)
Total soil loss = 0.463(Ac.Ft)
Total rainfall = 1.35(In)
Flood volume = 16435.4 Cubic Feet
Total soil loss = 20157.4 Cubic Feet

Peak flow rate of this hydrograph = 6.827(CFS)

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3 - 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	0.0004	0.05	Q	|	|	|	|
0+10	0.0012	0.13	Q	|	|	|	|
0+15	0.0022	0.14	Q	|	|	|	|
0+20	0.0032	0.15	Q	|	|	|	|
0+25	0.0044	0.17	Q	|	|	|	|
0+30	0.0057	0.19	Q	|	|	|	|
0+35	0.0071	0.20	Q	|	|	|	|
0+40	0.0084	0.20	Q	|	|	|	|
0+45	0.0099	0.21	QV	|	|	|	|
0+50	0.0113	0.21	QV	|	|	|	|
0+55	0.0127	0.19	QV	|	|	|	|
1+ 0	0.0141	0.20	QV	|	|	|	|
1+ 5	0.0166	0.36	|Q	|	|	|	|
1+10	0.0205	0.58	| Q	|	|	|	|
1+15	0.0249	0.63	| Q	|	|	|	|
1+20	0.0288	0.57	| QV	|	|	|	|

1+25	0.0337	0.71	QV				
1+30	0.0411	1.07	Q				
1+35	0.0485	1.08	QV				
1+40	0.0559	1.07	QV				
1+45	0.0660	1.46	QV				
1+50	0.0781	1.77	QV				
1+55	0.0896	1.66	Q V				
2+ 0	0.1006	1.60	Q V				
2+ 5	0.1122	1.68	Q V				
2+10	0.1272	2.18	Q V				
2+15	0.1489	3.15	Q V				
2+20	0.1707	3.17	Q V				
2+25	0.1969	3.80	Q V				
2+30	0.2366	5.77	Q V				
2+35	0.2836	6.83	Q V				
2+40	0.3295	6.67	Q V				
2+45	0.3572	4.02	Q V				
2+50	0.3677	1.52	Q V				
2+55	0.3730	0.78	Q V				
3+ 0	0.3759	0.42	Q V				
3+ 5	0.3770	0.15	Q V				
3+10	0.3772	0.03	Q V				
3+15	0.3773	0.01	Q V				
3+20	0.3773	0.00	Q V				
3+25	0.3773	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 09/12/22 File: DAC265.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
5-YR
6-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.40	10.44

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	3.50	26.11

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.892(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.892(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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

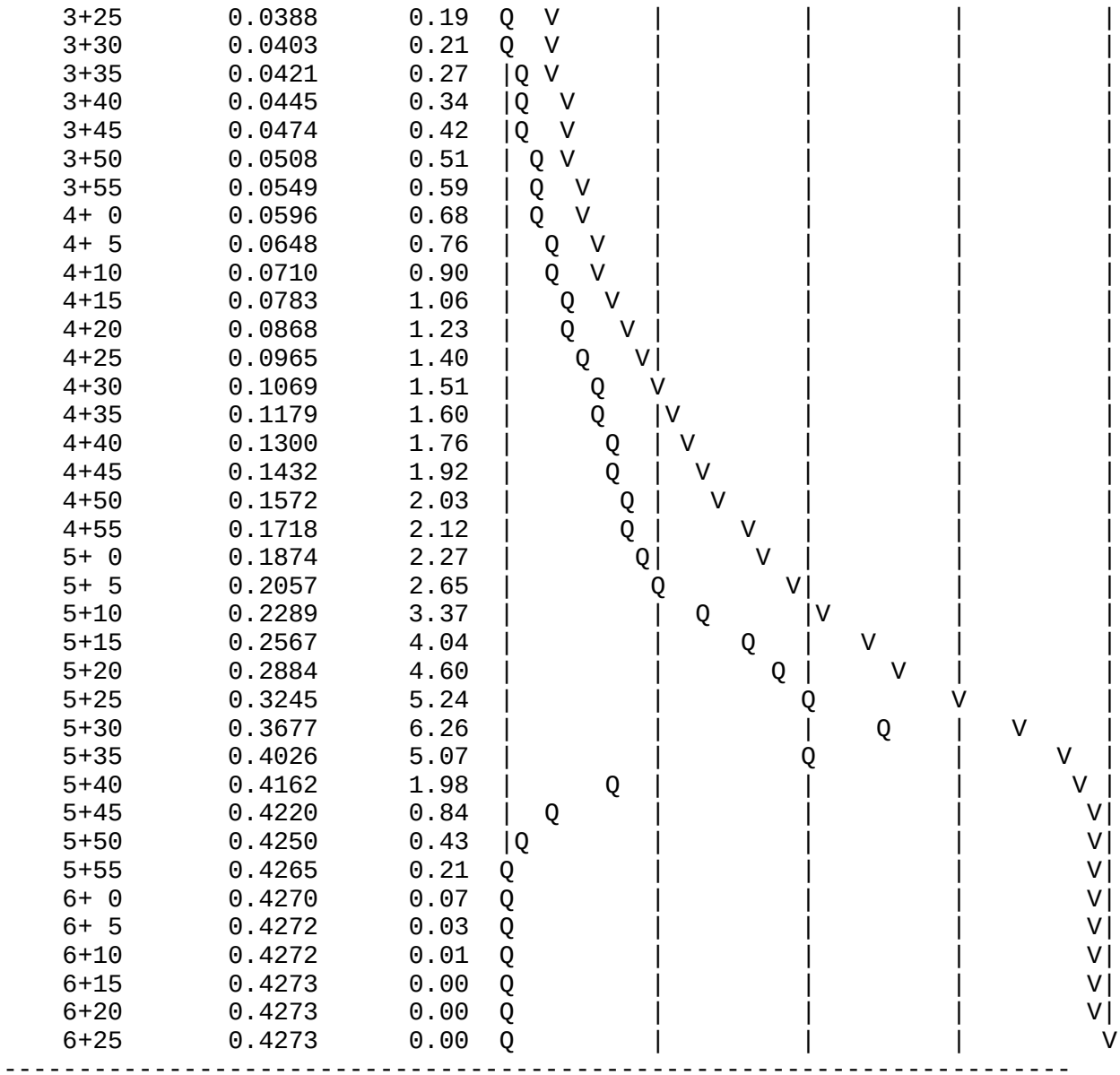
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.114	(0.268)		0.102	0.011
2	0.17	0.60	0.136	(0.268)		0.123	0.014
3	0.25	0.60	0.136	(0.268)		0.123	0.014
4	0.33	0.60	0.136	(0.268)		0.123	0.014
5	0.42	0.60	0.136	(0.268)		0.123	0.014
6	0.50	0.70	0.159	(0.268)		0.143	0.016
7	0.58	0.70	0.159	(0.268)		0.143	0.016
8	0.67	0.70	0.159	(0.268)		0.143	0.016
9	0.75	0.70	0.159	(0.268)		0.143	0.016
10	0.83	0.70	0.159	(0.268)		0.143	0.016
11	0.92	0.70	0.159	(0.268)		0.143	0.016
12	1.00	0.80	0.182	(0.268)		0.163	0.018
13	1.08	0.80	0.182	(0.268)		0.163	0.018

14	1.17	0.80	0.182	(0.268)	0.163	0.018
15	1.25	0.80	0.182	(0.268)	0.163	0.018
16	1.33	0.80	0.182	(0.268)	0.163	0.018
17	1.42	0.80	0.182	(0.268)	0.163	0.018
18	1.50	0.80	0.182	(0.268)	0.163	0.018
19	1.58	0.80	0.182	(0.268)	0.163	0.018
20	1.67	0.80	0.182	(0.268)	0.163	0.018
21	1.75	0.80	0.182	(0.268)	0.163	0.018
22	1.83	0.80	0.182	(0.268)	0.163	0.018
23	1.92	0.80	0.182	(0.268)	0.163	0.018
24	2.00	0.90	0.204	(0.268)	0.184	0.020
25	2.08	0.80	0.182	(0.268)	0.163	0.018
26	2.17	0.90	0.204	(0.268)	0.184	0.020
27	2.25	0.90	0.204	(0.268)	0.184	0.020
28	2.33	0.90	0.204	(0.268)	0.184	0.020
29	2.42	0.90	0.204	(0.268)	0.184	0.020
30	2.50	0.90	0.204	(0.268)	0.184	0.020
31	2.58	0.90	0.204	(0.268)	0.184	0.020
32	2.67	0.90	0.204	(0.268)	0.184	0.020
33	2.75	1.00	0.227	(0.268)	0.204	0.023
34	2.83	1.00	0.227	(0.268)	0.204	0.023
35	2.92	1.00	0.227	(0.268)	0.204	0.023
36	3.00	1.00	0.227	(0.268)	0.204	0.023
37	3.08	1.00	0.227	(0.268)	0.204	0.023
38	3.17	1.10	0.250	(0.268)	0.225	0.025
39	3.25	1.10	0.250	(0.268)	0.225	0.025
40	3.33	1.10	0.250	(0.268)	0.225	0.025
41	3.42	1.20	0.272	(0.268)	0.245	0.027
42	3.50	1.30	0.295	(0.268)	0.266	0.030
43	3.58	1.40	0.318	0.268	(0.286)	0.050
44	3.67	1.40	0.318	0.268	(0.286)	0.050
45	3.75	1.50	0.341	0.268	(0.306)	0.073
46	3.83	1.50	0.341	0.268	(0.306)	0.073
47	3.92	1.60	0.363	0.268	(0.327)	0.096
48	4.00	1.60	0.363	0.268	(0.327)	0.096
49	4.08	1.70	0.386	0.268	(0.347)	0.118
50	4.17	1.80	0.409	0.268	(0.368)	0.141
51	4.25	1.90	0.431	0.268	(0.388)	0.164
52	4.33	2.00	0.454	0.268	(0.409)	0.186
53	4.42	2.10	0.477	0.268	(0.429)	0.209
54	4.50	2.10	0.477	0.268	(0.429)	0.209
55	4.58	2.20	0.499	0.268	(0.449)	0.232
56	4.67	2.30	0.522	0.268	(0.470)	0.255
57	4.75	2.40	0.545	0.268	(0.490)	0.277
58	4.83	2.40	0.545	0.268	(0.490)	0.277
59	4.92	2.50	0.568	0.268	(0.511)	0.300
60	5.00	2.60	0.590	0.268	(0.531)	0.323
61	5.08	3.10	0.704	0.268	(0.633)	0.436
62	5.17	3.60	0.817	0.268	(0.736)	0.550
63	5.25	3.90	0.885	0.268	(0.797)	0.618
64	5.33	4.20	0.953	0.268	(0.858)	0.686
65	5.42	4.70	1.067	0.268	(0.960)	0.799
66	5.50	5.60	1.271	0.268	(1.144)	1.004
67	5.58	1.90	0.431	0.268	(0.388)	0.164
68	5.67	0.90	0.204	(0.268)	0.184	0.020
69	5.75	0.60	0.136	(0.268)	0.123	0.014
70	5.83	0.50	0.114	(0.268)	0.102	0.011
71	5.92	0.30	0.068	(0.268)	0.061	0.007
72	6.00	0.20	0.045	(0.268)	0.041	0.005

(Loss Rate Not Used)

```
   Sum =     100.0                                        Sum =     8.2
    Flood volume = Effective rainfall      0.69(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
    Total soil loss =      1.20(In)
    Total soil loss =     0.749(Ac.Ft)
    Total rainfall =      1.89(In)
    Flood volume =       18612.5 Cubic Feet
    Total soil loss =       32617.7 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      6.265(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        6 - H O U R    S T O R M
                    R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0002      0.03  Q         |         |         |         |
  0+10       0.0007      0.07  Q         |         |         |         |
  0+15       0.0013      0.09  Q         |         |         |         |
  0+20       0.0020      0.10  Q         |         |         |         |
  0+25       0.0027      0.10  Q         |         |         |         |
  0+30       0.0034      0.11  Q         |         |         |         |
  0+35       0.0042      0.12  Q         |         |         |         |
  0+40       0.0050      0.12  Q         |         |         |         |
  0+45       0.0059      0.12  Q         |         |         |         |
  0+50       0.0067      0.12  Q         |         |         |         |
  0+55       0.0075      0.12  Q         |         |         |         |
  1+ 0       0.0084      0.13  Q         |         |         |         |
  1+ 5       0.0093      0.13  Q         |         |         |         |
  1+10       0.0102      0.14  Q         |         |         |         |
  1+15       0.0112      0.14  QV        |         |         |         |
  1+20       0.0121      0.14  QV        |         |         |         |
  1+25       0.0130      0.14  QV        |         |         |         |
  1+30       0.0140      0.14  QV        |         |         |         |
  1+35       0.0149      0.14  QV        |         |         |         |
  1+40       0.0159      0.14  QV        |         |         |         |
  1+45       0.0168      0.14  QV        |         |         |         |
  1+50       0.0177      0.14  QV        |         |         |         |
  1+55       0.0187      0.14  QV        |         |         |         |
  2+ 0       0.0197      0.14  QV        |         |         |         |
  2+ 5       0.0207      0.14  QV        |         |         |         |
  2+10       0.0217      0.14  Q V       |         |         |         |
  2+15       0.0227      0.15  Q V       |         |         |         |
  2+20       0.0237      0.15  Q V       |         |         |         |
  2+25       0.0248      0.15  Q V       |         |         |         |
  2+30       0.0259      0.15  Q V       |         |         |         |
  2+35       0.0269      0.15  Q V       |         |         |         |
  2+40       0.0280      0.15  Q V       |         |         |         |
  2+45       0.0291      0.16  Q V       |         |         |         |
  2+50       0.0302      0.17  Q V       |         |         |         |
  2+55       0.0314      0.17  Q V       |         |         |         |
  3+ 0       0.0326      0.17  Q  V      |         |         |         |
  3+ 5       0.0337      0.17  Q  V      |         |         |         |
  3+10       0.0349      0.18  Q  V      |         |         |         |
  3+15       0.0362      0.18  Q  V      |         |         |         |
  3+20       0.0375      0.19  Q  V      |         |         |         |
```


3+25 0.0388 0.19
3+30 0.0403 0.21
3+35 0.0421 0.27
3+40 0.0445 0.34
3+45 0.0474 0.42
3+50 0.0508 0.51
3+55 0.0549 0.59
4+ 0 0.0596 0.68
4+ 5 0.0648 0.76
4+10 0.0710 0.90
4+15 0.0783 1.06
4+20 0.0868 1.23
4+25 0.0965 1.40
4+30 0.1069 1.51
4+35 0.1179 1.60
4+40 0.1300 1.76
4+45 0.1432 1.92
4+50 0.1572 2.03
4+55 0.1718 2.12
5+ 0 0.1874 2.27
5+ 5 0.2057 2.65
5+10 0.2289 3.37
5+15 0.2567 4.04
5+20 0.2884 4.60
5+25 0.3245 5.24
5+30 0.3677 6.26
5+35 0.4026 5.07
5+40 0.4162 1.98
5+45 0.4220 0.84
5+50 0.4250 0.43
5+55 0.4265 0.21
6+ 0 0.4270 0.07
6+ 5 0.4272 0.03
6+10 0.4272 0.01
6+15 0.4273 0.00
6+20 0.4273 0.00
6+25 0.4273 0.00

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 09/12/22 File: DAC2245.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
5-YR
24-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 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]
7.46	2.50	18.65

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	6.00	44.76

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.320(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.320(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	0.027	(0.474)		0.024	0.003
2	0.17	0.07	0.027	(0.473)		0.024	0.003
3	0.25	0.07	0.027	(0.471)		0.024	0.003
4	0.33	0.10	0.040	(0.469)		0.036	0.004
5	0.42	0.10	0.040	(0.467)		0.036	0.004
6	0.50	0.10	0.040	(0.465)		0.036	0.004
7	0.58	0.10	0.040	(0.463)		0.036	0.004
8	0.67	0.10	0.040	(0.462)		0.036	0.004
9	0.75	0.10	0.040	(0.460)		0.036	0.004
10	0.83	0.13	0.053	(0.458)		0.048	0.005
11	0.92	0.13	0.053	(0.456)		0.048	0.005
12	1.00	0.13	0.053	(0.454)		0.048	0.005
13	1.08	0.10	0.040	(0.453)		0.036	0.004

14	1.17	0.10	0.040	(0.451)	0.036	0.004
15	1.25	0.10	0.040	(0.449)	0.036	0.004
16	1.33	0.10	0.040	(0.447)	0.036	0.004
17	1.42	0.10	0.040	(0.445)	0.036	0.004
18	1.50	0.10	0.040	(0.444)	0.036	0.004
19	1.58	0.10	0.040	(0.442)	0.036	0.004
20	1.67	0.10	0.040	(0.440)	0.036	0.004
21	1.75	0.10	0.040	(0.438)	0.036	0.004
22	1.83	0.13	0.053	(0.437)	0.048	0.005
23	1.92	0.13	0.053	(0.435)	0.048	0.005
24	2.00	0.13	0.053	(0.433)	0.048	0.005
25	2.08	0.13	0.053	(0.431)	0.048	0.005
26	2.17	0.13	0.053	(0.430)	0.048	0.005
27	2.25	0.13	0.053	(0.428)	0.048	0.005
28	2.33	0.13	0.053	(0.426)	0.048	0.005
29	2.42	0.13	0.053	(0.424)	0.048	0.005
30	2.50	0.13	0.053	(0.423)	0.048	0.005
31	2.58	0.17	0.066	(0.421)	0.060	0.007
32	2.67	0.17	0.066	(0.419)	0.060	0.007
33	2.75	0.17	0.066	(0.417)	0.060	0.007
34	2.83	0.17	0.066	(0.416)	0.060	0.007
35	2.92	0.17	0.066	(0.414)	0.060	0.007
36	3.00	0.17	0.066	(0.412)	0.060	0.007
37	3.08	0.17	0.066	(0.411)	0.060	0.007
38	3.17	0.17	0.066	(0.409)	0.060	0.007
39	3.25	0.17	0.066	(0.407)	0.060	0.007
40	3.33	0.17	0.066	(0.405)	0.060	0.007
41	3.42	0.17	0.066	(0.404)	0.060	0.007
42	3.50	0.17	0.066	(0.402)	0.060	0.007
43	3.58	0.17	0.066	(0.400)	0.060	0.007
44	3.67	0.17	0.066	(0.399)	0.060	0.007
45	3.75	0.17	0.066	(0.397)	0.060	0.007
46	3.83	0.20	0.080	(0.395)	0.072	0.008
47	3.92	0.20	0.080	(0.394)	0.072	0.008
48	4.00	0.20	0.080	(0.392)	0.072	0.008
49	4.08	0.20	0.080	(0.390)	0.072	0.008
50	4.17	0.20	0.080	(0.389)	0.072	0.008
51	4.25	0.20	0.080	(0.387)	0.072	0.008
52	4.33	0.23	0.093	(0.385)	0.084	0.009
53	4.42	0.23	0.093	(0.384)	0.084	0.009
54	4.50	0.23	0.093	(0.382)	0.084	0.009
55	4.58	0.23	0.093	(0.381)	0.084	0.009
56	4.67	0.23	0.093	(0.379)	0.084	0.009
57	4.75	0.23	0.093	(0.377)	0.084	0.009
58	4.83	0.27	0.106	(0.376)	0.096	0.011
59	4.92	0.27	0.106	(0.374)	0.096	0.011
60	5.00	0.27	0.106	(0.372)	0.096	0.011
61	5.08	0.20	0.080	(0.371)	0.072	0.008
62	5.17	0.20	0.080	(0.369)	0.072	0.008
63	5.25	0.20	0.080	(0.368)	0.072	0.008
64	5.33	0.23	0.093	(0.366)	0.084	0.009
65	5.42	0.23	0.093	(0.364)	0.084	0.009
66	5.50	0.23	0.093	(0.363)	0.084	0.009
67	5.58	0.27	0.106	(0.361)	0.096	0.011
68	5.67	0.27	0.106	(0.360)	0.096	0.011
69	5.75	0.27	0.106	(0.358)	0.096	0.011
70	5.83	0.27	0.106	(0.356)	0.096	0.011
71	5.92	0.27	0.106	(0.355)	0.096	0.011
72	6.00	0.27	0.106	(0.353)	0.096	0.011
73	6.08	0.30	0.120	(0.352)	0.108	0.012

74	6.17	0.30	0.120	(0.350)	0.108	0.012
75	6.25	0.30	0.120	(0.349)	0.108	0.012
76	6.33	0.30	0.120	(0.347)	0.108	0.012
77	6.42	0.30	0.120	(0.345)	0.108	0.012
78	6.50	0.30	0.120	(0.344)	0.108	0.012
79	6.58	0.33	0.133	(0.342)	0.120	0.013
80	6.67	0.33	0.133	(0.341)	0.120	0.013
81	6.75	0.33	0.133	(0.339)	0.120	0.013
82	6.83	0.33	0.133	(0.338)	0.120	0.013
83	6.92	0.33	0.133	(0.336)	0.120	0.013
84	7.00	0.33	0.133	(0.335)	0.120	0.013
85	7.08	0.33	0.133	(0.333)	0.120	0.013
86	7.17	0.33	0.133	(0.332)	0.120	0.013
87	7.25	0.33	0.133	(0.330)	0.120	0.013
88	7.33	0.37	0.146	(0.329)	0.131	0.015
89	7.42	0.37	0.146	(0.327)	0.131	0.015
90	7.50	0.37	0.146	(0.326)	0.131	0.015
91	7.58	0.40	0.159	(0.324)	0.143	0.016
92	7.67	0.40	0.159	(0.323)	0.143	0.016
93	7.75	0.40	0.159	(0.321)	0.143	0.016
94	7.83	0.43	0.173	(0.320)	0.155	0.017
95	7.92	0.43	0.173	(0.318)	0.155	0.017
96	8.00	0.43	0.173	(0.317)	0.155	0.017
97	8.08	0.50	0.199	(0.315)	0.179	0.020
98	8.17	0.50	0.199	(0.314)	0.179	0.020
99	8.25	0.50	0.199	(0.312)	0.179	0.020
100	8.33	0.50	0.199	(0.311)	0.179	0.020
101	8.42	0.50	0.199	(0.309)	0.179	0.020
102	8.50	0.50	0.199	(0.308)	0.179	0.020
103	8.58	0.53	0.212	(0.306)	0.191	0.021
104	8.67	0.53	0.212	(0.305)	0.191	0.021
105	8.75	0.53	0.212	(0.304)	0.191	0.021
106	8.83	0.57	0.226	(0.302)	0.203	0.023
107	8.92	0.57	0.226	(0.301)	0.203	0.023
108	9.00	0.57	0.226	(0.299)	0.203	0.023
109	9.08	0.63	0.252	(0.298)	0.227	0.025
110	9.17	0.63	0.252	(0.296)	0.227	0.025
111	9.25	0.63	0.252	(0.295)	0.227	0.025
112	9.33	0.67	0.266	(0.294)	0.239	0.027
113	9.42	0.67	0.266	(0.292)	0.239	0.027
114	9.50	0.67	0.266	(0.291)	0.239	0.027
115	9.58	0.70	0.279	(0.289)	0.251	0.028
116	9.67	0.70	0.279	(0.288)	0.251	0.028
117	9.75	0.70	0.279	(0.287)	0.251	0.028
118	9.83	0.73	0.292	(0.285)	0.263	0.029
119	9.92	0.73	0.292	(0.284)	0.263	0.029
120	10.00	0.73	0.292	(0.283)	0.263	0.029
121	10.08	0.50	0.199	(0.281)	0.179	0.020
122	10.17	0.50	0.199	(0.280)	0.179	0.020
123	10.25	0.50	0.199	(0.278)	0.179	0.020
124	10.33	0.50	0.199	(0.277)	0.179	0.020
125	10.42	0.50	0.199	(0.276)	0.179	0.020
126	10.50	0.50	0.199	(0.274)	0.179	0.020
127	10.58	0.67	0.266	(0.273)	0.239	0.027
128	10.67	0.67	0.266	(0.272)	0.239	0.027
129	10.75	0.67	0.266	(0.270)	0.239	0.027
130	10.83	0.67	0.266	(0.269)	0.239	0.027
131	10.92	0.67	0.266	(0.268)	0.239	0.027
132	11.00	0.67	0.266	(0.266)	0.239	0.027
133	11.08	0.63	0.252	(0.265)	0.227	0.025

134	11.17	0.63	0.252	(0.264)	0.227	0.025
135	11.25	0.63	0.252	(0.263)	0.227	0.025
136	11.33	0.63	0.252	(0.261)	0.227	0.025
137	11.42	0.63	0.252	(0.260)	0.227	0.025
138	11.50	0.63	0.252	(0.259)	0.227	0.025
139	11.58	0.57	0.226	(0.257)	0.203	0.023
140	11.67	0.57	0.226	(0.256)	0.203	0.023
141	11.75	0.57	0.226	(0.255)	0.203	0.023
142	11.83	0.60	0.239	(0.254)	0.215	0.024
143	11.92	0.60	0.239	(0.252)	0.215	0.024
144	12.00	0.60	0.239	(0.251)	0.215	0.024
145	12.08	0.83	0.332	0.250	(0.299)	0.082
146	12.17	0.83	0.332	0.249	(0.299)	0.083
147	12.25	0.83	0.332	0.247	(0.299)	0.085
148	12.33	0.87	0.345	0.246	(0.311)	0.099
149	12.42	0.87	0.345	0.245	(0.311)	0.100
150	12.50	0.87	0.345	0.244	(0.311)	0.102
151	12.58	0.93	0.372	0.242	(0.335)	0.129
152	12.67	0.93	0.372	0.241	(0.335)	0.131
153	12.75	0.93	0.372	0.240	(0.335)	0.132
154	12.83	0.97	0.385	0.239	(0.347)	0.146
155	12.92	0.97	0.385	0.238	(0.347)	0.148
156	13.00	0.97	0.385	0.236	(0.347)	0.149
157	13.08	1.13	0.451	0.235	(0.406)	0.216
158	13.17	1.13	0.451	0.234	(0.406)	0.218
159	13.25	1.13	0.451	0.233	(0.406)	0.219
160	13.33	1.13	0.451	0.232	(0.406)	0.220
161	13.42	1.13	0.451	0.230	(0.406)	0.221
162	13.50	1.13	0.451	0.229	(0.406)	0.222
163	13.58	0.77	0.305	0.228	(0.275)	0.077
164	13.67	0.77	0.305	0.227	(0.275)	0.079
165	13.75	0.77	0.305	0.226	(0.275)	0.080
166	13.83	0.77	0.305	0.225	(0.275)	0.081
167	13.92	0.77	0.305	0.223	(0.275)	0.082
168	14.00	0.77	0.305	0.222	(0.275)	0.083
169	14.08	0.90	0.359	0.221	(0.323)	0.137
170	14.17	0.90	0.359	0.220	(0.323)	0.139
171	14.25	0.90	0.359	0.219	(0.323)	0.140
172	14.33	0.87	0.345	0.218	(0.311)	0.127
173	14.42	0.87	0.345	0.217	(0.311)	0.129
174	14.50	0.87	0.345	0.216	(0.311)	0.130
175	14.58	0.87	0.345	0.214	(0.311)	0.131
176	14.67	0.87	0.345	0.213	(0.311)	0.132
177	14.75	0.87	0.345	0.212	(0.311)	0.133
178	14.83	0.83	0.332	0.211	(0.299)	0.121
179	14.92	0.83	0.332	0.210	(0.299)	0.122
180	15.00	0.83	0.332	0.209	(0.299)	0.123
181	15.08	0.80	0.319	0.208	(0.287)	0.111
182	15.17	0.80	0.319	0.207	(0.287)	0.112
183	15.25	0.80	0.319	0.206	(0.287)	0.113
184	15.33	0.77	0.305	0.205	(0.275)	0.101
185	15.42	0.77	0.305	0.204	(0.275)	0.102
186	15.50	0.77	0.305	0.203	(0.275)	0.103
187	15.58	0.63	0.252	0.202	(0.227)	0.051
188	15.67	0.63	0.252	0.201	(0.227)	0.052
189	15.75	0.63	0.252	0.200	(0.227)	0.053
190	15.83	0.63	0.252	0.199	(0.227)	0.054
191	15.92	0.63	0.252	0.198	(0.227)	0.055
192	16.00	0.63	0.252	0.197	(0.227)	0.056
193	16.08	0.13	0.053	(0.196)	0.048	0.005

194	16.17	0.13	0.053	(0.195)	0.048	0.005
195	16.25	0.13	0.053	(0.194)	0.048	0.005
196	16.33	0.13	0.053	(0.193)	0.048	0.005
197	16.42	0.13	0.053	(0.192)	0.048	0.005
198	16.50	0.13	0.053	(0.191)	0.048	0.005
199	16.58	0.10	0.040	(0.190)	0.036	0.004
200	16.67	0.10	0.040	(0.189)	0.036	0.004
201	16.75	0.10	0.040	(0.188)	0.036	0.004
202	16.83	0.10	0.040	(0.187)	0.036	0.004
203	16.92	0.10	0.040	(0.186)	0.036	0.004
204	17.00	0.10	0.040	(0.185)	0.036	0.004
205	17.08	0.17	0.066	(0.184)	0.060	0.007
206	17.17	0.17	0.066	(0.183)	0.060	0.007
207	17.25	0.17	0.066	(0.182)	0.060	0.007
208	17.33	0.17	0.066	(0.181)	0.060	0.007
209	17.42	0.17	0.066	(0.180)	0.060	0.007
210	17.50	0.17	0.066	(0.179)	0.060	0.007
211	17.58	0.17	0.066	(0.178)	0.060	0.007
212	17.67	0.17	0.066	(0.178)	0.060	0.007
213	17.75	0.17	0.066	(0.177)	0.060	0.007
214	17.83	0.13	0.053	(0.176)	0.048	0.005
215	17.92	0.13	0.053	(0.175)	0.048	0.005
216	18.00	0.13	0.053	(0.174)	0.048	0.005
217	18.08	0.13	0.053	(0.173)	0.048	0.005
218	18.17	0.13	0.053	(0.172)	0.048	0.005
219	18.25	0.13	0.053	(0.172)	0.048	0.005
220	18.33	0.13	0.053	(0.171)	0.048	0.005
221	18.42	0.13	0.053	(0.170)	0.048	0.005
222	18.50	0.13	0.053	(0.169)	0.048	0.005
223	18.58	0.10	0.040	(0.168)	0.036	0.004
224	18.67	0.10	0.040	(0.167)	0.036	0.004
225	18.75	0.10	0.040	(0.167)	0.036	0.004
226	18.83	0.07	0.027	(0.166)	0.024	0.003
227	18.92	0.07	0.027	(0.165)	0.024	0.003
228	19.00	0.07	0.027	(0.164)	0.024	0.003
229	19.08	0.10	0.040	(0.163)	0.036	0.004
230	19.17	0.10	0.040	(0.163)	0.036	0.004
231	19.25	0.10	0.040	(0.162)	0.036	0.004
232	19.33	0.13	0.053	(0.161)	0.048	0.005
233	19.42	0.13	0.053	(0.160)	0.048	0.005
234	19.50	0.13	0.053	(0.160)	0.048	0.005
235	19.58	0.10	0.040	(0.159)	0.036	0.004
236	19.67	0.10	0.040	(0.158)	0.036	0.004
237	19.75	0.10	0.040	(0.157)	0.036	0.004
238	19.83	0.07	0.027	(0.157)	0.024	0.003
239	19.92	0.07	0.027	(0.156)	0.024	0.003
240	20.00	0.07	0.027	(0.155)	0.024	0.003
241	20.08	0.10	0.040	(0.155)	0.036	0.004
242	20.17	0.10	0.040	(0.154)	0.036	0.004
243	20.25	0.10	0.040	(0.153)	0.036	0.004
244	20.33	0.10	0.040	(0.153)	0.036	0.004
245	20.42	0.10	0.040	(0.152)	0.036	0.004
246	20.50	0.10	0.040	(0.151)	0.036	0.004
247	20.58	0.10	0.040	(0.151)	0.036	0.004
248	20.67	0.10	0.040	(0.150)	0.036	0.004
249	20.75	0.10	0.040	(0.150)	0.036	0.004
250	20.83	0.07	0.027	(0.149)	0.024	0.003
251	20.92	0.07	0.027	(0.148)	0.024	0.003
252	21.00	0.07	0.027	(0.148)	0.024	0.003
253	21.08	0.10	0.040	(0.147)	0.036	0.004

254	21.17	0.10	0.040	(0.147)	0.036	0.004
255	21.25	0.10	0.040	(0.146)	0.036	0.004
256	21.33	0.07	0.027	(0.145)	0.024	0.003
257	21.42	0.07	0.027	(0.145)	0.024	0.003
258	21.50	0.07	0.027	(0.144)	0.024	0.003
259	21.58	0.10	0.040	(0.144)	0.036	0.004
260	21.67	0.10	0.040	(0.143)	0.036	0.004
261	21.75	0.10	0.040	(0.143)	0.036	0.004
262	21.83	0.07	0.027	(0.142)	0.024	0.003
263	21.92	0.07	0.027	(0.142)	0.024	0.003
264	22.00	0.07	0.027	(0.141)	0.024	0.003
265	22.08	0.10	0.040	(0.141)	0.036	0.004
266	22.17	0.10	0.040	(0.140)	0.036	0.004
267	22.25	0.10	0.040	(0.140)	0.036	0.004
268	22.33	0.07	0.027	(0.139)	0.024	0.003
269	22.42	0.07	0.027	(0.139)	0.024	0.003
270	22.50	0.07	0.027	(0.139)	0.024	0.003
271	22.58	0.07	0.027	(0.138)	0.024	0.003
272	22.67	0.07	0.027	(0.138)	0.024	0.003
273	22.75	0.07	0.027	(0.137)	0.024	0.003
274	22.83	0.07	0.027	(0.137)	0.024	0.003
275	22.92	0.07	0.027	(0.137)	0.024	0.003
276	23.00	0.07	0.027	(0.136)	0.024	0.003
277	23.08	0.07	0.027	(0.136)	0.024	0.003
278	23.17	0.07	0.027	(0.136)	0.024	0.003
279	23.25	0.07	0.027	(0.136)	0.024	0.003
280	23.33	0.07	0.027	(0.135)	0.024	0.003
281	23.42	0.07	0.027	(0.135)	0.024	0.003
282	23.50	0.07	0.027	(0.135)	0.024	0.003
283	23.58	0.07	0.027	(0.135)	0.024	0.003
284	23.67	0.07	0.027	(0.134)	0.024	0.003
285	23.75	0.07	0.027	(0.134)	0.024	0.003
286	23.83	0.07	0.027	(0.134)	0.024	0.003
287	23.92	0.07	0.027	(0.134)	0.024	0.003
288	24.00	0.07	0.027	(0.134)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 8.1

Flood volume = Effective rainfall 0.67(In)
times area 7.5(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 2.65(In)
Total soil loss = 1.647(Ac.Ft)
Total rainfall = 3.32(In)
Flood volume = 18172.8 Cubic Feet
Total soil loss = 71725.0 Cubic Feet

Peak flow rate of this hydrograph = 1.663(CFS)

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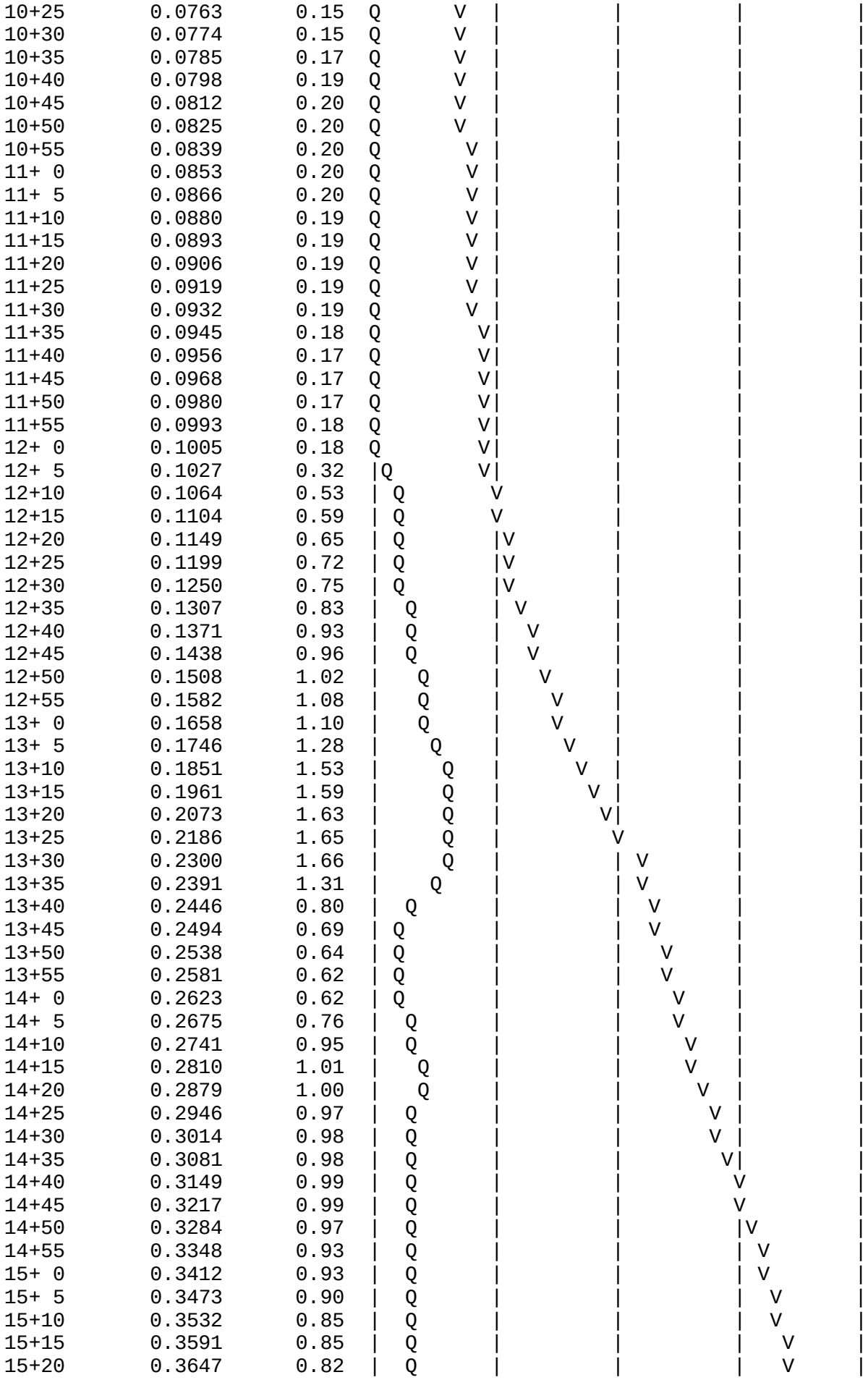
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q	|	|	|	|
0+10	0.0002	0.02	Q	|	|	|	|
0+15	0.0003	0.02	Q	|	|	|	|
0+20	0.0004	0.02	Q	|	|	|	|

0+25	0.0006	0.03	Q	|	|	|	|
0+30	0.0008	0.03	Q	|	|	|	|
0+35	0.0010	0.03	Q	|	|	|	|
0+40	0.0012	0.03	Q	|	|	|	|
0+45	0.0014	0.03	Q	|	|	|	|
0+50	0.0017	0.03	Q	|	|	|	|
0+55	0.0019	0.04	Q	|	|	|	|
1+ 0	0.0022	0.04	Q	|	|	|	|
1+ 5	0.0025	0.04	Q	|	|	|	|
1+10	0.0027	0.03	Q	|	|	|	|
1+15	0.0029	0.03	Q	|	|	|	|
1+20	0.0031	0.03	Q	|	|	|	|
1+25	0.0033	0.03	Q	|	|	|	|
1+30	0.0035	0.03	Q	|	|	|	|
1+35	0.0037	0.03	Q	|	|	|	|
1+40	0.0039	0.03	Q	|	|	|	|
1+45	0.0041	0.03	Q	|	|	|	|
1+50	0.0044	0.03	Q	|	|	|	|
1+55	0.0046	0.04	Q	|	|	|	|
2+ 0	0.0049	0.04	Q	|	|	|	|
2+ 5	0.0052	0.04	Q	|	|	|	|
2+10	0.0054	0.04	Q	|	|	|	|
2+15	0.0057	0.04	Q	|	|	|	|
2+20	0.0060	0.04	Q	|	|	|	|
2+25	0.0063	0.04	Q	|	|	|	|
2+30	0.0065	0.04	Q	|	|	|	|
2+35	0.0068	0.04	Q	|	|	|	|
2+40	0.0072	0.05	Q	|	|	|	|
2+45	0.0075	0.05	Q	|	|	|	|
2+50	0.0078	0.05	Q	|	|	|	|
2+55	0.0082	0.05	Q	|	|	|	|
3+ 0	0.0085	0.05	Q	|	|	|	|
3+ 5	0.0089	0.05	Q	|	|	|	|
3+10	0.0092	0.05	Q	|	|	|	|
3+15	0.0096	0.05	Q	|	|	|	|
3+20	0.0099	0.05	Q	|	|	|	|
3+25	0.0102	0.05	Q	|	|	|	|
3+30	0.0106	0.05	QV	|	|	|	|
3+35	0.0109	0.05	QV	|	|	|	|
3+40	0.0113	0.05	QV	|	|	|	|
3+45	0.0116	0.05	QV	|	|	|	|
3+50	0.0120	0.05	QV	|	|	|	|
3+55	0.0124	0.06	QV	|	|	|	|
4+ 0	0.0128	0.06	QV	|	|	|	|
4+ 5	0.0132	0.06	QV	|	|	|	|
4+10	0.0136	0.06	QV	|	|	|	|
4+15	0.0140	0.06	QV	|	|	|	|
4+20	0.0145	0.06	QV	|	|	|	|
4+25	0.0149	0.07	QV	|	|	|	|
4+30	0.0154	0.07	QV	|	|	|	|
4+35	0.0159	0.07	QV	|	|	|	|
4+40	0.0164	0.07	QV	|	|	|	|
4+45	0.0168	0.07	QV	|	|	|	|
4+50	0.0173	0.07	QV	|	|	|	|
4+55	0.0179	0.08	QV	|	|	|	|
5+ 0	0.0184	0.08	QV	|	|	|	|
5+ 5	0.0189	0.07	QV	|	|	|	|
5+10	0.0194	0.06	QV	|	|	|	|
5+15	0.0198	0.06	QV	|	|	|	|
5+20	0.0202	0.06	QV	|	|	|	|

5+25	0.0207	0.07	QV	|	|	|	|
5+30	0.0212	0.07	Q V	|	|	|	|
5+35	0.0217	0.07	Q V	|	|	|	|
5+40	0.0222	0.08	Q V	|	|	|	|
5+45	0.0228	0.08	Q V	|	|	|	|
5+50	0.0233	0.08	Q V	|	|	|	|
5+55	0.0239	0.08	Q V	|	|	|	|
6+ 0	0.0244	0.08	Q V	|	|	|	|
6+ 5	0.0250	0.08	Q V	|	|	|	|
6+10	0.0256	0.09	Q V	|	|	|	|
6+15	0.0262	0.09	Q V	|	|	|	|
6+20	0.0268	0.09	Q V	|	|	|	|
6+25	0.0274	0.09	Q V	|	|	|	|
6+30	0.0281	0.09	Q V	|	|	|	|
6+35	0.0287	0.09	Q V	|	|	|	|
6+40	0.0294	0.10	Q V	|	|	|	|
6+45	0.0301	0.10	Q V	|	|	|	|
6+50	0.0307	0.10	Q V	|	|	|	|
6+55	0.0314	0.10	Q V	|	|	|	|
7+ 0	0.0321	0.10	Q V	|	|	|	|
7+ 5	0.0328	0.10	Q V	|	|	|	|
7+10	0.0335	0.10	Q V	|	|	|	|
7+15	0.0342	0.10	Q V	|	|	|	|
7+20	0.0349	0.10	Q V	|	|	|	|
7+25	0.0356	0.11	Q V	|	|	|	|
7+30	0.0364	0.11	Q V	|	|	|	|
7+35	0.0372	0.11	Q V	|	|	|	|
7+40	0.0380	0.12	Q V	|	|	|	|
7+45	0.0388	0.12	Q V	|	|	|	|
7+50	0.0396	0.12	Q V	|	|	|	|
7+55	0.0405	0.13	Q V	|	|	|	|
8+ 0	0.0414	0.13	Q V	|	|	|	|
8+ 5	0.0423	0.14	Q V	|	|	|	|
8+10	0.0433	0.15	Q V	|	|	|	|
8+15	0.0444	0.15	Q V	|	|	|	|
8+20	0.0454	0.15	Q V	|	|	|	|
8+25	0.0464	0.15	Q V	|	|	|	|
8+30	0.0474	0.15	Q V	|	|	|	|
8+35	0.0485	0.15	Q V	|	|	|	|
8+40	0.0496	0.16	Q V	|	|	|	|
8+45	0.0507	0.16	Q V	|	|	|	|
8+50	0.0518	0.16	Q V	|	|	|	|
8+55	0.0530	0.17	Q V	|	|	|	|
9+ 0	0.0541	0.17	Q V	|	|	|	|
9+ 5	0.0553	0.18	Q V	|	|	|	|
9+10	0.0566	0.19	Q V	|	|	|	|
9+15	0.0579	0.19	Q V	|	|	|	|
9+20	0.0592	0.19	Q V	|	|	|	|
9+25	0.0606	0.20	Q V	|	|	|	|
9+30	0.0620	0.20	Q V	|	|	|	|
9+35	0.0634	0.20	Q V	|	|	|	|
9+40	0.0648	0.21	Q V	|	|	|	|
9+45	0.0662	0.21	Q V	|	|	|	|
9+50	0.0677	0.21	Q V	|	|	|	|
9+55	0.0692	0.22	Q V	|	|	|	|
10+ 0	0.0707	0.22	Q V	|	|	|	|
10+ 5	0.0720	0.20	Q V	|	|	|	|
10+10	0.0732	0.16	Q V	|	|	|	|
10+15	0.0743	0.16	Q V	|	|	|	|
10+20	0.0753	0.15	Q V	|	|	|	|



```
15+25       0.3701      0.78  |  Q      |         |         |    V    |
15+30       0.3754      0.77  |  Q      |         |         |    V    |
15+35       0.3799      0.65  | Q       |         |         |     V   |
15+40       0.3830      0.46  |Q        |         |         |     V   |
15+45       0.3860      0.42  |Q        |         |         |      V  |
15+50       0.3888      0.41  |Q        |         |         |      V  |
15+55       0.3916      0.41  |Q        |         |         |      V  |
16+ 0       0.3945      0.41  |Q        |         |         |      V  |
16+ 5       0.3965      0.29  |Q        |         |         |       V |
16+10       0.3973      0.12  Q         |         |         |       V |
16+15       0.3978      0.07  Q         |         |         |       V |
16+20       0.3982      0.05  Q         |         |         |       V |
16+25       0.3985      0.05  Q         |         |         |       V |
16+30       0.3987      0.04  Q         |         |         |       V |
16+35       0.3990      0.04  Q         |         |         |       V |
16+40       0.3992      0.03  Q         |         |         |       V |
16+45       0.3994      0.03  Q         |         |         |       V |
16+50       0.3996      0.03  Q         |         |         |       V |
16+55       0.3999      0.03  Q         |         |         |       V |
17+ 0       0.4001      0.03  Q         |         |         |       V |
17+ 5       0.4003      0.04  Q         |         |         |       V |
17+10       0.4006      0.05  Q         |         |         |       V |
17+15       0.4010      0.05  Q         |         |         |       V |
17+20       0.4013      0.05  Q         |         |         |       V |
17+25       0.4016      0.05  Q         |         |         |       V |
17+30       0.4020      0.05  Q         |         |         |       V |
17+35       0.4023      0.05  Q         |         |         |       V |
17+40       0.4027      0.05  Q         |         |         |       V |
17+45       0.4030      0.05  Q         |         |         |       V |
17+50       0.4033      0.05  Q         |         |         |       V |
17+55       0.4036      0.04  Q         |         |         |       V |
18+ 0       0.4039      0.04  Q         |         |         |       V |
18+ 5       0.4042      0.04  Q         |         |         |       V |
18+10       0.4045      0.04  Q         |         |         |       V |
18+15       0.4047      0.04  Q         |         |         |       V |
18+20       0.4050      0.04  Q         |         |         |       V |
18+25       0.4053      0.04  Q         |         |         |       V |
18+30       0.4056      0.04  Q         |         |         |       V |
18+35       0.4058      0.04  Q         |         |         |       V |
18+40       0.4060      0.03  Q         |         |         |       V |
18+45       0.4062      0.03  Q         |         |         |       V |
18+50       0.4064      0.03  Q         |         |         |       V |
18+55       0.4066      0.02  Q         |         |         |       V |
19+ 0       0.4067      0.02  Q         |         |         |       V |
19+ 5       0.4069      0.02  Q         |         |         |        V|
19+10       0.4071      0.03  Q         |         |         |        V|
19+15       0.4073      0.03  Q         |         |         |        V|
19+20       0.4075      0.03  Q         |         |         |        V|
19+25       0.4078      0.04  Q         |         |         |        V|
19+30       0.4080      0.04  Q         |         |         |        V|
19+35       0.4083      0.04  Q         |         |         |        V|
19+40       0.4085      0.03  Q         |         |         |        V|
19+45       0.4087      0.03  Q         |         |         |        V|
19+50       0.4089      0.03  Q         |         |         |        V|
19+55       0.4091      0.02  Q         |         |         |        V|
20+ 0       0.4092      0.02  Q         |         |         |        V|
20+ 5       0.4094      0.02  Q         |         |         |        V|
20+10       0.4096      0.03  Q         |         |         |        V|
20+15       0.4098      0.03  Q         |         |         |        V|
20+20       0.4100      0.03  Q         |         |         |        V|
```

20+25	0.4102	0.03	Q	|	|	|	V|
20+30	0.4104	0.03	Q	|	|	|	V|
20+35	0.4106	0.03	Q	|	|	|	V|
20+40	0.4108	0.03	Q	|	|	|	V|
20+45	0.4110	0.03	Q	|	|	|	V|
20+50	0.4112	0.03	Q	|	|	|	V|
20+55	0.4113	0.02	Q	|	|	|	V|
21+ 0	0.4115	0.02	Q	|	|	|	V|
21+ 5	0.4116	0.02	Q	|	|	|	V|
21+10	0.4118	0.03	Q	|	|	|	V|
21+15	0.4120	0.03	Q	|	|	|	V|
21+20	0.4122	0.03	Q	|	|	|	V|
21+25	0.4124	0.02	Q	|	|	|	V|
21+30	0.4125	0.02	Q	|	|	|	V|
21+35	0.4127	0.02	Q	|	|	|	V|
21+40	0.4129	0.03	Q	|	|	|	V|
21+45	0.4131	0.03	Q	|	|	|	V|
21+50	0.4132	0.03	Q	|	|	|	V|
21+55	0.4134	0.02	Q	|	|	|	V|
22+ 0	0.4135	0.02	Q	|	|	|	V|
22+ 5	0.4137	0.02	Q	|	|	|	V|
22+10	0.4139	0.03	Q	|	|	|	V|
22+15	0.4141	0.03	Q	|	|	|	V|
22+20	0.4143	0.03	Q	|	|	|	V|
22+25	0.4144	0.02	Q	|	|	|	V|
22+30	0.4146	0.02	Q	|	|	|	V|
22+35	0.4147	0.02	Q	|	|	|	V|
22+40	0.4148	0.02	Q	|	|	|	V|
22+45	0.4150	0.02	Q	|	|	|	V|
22+50	0.4151	0.02	Q	|	|	|	V|
22+55	0.4153	0.02	Q	|	|	|	V|
23+ 0	0.4154	0.02	Q	|	|	|	V|
23+ 5	0.4155	0.02	Q	|	|	|	V|
23+10	0.4157	0.02	Q	|	|	|	V|
23+15	0.4158	0.02	Q	|	|	|	V|
23+20	0.4160	0.02	Q	|	|	|	V|
23+25	0.4161	0.02	Q	|	|	|	V|
23+30	0.4162	0.02	Q	|	|	|	V|
23+35	0.4164	0.02	Q	|	|	|	V|
23+40	0.4165	0.02	Q	|	|	|	V|
23+45	0.4166	0.02	Q	|	|	|	V|
23+50	0.4168	0.02	Q	|	|	|	V|
23+55	0.4169	0.02	Q	|	|	|	V|
24+ 0	0.4171	0.02	Q	|	|	|	V|
24+ 5	0.4171	0.01	Q	|	|	|	V|
24+10	0.4172	0.00	Q	|	|	|	V|
24+15	0.4172	0.00	Q	|	|	|	V|
24+20	0.4172	0.00	Q	|	|	|	V|
24+25	0.4172	0.00	Q	|	|	|	V|

10-YEAR STORM

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 08/15/22 File: THECOVE110.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
1-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	0.57	8.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.45	22.45

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.932(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.932(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	4.40	0.492	0.268	(0.443)	0.224
2	0.17	4.50	0.503	0.268	(0.453)	0.236
3	0.25	5.40	0.604	0.268	(0.543)	0.336
4	0.33	5.40	0.604	0.268	(0.543)	0.336
5	0.42	5.70	0.637	0.268	(0.574)	0.370
6	0.50	6.40	0.716	0.268	(0.644)	0.448
7	0.58	7.90	0.883	0.268	(0.795)	0.616
8	0.67	9.10	1.018	0.268	(0.916)	0.750
9	0.75	12.80	1.431	0.268	(1.288)	1.164
10	0.83	25.60	2.863	0.268	(2.577)	2.595

```
 11   0.92     7.90      0.883          0.268    (  0.795)        0.616
 12   1.00     4.90      0.548          0.268    (  0.493)        0.280
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     8.0
    Flood volume = Effective rainfall      0.66(In)
     times area      15.5(Ac.)/[(In)/(Ft.)] =       0.9(Ac.Ft)
    Total soil loss =      0.27(In)
    Total soil loss =     0.345(Ac.Ft)
    Total rainfall =      0.93(In)
    Flood volume =       37329.1 Cubic Feet
    Total soil loss =       15037.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     25.742(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ---------------------------------------------------------------------------
   0+ 5       0.0064      0.93  VQ        |         |         |         |
   0+10       0.0249      2.68  |V Q      |         |         |         |
   0+15       0.0499      3.63  | V Q     |         |         |         |
   0+20       0.0817      4.62  |  V  Q   |         |         |         |
   0+25       0.1168      5.09  |    VQ   |         |         |         |
   0+30       0.1569      5.83  |      Q  |         |         |         |
   0+35       0.2070      7.28  |        Q|         |         |         |
   0+40       0.2712      9.32  |         | Q       |         |         |
   0+45       0.3573     12.50  |         |    Q    |         |         |
   0+50       0.5092     22.05  |         |         |  V     Q|         |
   0+55       0.6865     25.74  |         |         |         | V Q     |
   1+ 0       0.7742     12.74  |         |    Q    |         |    V    |
   1+ 5       0.8198      6.62  |       Q |         |         |       V |
   1+10       0.8397      2.89  |  Q      |         |         |        V|
   1+15       0.8500      1.50  |Q        |         |         |        V|
   1+20       0.8553      0.78  |Q        |         |         |        V|
   1+25       0.8566      0.19  Q         |         |         |        V|
   1+30       0.8570      0.05  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 08/15/22 File: THECOVE310.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
3-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.00	15.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	2.50	38.70

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.617(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.617(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	1.30	0.252	(0.268)	0.227	0.025
2	0.17	1.30	0.252	(0.268)	0.227	0.025
3	0.25	1.10	0.213	(0.268)	0.192	0.021
4	0.33	1.50	0.291	(0.268)	0.262	0.029
5	0.42	1.50	0.291	(0.268)	0.262	0.029
6	0.50	1.80	0.349	0.268	(0.314)	0.082
7	0.58	1.50	0.291	(0.268)	0.262	0.029
8	0.67	1.80	0.349	0.268	(0.314)	0.082
9	0.75	1.80	0.349	0.268	(0.314)	0.082
10	0.83	1.50	0.291	(0.268)	0.262	0.029
11	0.92	1.60	0.310	0.268	(0.279)	0.043
12	1.00	1.80	0.349	0.268	(0.314)	0.082

13	1.08	2.20	0.427	0.268	(	0.384)	0.159
14	1.17	2.20	0.427	0.268	(	0.384)	0.159
15	1.25	2.20	0.427	0.268	(	0.384)	0.159
16	1.33	2.00	0.388	0.268	(	0.349)	0.120
17	1.42	2.60	0.505	0.268	(	0.454)	0.237
18	1.50	2.70	0.524	0.268	(	0.472)	0.256
19	1.58	2.40	0.466	0.268	(	0.419)	0.198
20	1.67	2.70	0.524	0.268	(	0.472)	0.256
21	1.75	3.30	0.640	0.268	(	0.576)	0.373
22	1.83	3.10	0.602	0.268	(	0.541)	0.334
23	1.92	2.90	0.563	0.268	(	0.506)	0.295
24	2.00	3.00	0.582	0.268	(	0.524)	0.315
25	2.08	3.10	0.602	0.268	(	0.541)	0.334
26	2.17	4.20	0.815	0.268	(	0.733)	0.547
27	2.25	5.00	0.970	0.268	(	0.873)	0.703
28	2.33	3.50	0.679	0.268	(	0.611)	0.412
29	2.42	6.80	1.319	0.268	(	1.188)	1.052
30	2.50	7.30	1.416	0.268	(	1.275)	1.149
31	2.58	8.20	1.591	0.268	(	1.432)	1.324
32	2.67	5.90	1.145	0.268	(	1.030)	0.877
33	2.75	2.00	0.388	0.268	(	0.349)	0.120
34	2.83	1.80	0.349	0.268	(	0.314)	0.082
35	2.92	1.80	0.349	0.268	(	0.314)	0.082
36	3.00	0.60	0.116	(0.268)		0.105	0.012

(Loss Rate Not Used)

Sum = 100.0 Sum = 10.1

Flood volume = Effective rainfall 0.84(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 1.1(Ac.Ft)
Total soil loss = 0.77(In)
Total soil loss = 0.999(Ac.Ft)
Total rainfall = 1.62(In)
Flood volume = 47353.7 Cubic Feet
Total soil loss = 43509.6 Cubic Feet

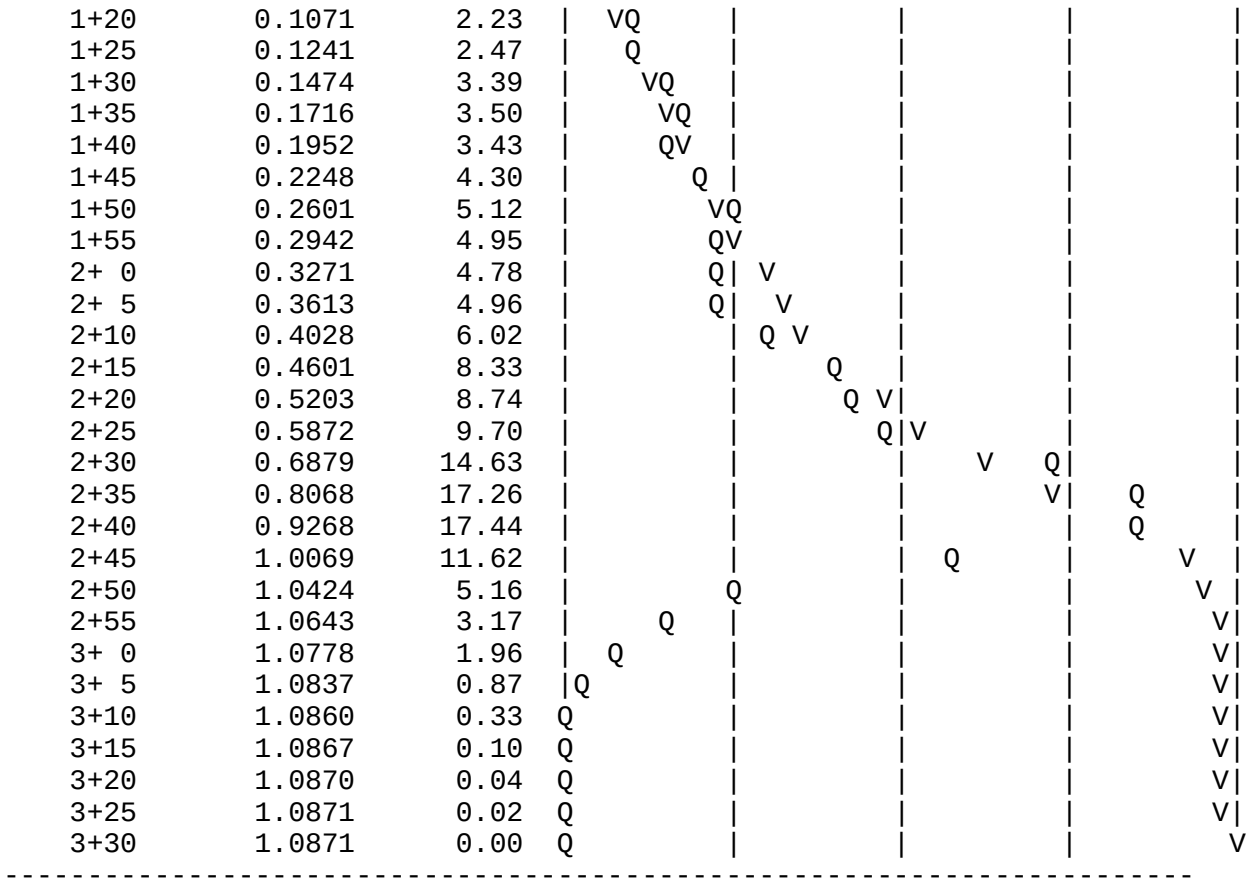
Peak flow rate of this hydrograph = 17.437(CFS)

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3 - 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	0.0007	0.10	Q	|	|	|	|
0+10	0.0028	0.30	Q	|	|	|	|
0+15	0.0050	0.33	Q	|	|	|	|
0+20	0.0075	0.36	Q	|	|	|	|
0+25	0.0104	0.42	Q	|	|	|	|
0+30	0.0149	0.66	VQ	|	|	|	|
0+35	0.0207	0.85	VQ	|	|	|	|
0+40	0.0261	0.78	VQ	|	|	|	|
0+45	0.0338	1.12	|VQ	|	|	|	|
0+50	0.0406	0.98	|Q	|	|	|	|
0+55	0.0452	0.68	|Q	|	|	|	|
1+ 0	0.0512	0.86	|Q	|	|	|	|
1+ 5	0.0612	1.46	| Q	|	|	|	|
1+10	0.0759	2.12	| V Q	|	|	|	|
1+15	0.0917	2.31	| VQ	|	|	|	|



1+20	0.1071	2.23	VQ					
1+25	0.1241	2.47	Q					
1+30	0.1474	3.39	VQ					
1+35	0.1716	3.50	VQ					
1+40	0.1952	3.43	QV					
1+45	0.2248	4.30	Q					
1+50	0.2601	5.12	VQ					
1+55	0.2942	4.95	QV					
2+ 0	0.3271	4.78	Q	V				
2+ 5	0.3613	4.96	Q	V				
2+10	0.4028	6.02		Q V				
2+15	0.4601	8.33		Q				
2+20	0.5203	8.74		Q V				
2+25	0.5872	9.70		Q	V			
2+30	0.6879	14.63			V	Q		
2+35	0.8068	17.26			V	Q		
2+40	0.9268	17.44			Q			
2+45	1.0069	11.62			Q		V	
2+50	1.0424	5.16	Q				V	
2+55	1.0643	3.17	Q				V	
3+ 0	1.0778	1.96	Q				V	
3+ 5	1.0837	0.87	Q				V	
3+10	1.0860	0.33	Q				V	
3+15	1.0867	0.10	Q				V	
3+20	1.0870	0.04	Q				V	
3+25	1.0871	0.02	Q				V	
3+30	1.0871	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 08/15/22 File: THECOVE610.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
6-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.40	21.67

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	3.50	54.18

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 2.264(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.264(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
			Sum = 100.000	Sum= 15.601

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	0.50	0.136	(0.268)		0.122	0.014
2	0.17	0.60	0.163	(0.268)		0.147	0.016
3	0.25	0.60	0.163	(0.268)		0.147	0.016
4	0.33	0.60	0.163	(0.268)		0.147	0.016
5	0.42	0.60	0.163	(0.268)		0.147	0.016
6	0.50	0.70	0.190	(0.268)		0.171	0.019
7	0.58	0.70	0.190	(0.268)		0.171	0.019
8	0.67	0.70	0.190	(0.268)		0.171	0.019
9	0.75	0.70	0.190	(0.268)		0.171	0.019
10	0.83	0.70	0.190	(0.268)		0.171	0.019
11	0.92	0.70	0.190	(0.268)		0.171	0.019
12	1.00	0.80	0.217	(0.268)		0.196	0.022

13	1.08	0.80	0.217	(0.268)	0.196	0.022
14	1.17	0.80	0.217	(0.268)	0.196	0.022
15	1.25	0.80	0.217	(0.268)	0.196	0.022
16	1.33	0.80	0.217	(0.268)	0.196	0.022
17	1.42	0.80	0.217	(0.268)	0.196	0.022
18	1.50	0.80	0.217	(0.268)	0.196	0.022
19	1.58	0.80	0.217	(0.268)	0.196	0.022
20	1.67	0.80	0.217	(0.268)	0.196	0.022
21	1.75	0.80	0.217	(0.268)	0.196	0.022
22	1.83	0.80	0.217	(0.268)	0.196	0.022
23	1.92	0.80	0.217	(0.268)	0.196	0.022
24	2.00	0.90	0.244	(0.268)	0.220	0.024
25	2.08	0.80	0.217	(0.268)	0.196	0.022
26	2.17	0.90	0.244	(0.268)	0.220	0.024
27	2.25	0.90	0.244	(0.268)	0.220	0.024
28	2.33	0.90	0.244	(0.268)	0.220	0.024
29	2.42	0.90	0.244	(0.268)	0.220	0.024
30	2.50	0.90	0.244	(0.268)	0.220	0.024
31	2.58	0.90	0.244	(0.268)	0.220	0.024
32	2.67	0.90	0.244	(0.268)	0.220	0.024
33	2.75	1.00	0.272	(0.268)	0.244	0.027
34	2.83	1.00	0.272	(0.268)	0.244	0.027
35	2.92	1.00	0.272	(0.268)	0.244	0.027
36	3.00	1.00	0.272	(0.268)	0.244	0.027
37	3.08	1.00	0.272	(0.268)	0.244	0.027
38	3.17	1.10	0.299	0.268	(0.269)	0.031
39	3.25	1.10	0.299	0.268	(0.269)	0.031
40	3.33	1.10	0.299	0.268	(0.269)	0.031
41	3.42	1.20	0.326	0.268	(0.293)	0.058
42	3.50	1.30	0.353	0.268	(0.318)	0.086
43	3.58	1.40	0.380	0.268	(0.342)	0.113
44	3.67	1.40	0.380	0.268	(0.342)	0.113
45	3.75	1.50	0.407	0.268	(0.367)	0.140
46	3.83	1.50	0.407	0.268	(0.367)	0.140
47	3.92	1.60	0.435	0.268	(0.391)	0.167
48	4.00	1.60	0.435	0.268	(0.391)	0.167
49	4.08	1.70	0.462	0.268	(0.416)	0.194
50	4.17	1.80	0.489	0.268	(0.440)	0.221
51	4.25	1.90	0.516	0.268	(0.465)	0.249
52	4.33	2.00	0.543	0.268	(0.489)	0.276
53	4.42	2.10	0.570	0.268	(0.513)	0.303
54	4.50	2.10	0.570	0.268	(0.513)	0.303
55	4.58	2.20	0.598	0.268	(0.538)	0.330
56	4.67	2.30	0.625	0.268	(0.562)	0.357
57	4.75	2.40	0.652	0.268	(0.587)	0.384
58	4.83	2.40	0.652	0.268	(0.587)	0.384
59	4.92	2.50	0.679	0.268	(0.611)	0.412
60	5.00	2.60	0.706	0.268	(0.636)	0.439
61	5.08	3.10	0.842	0.268	(0.758)	0.575
62	5.17	3.60	0.978	0.268	(0.880)	0.710
63	5.25	3.90	1.059	0.268	(0.954)	0.792
64	5.33	4.20	1.141	0.268	(1.027)	0.873
65	5.42	4.70	1.277	0.268	(1.149)	1.009
66	5.50	5.60	1.521	0.268	(1.369)	1.254
67	5.58	1.90	0.516	0.268	(0.465)	0.249
68	5.67	0.90	0.244	(0.268)	0.220	0.024
69	5.75	0.60	0.163	(0.268)	0.147	0.016
70	5.83	0.50	0.136	(0.268)	0.122	0.014
71	5.92	0.30	0.081	(0.268)	0.073	0.008
72	6.00	0.20	0.054	(0.268)	0.049	0.005

(Loss Rate Not Used)
Sum = 100.0 Sum = 11.3
Flood volume = Effective rainfall 0.94(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 1.33(In)
Total soil loss = 1.709(Ac.Ft)
Total rainfall = 2.26(In)
Flood volume = 52752.1 Cubic Feet
Total soil loss = 74458.3 Cubic Feet

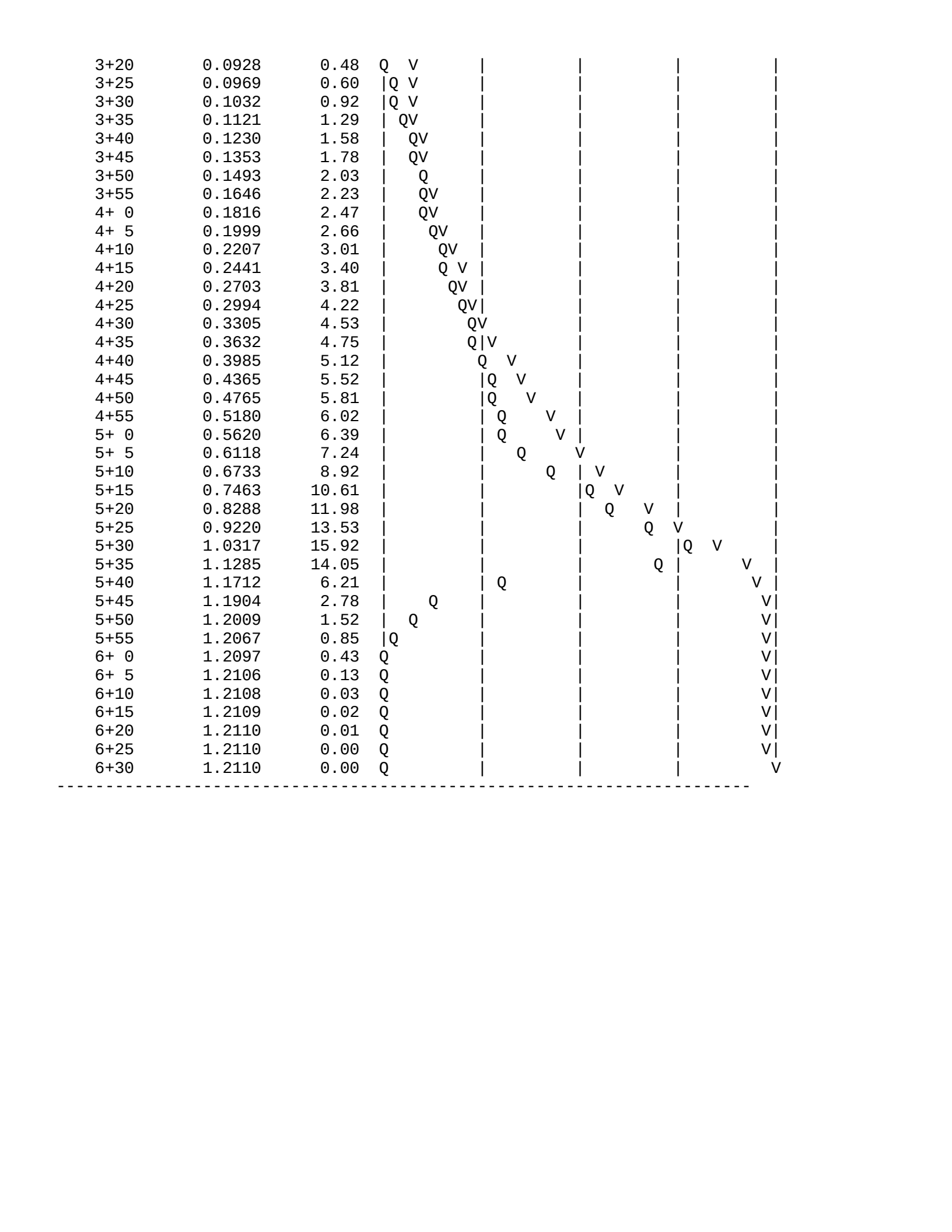
Peak flow rate of this hydrograph = 15.924(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0004	0.06	Q				
0+10	0.0016	0.17	Q				
0+15	0.0031	0.22	Q				
0+20	0.0047	0.24	Q				
0+25	0.0064	0.25	Q				
0+30	0.0082	0.26	Q				
0+35	0.0102	0.29	Q				
0+40	0.0122	0.29	Q				
0+45	0.0142	0.29	Q				
0+50	0.0162	0.30	Q				
0+55	0.0183	0.30	Q				
1+ 0	0.0204	0.31	Q				
1+ 5	0.0227	0.33	Q				
1+10	0.0250	0.33	Q				
1+15	0.0273	0.34	Q				
1+20	0.0296	0.34	Q				
1+25	0.0319	0.34	QV				
1+30	0.0343	0.34	QV				
1+35	0.0366	0.34	QV				
1+40	0.0389	0.34	QV				
1+45	0.0413	0.34	QV				
1+50	0.0436	0.34	QV				
1+55	0.0460	0.34	QV				
2+ 0	0.0484	0.35	QV				
2+ 5	0.0508	0.36	QV				
2+10	0.0533	0.36	QV				
2+15	0.0559	0.37	QV				
2+20	0.0585	0.38	QV				
2+25	0.0611	0.38	Q V				
2+30	0.0637	0.38	Q V				
2+35	0.0663	0.38	Q V				
2+40	0.0690	0.38	Q V				
2+45	0.0717	0.39	Q V				
2+50	0.0745	0.41	Q V				
2+55	0.0774	0.42	Q V				
3+ 0	0.0803	0.42	Q V				
3+ 5	0.0832	0.42	Q V				
3+10	0.0863	0.44	Q V				
3+15	0.0895	0.47	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 08/15/22 File: THECOVE2410.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
24-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 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]
15.48	2.50	38.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	6.00	92.88

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.940(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.940(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.474)	0.028	0.003
2	0.17	0.07	0.032	(0.473)	0.028	0.003
3	0.25	0.07	0.032	(0.471)	0.028	0.003
4	0.33	0.10	0.047	(0.469)	0.043	0.005
5	0.42	0.10	0.047	(0.467)	0.043	0.005
6	0.50	0.10	0.047	(0.465)	0.043	0.005
7	0.58	0.10	0.047	(0.463)	0.043	0.005
8	0.67	0.10	0.047	(0.462)	0.043	0.005
9	0.75	0.10	0.047	(0.460)	0.043	0.005
10	0.83	0.13	0.063	(0.458)	0.057	0.006
11	0.92	0.13	0.063	(0.456)	0.057	0.006
12	1.00	0.13	0.063	(0.454)	0.057	0.006

13	1.08	0.10	0.047	(0.453)	0.043	0.005
14	1.17	0.10	0.047	(0.451)	0.043	0.005
15	1.25	0.10	0.047	(0.449)	0.043	0.005
16	1.33	0.10	0.047	(0.447)	0.043	0.005
17	1.42	0.10	0.047	(0.445)	0.043	0.005
18	1.50	0.10	0.047	(0.444)	0.043	0.005
19	1.58	0.10	0.047	(0.442)	0.043	0.005
20	1.67	0.10	0.047	(0.440)	0.043	0.005
21	1.75	0.10	0.047	(0.438)	0.043	0.005
22	1.83	0.13	0.063	(0.437)	0.057	0.006
23	1.92	0.13	0.063	(0.435)	0.057	0.006
24	2.00	0.13	0.063	(0.433)	0.057	0.006
25	2.08	0.13	0.063	(0.431)	0.057	0.006
26	2.17	0.13	0.063	(0.430)	0.057	0.006
27	2.25	0.13	0.063	(0.428)	0.057	0.006
28	2.33	0.13	0.063	(0.426)	0.057	0.006
29	2.42	0.13	0.063	(0.424)	0.057	0.006
30	2.50	0.13	0.063	(0.423)	0.057	0.006
31	2.58	0.17	0.079	(0.421)	0.071	0.008
32	2.67	0.17	0.079	(0.419)	0.071	0.008
33	2.75	0.17	0.079	(0.417)	0.071	0.008
34	2.83	0.17	0.079	(0.416)	0.071	0.008
35	2.92	0.17	0.079	(0.414)	0.071	0.008
36	3.00	0.17	0.079	(0.412)	0.071	0.008
37	3.08	0.17	0.079	(0.411)	0.071	0.008
38	3.17	0.17	0.079	(0.409)	0.071	0.008
39	3.25	0.17	0.079	(0.407)	0.071	0.008
40	3.33	0.17	0.079	(0.405)	0.071	0.008
41	3.42	0.17	0.079	(0.404)	0.071	0.008
42	3.50	0.17	0.079	(0.402)	0.071	0.008
43	3.58	0.17	0.079	(0.400)	0.071	0.008
44	3.67	0.17	0.079	(0.399)	0.071	0.008
45	3.75	0.17	0.079	(0.397)	0.071	0.008
46	3.83	0.20	0.095	(0.395)	0.085	0.009
47	3.92	0.20	0.095	(0.394)	0.085	0.009
48	4.00	0.20	0.095	(0.392)	0.085	0.009
49	4.08	0.20	0.095	(0.390)	0.085	0.009
50	4.17	0.20	0.095	(0.389)	0.085	0.009
51	4.25	0.20	0.095	(0.387)	0.085	0.009
52	4.33	0.23	0.110	(0.385)	0.099	0.011
53	4.42	0.23	0.110	(0.384)	0.099	0.011
54	4.50	0.23	0.110	(0.382)	0.099	0.011
55	4.58	0.23	0.110	(0.381)	0.099	0.011
56	4.67	0.23	0.110	(0.379)	0.099	0.011
57	4.75	0.23	0.110	(0.377)	0.099	0.011
58	4.83	0.27	0.126	(0.376)	0.113	0.013
59	4.92	0.27	0.126	(0.374)	0.113	0.013
60	5.00	0.27	0.126	(0.372)	0.113	0.013
61	5.08	0.20	0.095	(0.371)	0.085	0.009
62	5.17	0.20	0.095	(0.369)	0.085	0.009
63	5.25	0.20	0.095	(0.368)	0.085	0.009
64	5.33	0.23	0.110	(0.366)	0.099	0.011
65	5.42	0.23	0.110	(0.364)	0.099	0.011
66	5.50	0.23	0.110	(0.363)	0.099	0.011
67	5.58	0.27	0.126	(0.361)	0.113	0.013
68	5.67	0.27	0.126	(0.360)	0.113	0.013
69	5.75	0.27	0.126	(0.358)	0.113	0.013
70	5.83	0.27	0.126	(0.356)	0.113	0.013
71	5.92	0.27	0.126	(0.355)	0.113	0.013
72	6.00	0.27	0.126	(0.353)	0.113	0.013

73	6.08	0.30	0.142	(0.352)	0.128	0.014
74	6.17	0.30	0.142	(0.350)	0.128	0.014
75	6.25	0.30	0.142	(0.349)	0.128	0.014
76	6.33	0.30	0.142	(0.347)	0.128	0.014
77	6.42	0.30	0.142	(0.345)	0.128	0.014
78	6.50	0.30	0.142	(0.344)	0.128	0.014
79	6.58	0.33	0.158	(0.342)	0.142	0.016
80	6.67	0.33	0.158	(0.341)	0.142	0.016
81	6.75	0.33	0.158	(0.339)	0.142	0.016
82	6.83	0.33	0.158	(0.338)	0.142	0.016
83	6.92	0.33	0.158	(0.336)	0.142	0.016
84	7.00	0.33	0.158	(0.335)	0.142	0.016
85	7.08	0.33	0.158	(0.333)	0.142	0.016
86	7.17	0.33	0.158	(0.332)	0.142	0.016
87	7.25	0.33	0.158	(0.330)	0.142	0.016
88	7.33	0.37	0.173	(0.329)	0.156	0.017
89	7.42	0.37	0.173	(0.327)	0.156	0.017
90	7.50	0.37	0.173	(0.326)	0.156	0.017
91	7.58	0.40	0.189	(0.324)	0.170	0.019
92	7.67	0.40	0.189	(0.323)	0.170	0.019
93	7.75	0.40	0.189	(0.321)	0.170	0.019
94	7.83	0.43	0.205	(0.320)	0.184	0.020
95	7.92	0.43	0.205	(0.318)	0.184	0.020
96	8.00	0.43	0.205	(0.317)	0.184	0.020
97	8.08	0.50	0.236	(0.315)	0.213	0.024
98	8.17	0.50	0.236	(0.314)	0.213	0.024
99	8.25	0.50	0.236	(0.312)	0.213	0.024
100	8.33	0.50	0.236	(0.311)	0.213	0.024
101	8.42	0.50	0.236	(0.309)	0.213	0.024
102	8.50	0.50	0.236	(0.308)	0.213	0.024
103	8.58	0.53	0.252	(0.306)	0.227	0.025
104	8.67	0.53	0.252	(0.305)	0.227	0.025
105	8.75	0.53	0.252	(0.304)	0.227	0.025
106	8.83	0.57	0.268	(0.302)	0.241	0.027
107	8.92	0.57	0.268	(0.301)	0.241	0.027
108	9.00	0.57	0.268	(0.299)	0.241	0.027
109	9.08	0.63	0.299	(0.298)	0.269	0.030
110	9.17	0.63	0.299	(0.296)	0.269	0.030
111	9.25	0.63	0.299	(0.295)	0.269	0.030
112	9.33	0.67	0.315	(0.294)	0.284	0.032
113	9.42	0.67	0.315	(0.292)	0.284	0.032
114	9.50	0.67	0.315	(0.291)	0.284	0.032
115	9.58	0.70	0.331	0.289	(0.298)	0.041
116	9.67	0.70	0.331	0.288	(0.298)	0.043
117	9.75	0.70	0.331	0.287	(0.298)	0.044
118	9.83	0.73	0.347	0.285	(0.312)	0.061
119	9.92	0.73	0.347	0.284	(0.312)	0.063
120	10.00	0.73	0.347	0.283	(0.312)	0.064
121	10.08	0.50	0.236	(0.281)	0.213	0.024
122	10.17	0.50	0.236	(0.280)	0.213	0.024
123	10.25	0.50	0.236	(0.278)	0.213	0.024
124	10.33	0.50	0.236	(0.277)	0.213	0.024
125	10.42	0.50	0.236	(0.276)	0.213	0.024
126	10.50	0.50	0.236	(0.274)	0.213	0.024
127	10.58	0.67	0.315	0.273	(0.284)	0.042
128	10.67	0.67	0.315	0.272	(0.284)	0.043
129	10.75	0.67	0.315	0.270	(0.284)	0.045
130	10.83	0.67	0.315	0.269	(0.284)	0.046
131	10.92	0.67	0.315	0.268	(0.284)	0.047
132	11.00	0.67	0.315	0.266	(0.284)	0.049

133	11.08	0.63	0.299		0.265	(0.269)	0.034
134	11.17	0.63	0.299		0.264	(0.269)	0.036
135	11.25	0.63	0.299		0.263	(0.269)	0.037
136	11.33	0.63	0.299		0.261	(0.269)	0.038
137	11.42	0.63	0.299		0.260	(0.269)	0.039
138	11.50	0.63	0.299		0.259	(0.269)	0.041
139	11.58	0.57	0.268	(0.257)		0.241	0.027
140	11.67	0.57	0.268	(0.256)		0.241	0.027
141	11.75	0.57	0.268	(0.255)		0.241	0.027
142	11.83	0.60	0.284		0.254	(0.255)	0.030
143	11.92	0.60	0.284		0.252	(0.255)	0.031
144	12.00	0.60	0.284		0.251	(0.255)	0.033
145	12.08	0.83	0.394		0.250	(0.355)	0.144
146	12.17	0.83	0.394		0.249	(0.355)	0.145
147	12.25	0.83	0.394		0.247	(0.355)	0.147
148	12.33	0.87	0.410		0.246	(0.369)	0.164
149	12.42	0.87	0.410		0.245	(0.369)	0.165
150	12.50	0.87	0.410		0.244	(0.369)	0.166
151	12.58	0.93	0.441		0.242	(0.397)	0.199
152	12.67	0.93	0.441		0.241	(0.397)	0.200
153	12.75	0.93	0.441		0.240	(0.397)	0.201
154	12.83	0.97	0.457		0.239	(0.411)	0.218
155	12.92	0.97	0.457		0.238	(0.411)	0.220
156	13.00	0.97	0.457		0.236	(0.411)	0.221
157	13.08	1.13	0.536		0.235	(0.482)	0.301
158	13.17	1.13	0.536		0.234	(0.482)	0.302
159	13.25	1.13	0.536		0.233	(0.482)	0.303
160	13.33	1.13	0.536		0.232	(0.482)	0.304
161	13.42	1.13	0.536		0.230	(0.482)	0.305
162	13.50	1.13	0.536		0.229	(0.482)	0.307
163	13.58	0.77	0.362		0.228	(0.326)	0.134
164	13.67	0.77	0.362		0.227	(0.326)	0.136
165	13.75	0.77	0.362		0.226	(0.326)	0.137
166	13.83	0.77	0.362		0.225	(0.326)	0.138
167	13.92	0.77	0.362		0.223	(0.326)	0.139
168	14.00	0.77	0.362		0.222	(0.326)	0.140
169	14.08	0.90	0.425		0.221	(0.383)	0.204
170	14.17	0.90	0.425		0.220	(0.383)	0.205
171	14.25	0.90	0.425		0.219	(0.383)	0.207
172	14.33	0.87	0.410		0.218	(0.369)	0.192
173	14.42	0.87	0.410		0.217	(0.369)	0.193
174	14.50	0.87	0.410		0.216	(0.369)	0.194
175	14.58	0.87	0.410		0.214	(0.369)	0.195
176	14.67	0.87	0.410		0.213	(0.369)	0.196
177	14.75	0.87	0.410		0.212	(0.369)	0.197
178	14.83	0.83	0.394		0.211	(0.355)	0.183
179	14.92	0.83	0.394		0.210	(0.355)	0.184
180	15.00	0.83	0.394		0.209	(0.355)	0.185
181	15.08	0.80	0.378		0.208	(0.340)	0.170
182	15.17	0.80	0.378		0.207	(0.340)	0.171
183	15.25	0.80	0.378		0.206	(0.340)	0.172
184	15.33	0.77	0.362		0.205	(0.326)	0.158
185	15.42	0.77	0.362		0.204	(0.326)	0.159
186	15.50	0.77	0.362		0.203	(0.326)	0.160
187	15.58	0.63	0.299		0.202	(0.269)	0.098
188	15.67	0.63	0.299		0.201	(0.269)	0.099
189	15.75	0.63	0.299		0.200	(0.269)	0.100
190	15.83	0.63	0.299		0.199	(0.269)	0.101
191	15.92	0.63	0.299		0.198	(0.269)	0.102
192	16.00	0.63	0.299		0.197	(0.269)	0.103

193	16.08	0.13	0.063	(0.196)	0.057	0.006
194	16.17	0.13	0.063	(0.195)	0.057	0.006
195	16.25	0.13	0.063	(0.194)	0.057	0.006
196	16.33	0.13	0.063	(0.193)	0.057	0.006
197	16.42	0.13	0.063	(0.192)	0.057	0.006
198	16.50	0.13	0.063	(0.191)	0.057	0.006
199	16.58	0.10	0.047	(0.190)	0.043	0.005
200	16.67	0.10	0.047	(0.189)	0.043	0.005
201	16.75	0.10	0.047	(0.188)	0.043	0.005
202	16.83	0.10	0.047	(0.187)	0.043	0.005
203	16.92	0.10	0.047	(0.186)	0.043	0.005
204	17.00	0.10	0.047	(0.185)	0.043	0.005
205	17.08	0.17	0.079	(0.184)	0.071	0.008
206	17.17	0.17	0.079	(0.183)	0.071	0.008
207	17.25	0.17	0.079	(0.182)	0.071	0.008
208	17.33	0.17	0.079	(0.181)	0.071	0.008
209	17.42	0.17	0.079	(0.180)	0.071	0.008
210	17.50	0.17	0.079	(0.179)	0.071	0.008
211	17.58	0.17	0.079	(0.178)	0.071	0.008
212	17.67	0.17	0.079	(0.178)	0.071	0.008
213	17.75	0.17	0.079	(0.177)	0.071	0.008
214	17.83	0.13	0.063	(0.176)	0.057	0.006
215	17.92	0.13	0.063	(0.175)	0.057	0.006
216	18.00	0.13	0.063	(0.174)	0.057	0.006
217	18.08	0.13	0.063	(0.173)	0.057	0.006
218	18.17	0.13	0.063	(0.172)	0.057	0.006
219	18.25	0.13	0.063	(0.172)	0.057	0.006
220	18.33	0.13	0.063	(0.171)	0.057	0.006
221	18.42	0.13	0.063	(0.170)	0.057	0.006
222	18.50	0.13	0.063	(0.169)	0.057	0.006
223	18.58	0.10	0.047	(0.168)	0.043	0.005
224	18.67	0.10	0.047	(0.167)	0.043	0.005
225	18.75	0.10	0.047	(0.167)	0.043	0.005
226	18.83	0.07	0.032	(0.166)	0.028	0.003
227	18.92	0.07	0.032	(0.165)	0.028	0.003
228	19.00	0.07	0.032	(0.164)	0.028	0.003
229	19.08	0.10	0.047	(0.163)	0.043	0.005
230	19.17	0.10	0.047	(0.163)	0.043	0.005
231	19.25	0.10	0.047	(0.162)	0.043	0.005
232	19.33	0.13	0.063	(0.161)	0.057	0.006
233	19.42	0.13	0.063	(0.160)	0.057	0.006
234	19.50	0.13	0.063	(0.160)	0.057	0.006
235	19.58	0.10	0.047	(0.159)	0.043	0.005
236	19.67	0.10	0.047	(0.158)	0.043	0.005
237	19.75	0.10	0.047	(0.157)	0.043	0.005
238	19.83	0.07	0.032	(0.157)	0.028	0.003
239	19.92	0.07	0.032	(0.156)	0.028	0.003
240	20.00	0.07	0.032	(0.155)	0.028	0.003
241	20.08	0.10	0.047	(0.155)	0.043	0.005
242	20.17	0.10	0.047	(0.154)	0.043	0.005
243	20.25	0.10	0.047	(0.153)	0.043	0.005
244	20.33	0.10	0.047	(0.153)	0.043	0.005
245	20.42	0.10	0.047	(0.152)	0.043	0.005
246	20.50	0.10	0.047	(0.151)	0.043	0.005
247	20.58	0.10	0.047	(0.151)	0.043	0.005
248	20.67	0.10	0.047	(0.150)	0.043	0.005
249	20.75	0.10	0.047	(0.150)	0.043	0.005
250	20.83	0.07	0.032	(0.149)	0.028	0.003
251	20.92	0.07	0.032	(0.148)	0.028	0.003
252	21.00	0.07	0.032	(0.148)	0.028	0.003

253	21.08	0.10	0.047	(0.147)	0.043	0.005
254	21.17	0.10	0.047	(0.147)	0.043	0.005
255	21.25	0.10	0.047	(0.146)	0.043	0.005
256	21.33	0.07	0.032	(0.145)	0.028	0.003
257	21.42	0.07	0.032	(0.145)	0.028	0.003
258	21.50	0.07	0.032	(0.144)	0.028	0.003
259	21.58	0.10	0.047	(0.144)	0.043	0.005
260	21.67	0.10	0.047	(0.143)	0.043	0.005
261	21.75	0.10	0.047	(0.143)	0.043	0.005
262	21.83	0.07	0.032	(0.142)	0.028	0.003
263	21.92	0.07	0.032	(0.142)	0.028	0.003
264	22.00	0.07	0.032	(0.141)	0.028	0.003
265	22.08	0.10	0.047	(0.141)	0.043	0.005
266	22.17	0.10	0.047	(0.140)	0.043	0.005
267	22.25	0.10	0.047	(0.140)	0.043	0.005
268	22.33	0.07	0.032	(0.139)	0.028	0.003
269	22.42	0.07	0.032	(0.139)	0.028	0.003
270	22.50	0.07	0.032	(0.139)	0.028	0.003
271	22.58	0.07	0.032	(0.138)	0.028	0.003
272	22.67	0.07	0.032	(0.138)	0.028	0.003
273	22.75	0.07	0.032	(0.137)	0.028	0.003
274	22.83	0.07	0.032	(0.137)	0.028	0.003
275	22.92	0.07	0.032	(0.137)	0.028	0.003
276	23.00	0.07	0.032	(0.136)	0.028	0.003
277	23.08	0.07	0.032	(0.136)	0.028	0.003
278	23.17	0.07	0.032	(0.136)	0.028	0.003
279	23.25	0.07	0.032	(0.136)	0.028	0.003
280	23.33	0.07	0.032	(0.135)	0.028	0.003
281	23.42	0.07	0.032	(0.135)	0.028	0.003
282	23.50	0.07	0.032	(0.135)	0.028	0.003
283	23.58	0.07	0.032	(0.135)	0.028	0.003
284	23.67	0.07	0.032	(0.134)	0.028	0.003
285	23.75	0.07	0.032	(0.134)	0.028	0.003
286	23.83	0.07	0.032	(0.134)	0.028	0.003
287	23.92	0.07	0.032	(0.134)	0.028	0.003
288	24.00	0.07	0.032	(0.134)	0.028	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 11.8

Flood volume = Effective rainfall 0.98(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 1.3(Ac.Ft)

Total soil loss = 2.96(In)
Total soil loss = 3.814(Ac.Ft)
Total rainfall = 3.94(In)
Flood volume = 55258.2 Cubic Feet
Total soil loss = 166129.1 Cubic Feet

Peak flow rate of this hydrograph = 4.750(CFS)

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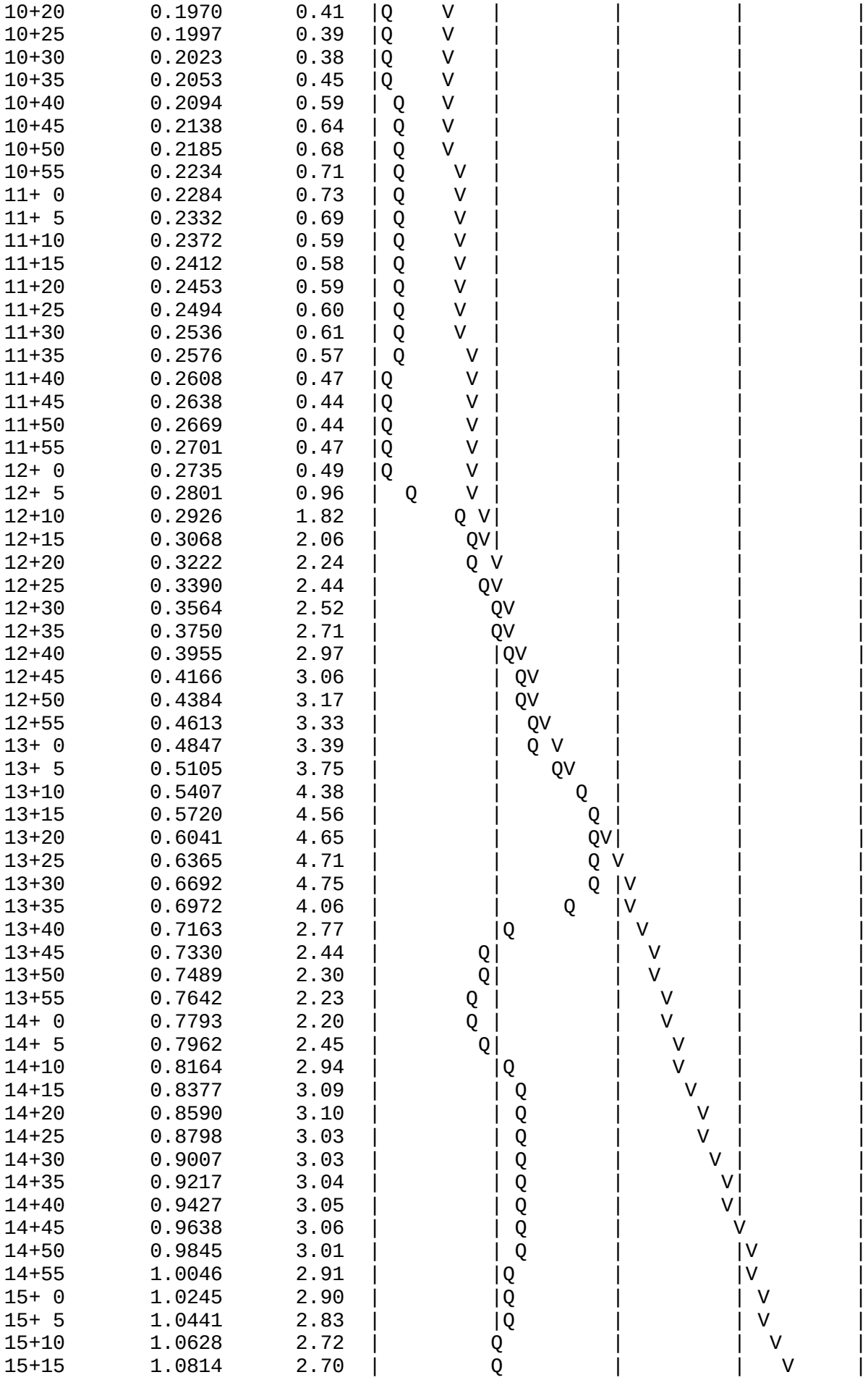
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	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	0.0019	0.07	Q	|	|	|	|
0+35	0.0024	0.07	Q	|	|	|	|
0+40	0.0029	0.07	Q	|	|	|	|
0+45	0.0035	0.07	Q	|	|	|	|
0+50	0.0040	0.08	Q	|	|	|	|
0+55	0.0046	0.09	Q	|	|	|	|
1+ 0	0.0053	0.10	Q	|	|	|	|
1+ 5	0.0059	0.09	Q	|	|	|	|
1+10	0.0065	0.08	Q	|	|	|	|
1+15	0.0070	0.08	Q	|	|	|	|
1+20	0.0075	0.08	Q	|	|	|	|
1+25	0.0080	0.07	Q	|	|	|	|
1+30	0.0085	0.07	Q	|	|	|	|
1+35	0.0090	0.07	Q	|	|	|	|
1+40	0.0096	0.07	Q	|	|	|	|
1+45	0.0101	0.07	Q	|	|	|	|
1+50	0.0106	0.08	Q	|	|	|	|
1+55	0.0112	0.09	Q	|	|	|	|
2+ 0	0.0119	0.10	Q	|	|	|	|
2+ 5	0.0126	0.10	Q	|	|	|	|
2+10	0.0132	0.10	Q	|	|	|	|
2+15	0.0139	0.10	Q	|	|	|	|
2+20	0.0146	0.10	Q	|	|	|	|
2+25	0.0153	0.10	Q	|	|	|	|
2+30	0.0160	0.10	Q	|	|	|	|
2+35	0.0167	0.10	Q	|	|	|	|
2+40	0.0175	0.12	Q	|	|	|	|
2+45	0.0183	0.12	Q	|	|	|	|
2+50	0.0191	0.12	Q	|	|	|	|
2+55	0.0200	0.12	Q	|	|	|	|
3+ 0	0.0208	0.12	Q	|	|	|	|
3+ 5	0.0217	0.12	Q	|	|	|	|
3+10	0.0225	0.12	Q	|	|	|	|
3+15	0.0234	0.12	Q	|	|	|	|
3+20	0.0242	0.12	Q	|	|	|	|
3+25	0.0251	0.12	Q	|	|	|	|
3+30	0.0259	0.12	Q	|	|	|	|
3+35	0.0268	0.12	Q	|	|	|	|
3+40	0.0276	0.12	Q	|	|	|	|
3+45	0.0285	0.12	Q	|	|	|	|
3+50	0.0293	0.13	Q	|	|	|	|
3+55	0.0303	0.14	Q	|	|	|	|
4+ 0	0.0313	0.14	Q	|	|	|	|
4+ 5	0.0323	0.15	QV	|	|	|	|
4+10	0.0333	0.15	QV	|	|	|	|
4+15	0.0344	0.15	QV	|	|	|	|
4+20	0.0354	0.15	QV	|	|	|	|
4+25	0.0366	0.17	QV	|	|	|	|
4+30	0.0377	0.17	QV	|	|	|	|
4+35	0.0389	0.17	QV	|	|	|	|
4+40	0.0401	0.17	QV	|	|	|	|
4+45	0.0413	0.17	QV	|	|	|	|
4+50	0.0425	0.18	QV	|	|	|	|
4+55	0.0438	0.19	QV	|	|	|	|
5+ 0	0.0451	0.19	QV	|	|	|	|
5+ 5	0.0464	0.18	QV	|	|	|	|
5+10	0.0475	0.16	QV	|	|	|	|
5+15	0.0485	0.15	QV	|	|	|	|

5+20	0.0496	0.16	QV	|	|	|	|
5+25	0.0508	0.17	QV	|	|	|	|
5+30	0.0520	0.17	QV	|	|	|	|
5+35	0.0532	0.18	QV	|	|	|	|
5+40	0.0545	0.19	QV	|	|	|	|
5+45	0.0558	0.19	QV	|	|	|	|
5+50	0.0572	0.20	QV	|	|	|	|
5+55	0.0585	0.20	QV	|	|	|	|
6+ 0	0.0599	0.20	QV	|	|	|	|
6+ 5	0.0613	0.20	QV	|	|	|	|
6+10	0.0627	0.22	QV	|	|	|	|
6+15	0.0643	0.22	Q V	|	|	|	|
6+20	0.0658	0.22	Q V	|	|	|	|
6+25	0.0673	0.22	Q V	|	|	|	|
6+30	0.0688	0.22	Q V	|	|	|	|
6+35	0.0704	0.23	Q V	|	|	|	|
6+40	0.0720	0.24	Q V	|	|	|	|
6+45	0.0737	0.24	Q V	|	|	|	|
6+50	0.0754	0.24	Q V	|	|	|	|
6+55	0.0771	0.25	Q V	|	|	|	|
7+ 0	0.0788	0.25	Q V	|	|	|	|
7+ 5	0.0805	0.25	Q V	|	|	|	|
7+10	0.0822	0.25	Q V	|	|	|	|
7+15	0.0839	0.25	Q V	|	|	|	|
7+20	0.0856	0.25	|QV	|	|	|	|
7+25	0.0874	0.26	|QV	|	|	|	|
7+30	0.0893	0.27	|QV	|	|	|	|
7+35	0.0912	0.28	|QV	|	|	|	|
7+40	0.0931	0.29	|QV	|	|	|	|
7+45	0.0951	0.29	|Q V	|	|	|	|
7+50	0.0972	0.30	|Q V	|	|	|	|
7+55	0.0994	0.31	|Q V	|	|	|	|
8+ 0	0.1016	0.32	|Q V	|	|	|	|
8+ 5	0.1038	0.33	|Q V	|	|	|	|
8+10	0.1063	0.36	|Q V	|	|	|	|
8+15	0.1088	0.36	|Q V	|	|	|	|
8+20	0.1113	0.37	|Q V	|	|	|	|
8+25	0.1138	0.37	|Q V	|	|	|	|
8+30	0.1164	0.37	|Q V	|	|	|	|
8+35	0.1190	0.38	|Q V	|	|	|	|
8+40	0.1216	0.39	|Q V	|	|	|	|
8+45	0.1243	0.39	|Q V	|	|	|	|
8+50	0.1271	0.40	|Q V	|	|	|	|
8+55	0.1299	0.41	|Q V	|	|	|	|
9+ 0	0.1328	0.41	|Q V	|	|	|	|
9+ 5	0.1357	0.43	|Q V	|	|	|	|
9+10	0.1388	0.45	|Q V	|	|	|	|
9+15	0.1420	0.46	|Q V	|	|	|	|
9+20	0.1453	0.47	|Q V	|	|	|	|
9+25	0.1486	0.48	|Q V	|	|	|	|
9+30	0.1520	0.49	|Q V	|	|	|	|
9+35	0.1556	0.53	| Q V	|	|	|	|
9+40	0.1599	0.61	| Q V	|	|	|	|
9+45	0.1643	0.65	| Q V	|	|	|	|
9+50	0.1695	0.74	| Q V	|	|	|	|
9+55	0.1756	0.89	| Q V	|	|	|	|
10+ 0	0.1821	0.94	| Q V	|	|	|	|
10+ 5	0.1876	0.81	| Q V	|	|	|	|
10+10	0.1912	0.51	| Q V	|	|	|	|
10+15	0.1942	0.44	|Q V	|	|	|	|



```
15+20       1.0996      2.64  |          Q          |          |   V      |
15+25       1.1170      2.53  |          Q          |          |    V     |
15+30       1.1343      2.51  |          Q          |          |    V     |
15+35       1.1497      2.24  |        Q  |         |          |     V    |
15+40       1.1619      1.78  |       Q   |         |          |     V    |
15+45       1.1734      1.66  |     Q     |         |          |     V    |
15+50       1.1845      1.62  |     Q     |         |          |      V   |
15+55       1.1955      1.60  |     Q     |         |          |      V   |
16+ 0       1.2065      1.60  |     Q     |         |          |       V  |
16+ 5       1.2148      1.20  |   Q       |         |          |       V  |
16+10       1.2180      0.47  |Q          |         |          |       V  |
16+15       1.2199      0.28  |Q          |         |          |       V  |
16+20       1.2212      0.19  Q           |         |          |       V  |
16+25       1.2222      0.14  Q           |         |          |       V  |
16+30       1.2230      0.12  Q           |         |          |       V  |
16+35       1.2236      0.09  Q           |         |          |       V  |
16+40       1.2242      0.08  Q           |         |          |       V  |
16+45       1.2247      0.08  Q           |         |          |       V  |
16+50       1.2252      0.08  Q           |         |          |       V  |
16+55       1.2258      0.07  Q           |         |          |       V  |
17+ 0       1.2263      0.07  Q           |         |          |       V  |
17+ 5       1.2269      0.09  Q           |         |          |       V  |
17+10       1.2276      0.11  Q           |         |          |       V  |
17+15       1.2284      0.12  Q           |         |          |       V  |
17+20       1.2293      0.12  Q           |         |          |       V  |
17+25       1.2301      0.12  Q           |         |          |       V  |
17+30       1.2309      0.12  Q           |         |          |       V  |
17+35       1.2318      0.12  Q           |         |          |       V  |
17+40       1.2326      0.12  Q           |         |          |       V  |
17+45       1.2335      0.12  Q           |         |          |       V  |
17+50       1.2343      0.12  Q           |         |          |       V  |
17+55       1.2350      0.10  Q           |         |          |       V  |
18+ 0       1.2357      0.10  Q           |         |          |       V  |
18+ 5       1.2364      0.10  Q           |         |          |       V  |
18+10       1.2371      0.10  Q           |         |          |        V|
18+15       1.2378      0.10  Q           |         |          |        V|
18+20       1.2384      0.10  Q           |         |          |        V|
18+25       1.2391      0.10  Q           |         |          |        V|
18+30       1.2398      0.10  Q           |         |          |        V|
18+35       1.2404      0.09  Q           |         |          |        V|
18+40       1.2410      0.08  Q           |         |          |        V|
18+45       1.2415      0.08  Q           |         |          |        V|
18+50       1.2420      0.07  Q           |         |          |        V|
18+55       1.2424      0.06  Q           |         |          |        V|
19+ 0       1.2427      0.05  Q           |         |          |        V|
19+ 5       1.2431      0.06  Q           |         |          |        V|
19+10       1.2436      0.07  Q           |         |          |        V|
19+15       1.2441      0.07  Q           |         |          |        V|
19+20       1.2446      0.08  Q           |         |          |        V|
19+25       1.2452      0.09  Q           |         |          |        V|
19+30       1.2459      0.10  Q           |         |          |        V|
19+35       1.2465      0.09  Q           |         |          |        V|
19+40       1.2471      0.08  Q           |         |          |        V|
19+45       1.2476      0.08  Q           |         |          |        V|
19+50       1.2481      0.07  Q           |         |          |        V|
19+55       1.2485      0.06  Q           |         |          |        V|
20+ 0       1.2488      0.05  Q           |         |          |        V|
20+ 5       1.2492      0.06  Q           |         |          |        V|
20+10       1.2497      0.07  Q           |         |          |        V|
20+15       1.2502      0.07  Q           |         |          |        V|
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20+20	1.2507	0.07	Q	|	|	|	V|
20+25	1.2512	0.07	Q	|	|	|	V|
20+30	1.2517	0.07	Q	|	|	|	V|
20+35	1.2522	0.07	Q	|	|	|	V|
20+40	1.2527	0.07	Q	|	|	|	V|
20+45	1.2532	0.07	Q	|	|	|	V|
20+50	1.2537	0.07	Q	|	|	|	V|
20+55	1.2540	0.06	Q	|	|	|	V|
21+ 0	1.2544	0.05	Q	|	|	|	V|
21+ 5	1.2548	0.06	Q	|	|	|	V|
21+10	1.2553	0.07	Q	|	|	|	V|
21+15	1.2558	0.07	Q	|	|	|	V|
21+20	1.2562	0.07	Q	|	|	|	V|
21+25	1.2566	0.05	Q	|	|	|	V|
21+30	1.2569	0.05	Q	|	|	|	V|
21+35	1.2573	0.06	Q	|	|	|	V|
21+40	1.2578	0.07	Q	|	|	|	V|
21+45	1.2583	0.07	Q	|	|	|	V|
21+50	1.2588	0.07	Q	|	|	|	V|
21+55	1.2591	0.05	Q	|	|	|	V|
22+ 0	1.2595	0.05	Q	|	|	|	V|
22+ 5	1.2599	0.06	Q	|	|	|	V|
22+10	1.2604	0.07	Q	|	|	|	V|
22+15	1.2608	0.07	Q	|	|	|	V|
22+20	1.2613	0.07	Q	|	|	|	V|
22+25	1.2617	0.05	Q	|	|	|	V|
22+30	1.2620	0.05	Q	|	|	|	V|
22+35	1.2624	0.05	Q	|	|	|	V|
22+40	1.2627	0.05	Q	|	|	|	V|
22+45	1.2631	0.05	Q	|	|	|	V|
22+50	1.2634	0.05	Q	|	|	|	V|
22+55	1.2637	0.05	Q	|	|	|	V|
23+ 0	1.2641	0.05	Q	|	|	|	V|
23+ 5	1.2644	0.05	Q	|	|	|	V|
23+10	1.2648	0.05	Q	|	|	|	V|
23+15	1.2651	0.05	Q	|	|	|	V|
23+20	1.2654	0.05	Q	|	|	|	V|
23+25	1.2658	0.05	Q	|	|	|	V|
23+30	1.2661	0.05	Q	|	|	|	V|
23+35	1.2665	0.05	Q	|	|	|	V|
23+40	1.2668	0.05	Q	|	|	|	V|
23+45	1.2671	0.05	Q	|	|	|	V|
23+50	1.2675	0.05	Q	|	|	|	V|
23+55	1.2678	0.05	Q	|	|	|	V|
24+ 0	1.2681	0.05	Q	|	|	|	V|
24+ 5	1.2684	0.04	Q	|	|	|	V|
24+10	1.2685	0.01	Q	|	|	|	V|
24+15	1.2685	0.01	Q	|	|	|	V|
24+20	1.2685	0.00	Q	|	|	|	V|
24+25	1.2686	0.00	Q	|	|	|	V|
24+30	1.2686	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 09/12/22 File: DAC2110.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
10-YR
1-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	0.59	4.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.45	10.82

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.944(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.944(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum = 100.000	Sum=	7.518

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	4.40	0.498	0.268	(	0.448)	0.231
2	0.17	4.50	0.510	0.268	(	0.459)	0.242
3	0.25	5.40	0.612	0.268	(	0.550)	0.344
4	0.33	5.40	0.612	0.268	(	0.550)	0.344
5	0.42	5.70	0.646	0.268	(	0.581)	0.378
6	0.50	6.40	0.725	0.268	(	0.652)	0.457
7	0.58	7.90	0.895	0.268	(	0.805)	0.627
8	0.67	9.10	1.031	0.268	(	0.928)	0.763
9	0.75	12.80	1.450	0.268	(	1.305)	1.182
10	0.83	25.60	2.899	0.268	(	2.609)	2.632
11	0.92	7.90	0.895	0.268	(	0.805)	0.627

```
 12   1.00     4.90      0.555          0.268    (  0.499)        0.287
           (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     8.1
     Flood volume = Effective rainfall      0.68(In)
      times area       7.5(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
     Total soil loss =      0.27(In)
     Total soil loss =     0.166(Ac.Ft)
     Total rainfall =      0.94(In)
     Flood volume =       18309.9 Cubic Feet
     Total soil loss =        7246.6 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =     12.335(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                         1 - 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       0.0039      0.57  VQ        |         |         |         |
    0+10       0.0136      1.41  |VQ       |         |         |         |
    0+15       0.0267      1.90  | VQ      |         |         |         |
    0+20       0.0429      2.36  |   Q     |         |         |         |
    0+25       0.0607      2.57  |    Q    |         |         |         |
    0+30       0.0810      2.95  |    Q V  |         |         |         |
    0+35       0.1065      3.70  |      Q  V         |         |         |
    0+40       0.1391      4.73  |        Q|  V      |         |         |
    0+45       0.1833      6.42  |         | Q    V  |         |         |
    0+50       0.2636     11.66  |         |         |  Q V    |         |
    0+55       0.3486     12.33  |         |         |   Q     |  V      |
    1+ 0       0.3887      5.82  |         |Q        |         |     V   |
    1+ 5       0.4082      2.84  |    Q    |         |         |       V |
    1+10       0.4158      1.10  | Q       |         |         |        V|
    1+15       0.4193      0.50  |Q        |         |         |        V|
    1+20       0.4201      0.12  Q         |         |         |        V|
    1+25       0.4203      0.03  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 09/12/22 File: DAC2310.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
10-YR
3-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.00	7.46

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	2.50	18.65

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.617(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.617(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	1.30	0.252	(| 0.268)	0.227	0.025
2	0.17	1.30	0.252	(| 0.268)	0.227	0.025
3	0.25	1.10	0.213	(| 0.268)	0.192	0.021
4	0.33	1.50	0.291	(| 0.268)	0.262	0.029
5	0.42	1.50	0.291	(| 0.268)	0.262	0.029
6	0.50	1.80	0.349		0.268	(0.314)	0.082
7	0.58	1.50	0.291	(| 0.268)	0.262	0.029
8	0.67	1.80	0.349		0.268	(0.314)	0.082
9	0.75	1.80	0.349		0.268	(0.314)	0.082
10	0.83	1.50	0.291	(| 0.268)	0.262	0.029
11	0.92	1.60	0.310		0.268	(0.279)	0.043
12	1.00	1.80	0.349		0.268	(0.314)	0.082
13	1.08	2.20	0.427		0.268	(0.384)	0.159

14	1.17	2.20	0.427	0.268	(0.384)	0.159	
15	1.25	2.20	0.427	0.268	(0.384)	0.159	
16	1.33	2.00	0.388	0.268	(0.349)	0.120	
17	1.42	2.60	0.505	0.268	(0.454)	0.237	
18	1.50	2.70	0.524	0.268	(0.472)	0.256	
19	1.58	2.40	0.466	0.268	(0.419)	0.198	
20	1.67	2.70	0.524	0.268	(0.472)	0.256	
21	1.75	3.30	0.640	0.268	(0.576)	0.373	
22	1.83	3.10	0.602	0.268	(0.541)	0.334	
23	1.92	2.90	0.563	0.268	(0.506)	0.295	
24	2.00	3.00	0.582	0.268	(0.524)	0.315	
25	2.08	3.10	0.602	0.268	(0.541)	0.334	
26	2.17	4.20	0.815	0.268	(0.733)	0.547	
27	2.25	5.00	0.970	0.268	(0.873)	0.703	
28	2.33	3.50	0.679	0.268	(0.611)	0.412	
29	2.42	6.80	1.320	0.268	(1.188)	1.052	
30	2.50	7.30	1.417	0.268	(1.275)	1.149	
31	2.58	8.20	1.591	0.268	(1.432)	1.324	
32	2.67	5.90	1.145	0.268	(1.030)	0.877	
33	2.75	2.00	0.388	0.268	(0.349)	0.120	
34	2.83	1.80	0.349	0.268	(0.314)	0.082	
35	2.92	1.80	0.349	0.268	(0.314)	0.082	
36	3.00	0.60	0.116	(0.268)	0.105	0.012	

(Loss Rate Not Used)

Sum = 100.0 Sum = 10.1

Flood volume = Effective rainfall 0.84(In)
times area 7.5(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.77(In)
Total soil loss = 0.481(Ac.Ft)
Total rainfall = 1.62(In)
Flood volume = 22821.7 Cubic Feet
Total soil loss = 20967.9 Cubic Feet

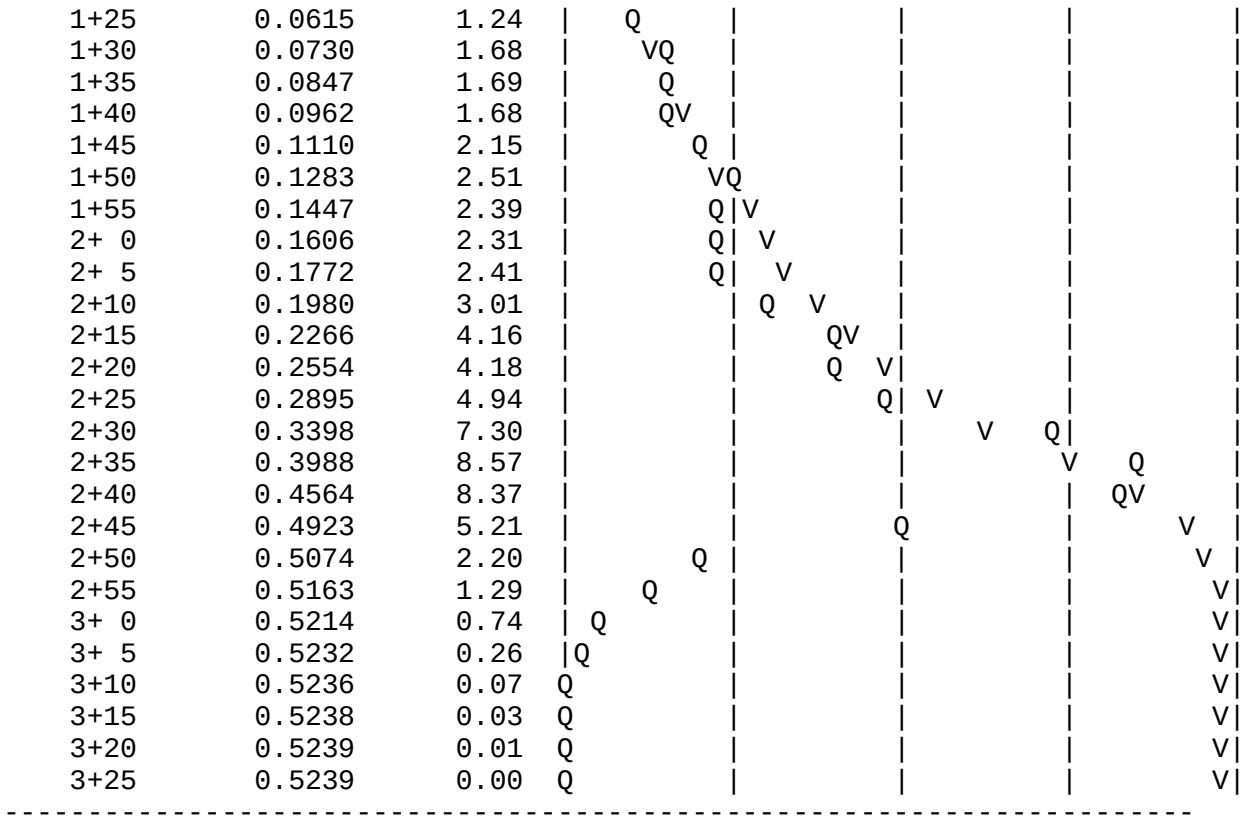
Peak flow rate of this hydrograph = 8.566(CFS)

++

3 - 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	0.0004	0.06	Q	|	|	|	|
0+10	0.0015	0.15	Q	|	|	|	|
0+15	0.0026	0.16	Q	|	|	|	|
0+20	0.0038	0.18	Q	|	|	|	|
0+25	0.0052	0.21	Q	|	|	|	|
0+30	0.0076	0.34	VQ	|	|	|	|
0+35	0.0104	0.40	VQ	|	|	|	|
0+40	0.0131	0.39	VQ	|	|	|	|
0+45	0.0169	0.55	|VQ	|	|	|	|
0+50	0.0201	0.46	|Q	|	|	|	|
0+55	0.0223	0.32	|Q	|	|	|	|
1+ 0	0.0252	0.43	|Q	|	|	|	|
1+ 5	0.0304	0.75	| VQ	|	|	|	|
1+10	0.0377	1.06	| V Q	|	|	|	|
1+15	0.0455	1.13	| VQ	|	|	|	|
1+20	0.0529	1.08	| Q	|	|	|	|


1+25 0.0615 1.24
1+30 0.0730 1.68
1+35 0.0847 1.69
1+40 0.0962 1.68
1+45 0.1110 2.15
1+50 0.1283 2.51
1+55 0.1447 2.39
2+ 0 0.1606 2.31
2+ 5 0.1772 2.41
2+10 0.1980 3.01
2+15 0.2266 4.16
2+20 0.2554 4.18
2+25 0.2895 4.94
2+30 0.3398 7.30
2+35 0.3988 8.57
2+40 0.4564 8.37
2+45 0.4923 5.21
2+50 0.5074 2.20
2+55 0.5163 1.29
3+ 0 0.5214 0.74
3+ 5 0.5232 0.26
3+10 0.5236 0.07
3+15 0.5238 0.03
3+20 0.5239 0.01
3+25 0.5239 0.00

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 09/12/22 File: DAC2610.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
10-YR
6-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.40	10.44

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	3.50	26.11

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 2.264(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.264(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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

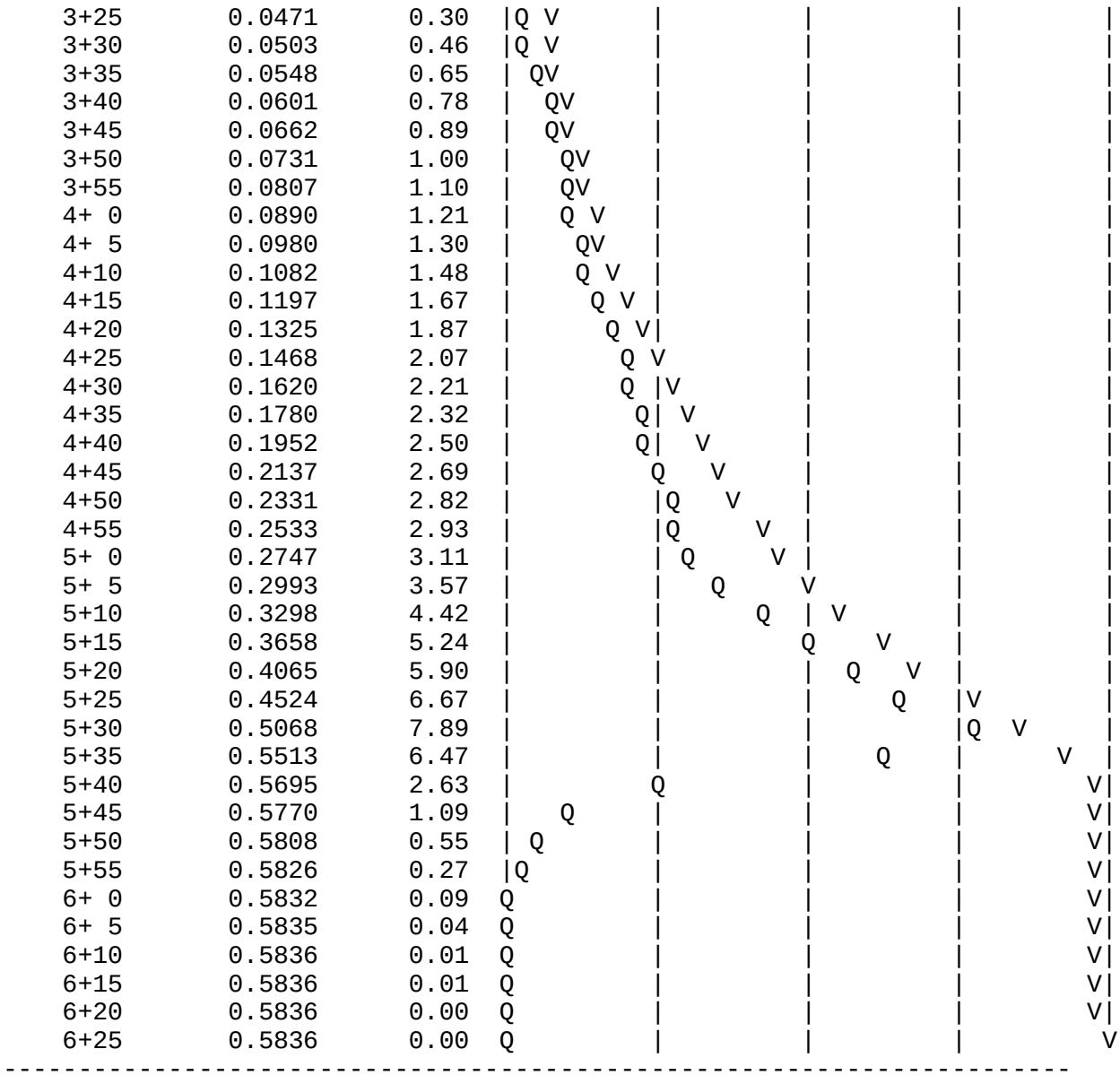
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.136	(0.268)		0.122	0.014
2	0.17	0.60	0.163	(0.268)		0.147	0.016
3	0.25	0.60	0.163	(0.268)		0.147	0.016
4	0.33	0.60	0.163	(0.268)		0.147	0.016
5	0.42	0.60	0.163	(0.268)		0.147	0.016
6	0.50	0.70	0.190	(0.268)		0.171	0.019
7	0.58	0.70	0.190	(0.268)		0.171	0.019
8	0.67	0.70	0.190	(0.268)		0.171	0.019
9	0.75	0.70	0.190	(0.268)		0.171	0.019
10	0.83	0.70	0.190	(0.268)		0.171	0.019
11	0.92	0.70	0.190	(0.268)		0.171	0.019
12	1.00	0.80	0.217	(0.268)		0.196	0.022
13	1.08	0.80	0.217	(0.268)		0.196	0.022

14	1.17	0.80	0.217	(0.268)	0.196	0.022
15	1.25	0.80	0.217	(0.268)	0.196	0.022
16	1.33	0.80	0.217	(0.268)	0.196	0.022
17	1.42	0.80	0.217	(0.268)	0.196	0.022
18	1.50	0.80	0.217	(0.268)	0.196	0.022
19	1.58	0.80	0.217	(0.268)	0.196	0.022
20	1.67	0.80	0.217	(0.268)	0.196	0.022
21	1.75	0.80	0.217	(0.268)	0.196	0.022
22	1.83	0.80	0.217	(0.268)	0.196	0.022
23	1.92	0.80	0.217	(0.268)	0.196	0.022
24	2.00	0.90	0.245	(0.268)	0.220	0.024
25	2.08	0.80	0.217	(0.268)	0.196	0.022
26	2.17	0.90	0.245	(0.268)	0.220	0.024
27	2.25	0.90	0.245	(0.268)	0.220	0.024
28	2.33	0.90	0.245	(0.268)	0.220	0.024
29	2.42	0.90	0.245	(0.268)	0.220	0.024
30	2.50	0.90	0.245	(0.268)	0.220	0.024
31	2.58	0.90	0.245	(0.268)	0.220	0.024
32	2.67	0.90	0.245	(0.268)	0.220	0.024
33	2.75	1.00	0.272	(0.268)	0.245	0.027
34	2.83	1.00	0.272	(0.268)	0.245	0.027
35	2.92	1.00	0.272	(0.268)	0.245	0.027
36	3.00	1.00	0.272	(0.268)	0.245	0.027
37	3.08	1.00	0.272	(0.268)	0.245	0.027
38	3.17	1.10	0.299	0.268	(0.269)	0.031
39	3.25	1.10	0.299	0.268	(0.269)	0.031
40	3.33	1.10	0.299	0.268	(0.269)	0.031
41	3.42	1.20	0.326	0.268	(0.293)	0.058
42	3.50	1.30	0.353	0.268	(0.318)	0.086
43	3.58	1.40	0.380	0.268	(0.342)	0.113
44	3.67	1.40	0.380	0.268	(0.342)	0.113
45	3.75	1.50	0.408	0.268	(0.367)	0.140
46	3.83	1.50	0.408	0.268	(0.367)	0.140
47	3.92	1.60	0.435	0.268	(0.391)	0.167
48	4.00	1.60	0.435	0.268	(0.391)	0.167
49	4.08	1.70	0.462	0.268	(0.416)	0.194
50	4.17	1.80	0.489	0.268	(0.440)	0.221
51	4.25	1.90	0.516	0.268	(0.465)	0.249
52	4.33	2.00	0.543	0.268	(0.489)	0.276
53	4.42	2.10	0.571	0.268	(0.513)	0.303
54	4.50	2.10	0.571	0.268	(0.513)	0.303
55	4.58	2.20	0.598	0.268	(0.538)	0.330
56	4.67	2.30	0.625	0.268	(0.562)	0.357
57	4.75	2.40	0.652	0.268	(0.587)	0.384
58	4.83	2.40	0.652	0.268	(0.587)	0.384
59	4.92	2.50	0.679	0.268	(0.611)	0.412
60	5.00	2.60	0.706	0.268	(0.636)	0.439
61	5.08	3.10	0.842	0.268	(0.758)	0.575
62	5.17	3.60	0.978	0.268	(0.880)	0.710
63	5.25	3.90	1.060	0.268	(0.954)	0.792
64	5.33	4.20	1.141	0.268	(1.027)	0.873
65	5.42	4.70	1.277	0.268	(1.149)	1.009
66	5.50	5.60	1.521	0.268	(1.369)	1.254
67	5.58	1.90	0.516	0.268	(0.465)	0.249
68	5.67	0.90	0.245	(0.268)	0.220	0.024
69	5.75	0.60	0.163	(0.268)	0.147	0.016
70	5.83	0.50	0.136	(0.268)	0.122	0.014
71	5.92	0.30	0.082	(0.268)	0.073	0.008
72	6.00	0.20	0.054	(0.268)	0.049	0.005

(Loss Rate Not Used)

```
   Sum =     100.0                                        Sum =    11.3
    Flood volume = Effective rainfall      0.94(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       0.6(Ac.Ft)
    Total soil loss =      1.33(In)
    Total soil loss =     0.824(Ac.Ft)
    Total rainfall =      2.26(In)
    Flood volume =       25423.1 Cubic Feet
    Total soil loss =       35882.8 Cubic Feet
    ------------------------------------------------------------------------
     Peak flow rate of this hydrograph =      7.893(CFS)
    ------------------------------------------------------------------------
    ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        6 - H O U R    S T O R M
                    R u n o f f      H y d r o g r a p h
    ------------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ------------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0002      0.03  Q         |         |         |         |
  0+10       0.0008      0.09  Q         |         |         |         |
  0+15       0.0016      0.11  Q         |         |         |         |
  0+20       0.0024      0.12  Q         |         |         |         |
  0+25       0.0032      0.12  Q         |         |         |         |
  0+30       0.0041      0.13  Q         |         |         |         |
  0+35       0.0051      0.14  Q         |         |         |         |
  0+40       0.0060      0.14  Q         |         |         |         |
  0+45       0.0070      0.14  Q         |         |         |         |
  0+50       0.0080      0.14  Q         |         |         |         |
  0+55       0.0090      0.14  Q         |         |         |         |
  1+ 0       0.0100      0.15  Q         |         |         |         |
  1+ 5       0.0111      0.16  Q         |         |         |         |
  1+10       0.0122      0.16  Q         |         |         |         |
  1+15       0.0134      0.16  Q         |         |         |         |
  1+20       0.0145      0.16  Q         |         |         |         |
  1+25       0.0156      0.16  QV        |         |         |         |
  1+30       0.0167      0.16  QV        |         |         |         |
  1+35       0.0179      0.16  QV        |         |         |         |
  1+40       0.0190      0.16  QV        |         |         |         |
  1+45       0.0201      0.16  QV        |         |         |         |
  1+50       0.0212      0.16  QV        |         |         |         |
  1+55       0.0224      0.16  QV        |         |         |         |
  2+ 0       0.0235      0.17  QV        |         |         |         |
  2+ 5       0.0247      0.17  QV        |         |         |         |
  2+10       0.0259      0.17  QV        |         |         |         |
  2+15       0.0272      0.18  QV        |         |         |         |
  2+20       0.0284      0.18  QV        |         |         |         |
  2+25       0.0297      0.18  Q V       |         |         |         |
  2+30       0.0309      0.18  Q V       |         |         |         |
  2+35       0.0322      0.18  Q V       |         |         |         |
  2+40       0.0335      0.18  Q V       |         |         |         |
  2+45       0.0348      0.19  Q V       |         |         |         |
  2+50       0.0362      0.20  Q V       |         |         |         |
  2+55       0.0376      0.20  Q V       |         |         |         |
  3+ 0       0.0390      0.20  Q V       |         |         |         |
  3+ 5       0.0404      0.20  Q V       |         |         |         |
  3+10       0.0418      0.21  Q V       |         |         |         |
  3+15       0.0434      0.23  Q V       |         |         |         |
  3+20       0.0450      0.23  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 09/12/22 File: DAC22410.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
10-YR
24-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 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]
7.46	2.50	18.65

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	6.00	44.76

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.940(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.940(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.474)		0.028	0.003
2	0.17	0.07	0.032	(0.473)		0.028	0.003
3	0.25	0.07	0.032	(0.471)		0.028	0.003
4	0.33	0.10	0.047	(0.469)		0.043	0.005
5	0.42	0.10	0.047	(0.467)		0.043	0.005
6	0.50	0.10	0.047	(0.465)		0.043	0.005
7	0.58	0.10	0.047	(0.463)		0.043	0.005
8	0.67	0.10	0.047	(0.462)		0.043	0.005
9	0.75	0.10	0.047	(0.460)		0.043	0.005
10	0.83	0.13	0.063	(0.458)		0.057	0.006
11	0.92	0.13	0.063	(0.456)		0.057	0.006
12	1.00	0.13	0.063	(0.454)		0.057	0.006
13	1.08	0.10	0.047	(0.453)		0.043	0.005

14	1.17	0.10	0.047	(0.451)	0.043	0.005
15	1.25	0.10	0.047	(0.449)	0.043	0.005
16	1.33	0.10	0.047	(0.447)	0.043	0.005
17	1.42	0.10	0.047	(0.445)	0.043	0.005
18	1.50	0.10	0.047	(0.444)	0.043	0.005
19	1.58	0.10	0.047	(0.442)	0.043	0.005
20	1.67	0.10	0.047	(0.440)	0.043	0.005
21	1.75	0.10	0.047	(0.438)	0.043	0.005
22	1.83	0.13	0.063	(0.437)	0.057	0.006
23	1.92	0.13	0.063	(0.435)	0.057	0.006
24	2.00	0.13	0.063	(0.433)	0.057	0.006
25	2.08	0.13	0.063	(0.431)	0.057	0.006
26	2.17	0.13	0.063	(0.430)	0.057	0.006
27	2.25	0.13	0.063	(0.428)	0.057	0.006
28	2.33	0.13	0.063	(0.426)	0.057	0.006
29	2.42	0.13	0.063	(0.424)	0.057	0.006
30	2.50	0.13	0.063	(0.423)	0.057	0.006
31	2.58	0.17	0.079	(0.421)	0.071	0.008
32	2.67	0.17	0.079	(0.419)	0.071	0.008
33	2.75	0.17	0.079	(0.417)	0.071	0.008
34	2.83	0.17	0.079	(0.416)	0.071	0.008
35	2.92	0.17	0.079	(0.414)	0.071	0.008
36	3.00	0.17	0.079	(0.412)	0.071	0.008
37	3.08	0.17	0.079	(0.411)	0.071	0.008
38	3.17	0.17	0.079	(0.409)	0.071	0.008
39	3.25	0.17	0.079	(0.407)	0.071	0.008
40	3.33	0.17	0.079	(0.405)	0.071	0.008
41	3.42	0.17	0.079	(0.404)	0.071	0.008
42	3.50	0.17	0.079	(0.402)	0.071	0.008
43	3.58	0.17	0.079	(0.400)	0.071	0.008
44	3.67	0.17	0.079	(0.399)	0.071	0.008
45	3.75	0.17	0.079	(0.397)	0.071	0.008
46	3.83	0.20	0.095	(0.395)	0.085	0.009
47	3.92	0.20	0.095	(0.394)	0.085	0.009
48	4.00	0.20	0.095	(0.392)	0.085	0.009
49	4.08	0.20	0.095	(0.390)	0.085	0.009
50	4.17	0.20	0.095	(0.389)	0.085	0.009
51	4.25	0.20	0.095	(0.387)	0.085	0.009
52	4.33	0.23	0.110	(0.385)	0.099	0.011
53	4.42	0.23	0.110	(0.384)	0.099	0.011
54	4.50	0.23	0.110	(0.382)	0.099	0.011
55	4.58	0.23	0.110	(0.381)	0.099	0.011
56	4.67	0.23	0.110	(0.379)	0.099	0.011
57	4.75	0.23	0.110	(0.377)	0.099	0.011
58	4.83	0.27	0.126	(0.376)	0.113	0.013
59	4.92	0.27	0.126	(0.374)	0.113	0.013
60	5.00	0.27	0.126	(0.372)	0.113	0.013
61	5.08	0.20	0.095	(0.371)	0.085	0.009
62	5.17	0.20	0.095	(0.369)	0.085	0.009
63	5.25	0.20	0.095	(0.368)	0.085	0.009
64	5.33	0.23	0.110	(0.366)	0.099	0.011
65	5.42	0.23	0.110	(0.364)	0.099	0.011
66	5.50	0.23	0.110	(0.363)	0.099	0.011
67	5.58	0.27	0.126	(0.361)	0.113	0.013
68	5.67	0.27	0.126	(0.360)	0.113	0.013
69	5.75	0.27	0.126	(0.358)	0.113	0.013
70	5.83	0.27	0.126	(0.356)	0.113	0.013
71	5.92	0.27	0.126	(0.355)	0.113	0.013
72	6.00	0.27	0.126	(0.353)	0.113	0.013
73	6.08	0.30	0.142	(0.352)	0.128	0.014

74	6.17	0.30	0.142	(0.350)	0.128	0.014
75	6.25	0.30	0.142	(0.349)	0.128	0.014
76	6.33	0.30	0.142	(0.347)	0.128	0.014
77	6.42	0.30	0.142	(0.345)	0.128	0.014
78	6.50	0.30	0.142	(0.344)	0.128	0.014
79	6.58	0.33	0.158	(0.342)	0.142	0.016
80	6.67	0.33	0.158	(0.341)	0.142	0.016
81	6.75	0.33	0.158	(0.339)	0.142	0.016
82	6.83	0.33	0.158	(0.338)	0.142	0.016
83	6.92	0.33	0.158	(0.336)	0.142	0.016
84	7.00	0.33	0.158	(0.335)	0.142	0.016
85	7.08	0.33	0.158	(0.333)	0.142	0.016
86	7.17	0.33	0.158	(0.332)	0.142	0.016
87	7.25	0.33	0.158	(0.330)	0.142	0.016
88	7.33	0.37	0.173	(0.329)	0.156	0.017
89	7.42	0.37	0.173	(0.327)	0.156	0.017
90	7.50	0.37	0.173	(0.326)	0.156	0.017
91	7.58	0.40	0.189	(0.324)	0.170	0.019
92	7.67	0.40	0.189	(0.323)	0.170	0.019
93	7.75	0.40	0.189	(0.321)	0.170	0.019
94	7.83	0.43	0.205	(0.320)	0.184	0.020
95	7.92	0.43	0.205	(0.318)	0.184	0.020
96	8.00	0.43	0.205	(0.317)	0.184	0.020
97	8.08	0.50	0.236	(0.315)	0.213	0.024
98	8.17	0.50	0.236	(0.314)	0.213	0.024
99	8.25	0.50	0.236	(0.312)	0.213	0.024
100	8.33	0.50	0.236	(0.311)	0.213	0.024
101	8.42	0.50	0.236	(0.309)	0.213	0.024
102	8.50	0.50	0.236	(0.308)	0.213	0.024
103	8.58	0.53	0.252	(0.306)	0.227	0.025
104	8.67	0.53	0.252	(0.305)	0.227	0.025
105	8.75	0.53	0.252	(0.304)	0.227	0.025
106	8.83	0.57	0.268	(0.302)	0.241	0.027
107	8.92	0.57	0.268	(0.301)	0.241	0.027
108	9.00	0.57	0.268	(0.299)	0.241	0.027
109	9.08	0.63	0.299	(0.298)	0.269	0.030
110	9.17	0.63	0.299	(0.296)	0.269	0.030
111	9.25	0.63	0.299	(0.295)	0.269	0.030
112	9.33	0.67	0.315	(0.294)	0.284	0.032
113	9.42	0.67	0.315	(0.292)	0.284	0.032
114	9.50	0.67	0.315	(0.291)	0.284	0.032
115	9.58	0.70	0.331	0.289	(0.298)	0.041
116	9.67	0.70	0.331	0.288	(0.298)	0.043
117	9.75	0.70	0.331	0.287	(0.298)	0.044
118	9.83	0.73	0.347	0.285	(0.312)	0.061
119	9.92	0.73	0.347	0.284	(0.312)	0.063
120	10.00	0.73	0.347	0.283	(0.312)	0.064
121	10.08	0.50	0.236	(0.281)	0.213	0.024
122	10.17	0.50	0.236	(0.280)	0.213	0.024
123	10.25	0.50	0.236	(0.278)	0.213	0.024
124	10.33	0.50	0.236	(0.277)	0.213	0.024
125	10.42	0.50	0.236	(0.276)	0.213	0.024
126	10.50	0.50	0.236	(0.274)	0.213	0.024
127	10.58	0.67	0.315	0.273	(0.284)	0.042
128	10.67	0.67	0.315	0.272	(0.284)	0.043
129	10.75	0.67	0.315	0.270	(0.284)	0.045
130	10.83	0.67	0.315	0.269	(0.284)	0.046
131	10.92	0.67	0.315	0.268	(0.284)	0.047
132	11.00	0.67	0.315	0.266	(0.284)	0.049
133	11.08	0.63	0.299	0.265	(0.269)	0.034

134	11.17	0.63	0.299	0.264	(0.269)	0.036
135	11.25	0.63	0.299	0.263	(0.269)	0.037
136	11.33	0.63	0.299	0.261	(0.269)	0.038
137	11.42	0.63	0.299	0.260	(0.269)	0.039
138	11.50	0.63	0.299	0.259	(0.269)	0.041
139	11.58	0.57	0.268	(0.257)	0.241	0.027
140	11.67	0.57	0.268	(0.256)	0.241	0.027
141	11.75	0.57	0.268	(0.255)	0.241	0.027
142	11.83	0.60	0.284	0.254	(0.255)	0.030
143	11.92	0.60	0.284	0.252	(0.255)	0.031
144	12.00	0.60	0.284	0.251	(0.255)	0.033
145	12.08	0.83	0.394	0.250	(0.355)	0.144
146	12.17	0.83	0.394	0.249	(0.355)	0.145
147	12.25	0.83	0.394	0.247	(0.355)	0.147
148	12.33	0.87	0.410	0.246	(0.369)	0.164
149	12.42	0.87	0.410	0.245	(0.369)	0.165
150	12.50	0.87	0.410	0.244	(0.369)	0.166
151	12.58	0.93	0.441	0.242	(0.397)	0.199
152	12.67	0.93	0.441	0.241	(0.397)	0.200
153	12.75	0.93	0.441	0.240	(0.397)	0.201
154	12.83	0.97	0.457	0.239	(0.411)	0.218
155	12.92	0.97	0.457	0.238	(0.411)	0.220
156	13.00	0.97	0.457	0.236	(0.411)	0.221
157	13.08	1.13	0.536	0.235	(0.482)	0.301
158	13.17	1.13	0.536	0.234	(0.482)	0.302
159	13.25	1.13	0.536	0.233	(0.482)	0.303
160	13.33	1.13	0.536	0.232	(0.482)	0.304
161	13.42	1.13	0.536	0.230	(0.482)	0.305
162	13.50	1.13	0.536	0.229	(0.482)	0.307
163	13.58	0.77	0.362	0.228	(0.326)	0.134
164	13.67	0.77	0.362	0.227	(0.326)	0.136
165	13.75	0.77	0.362	0.226	(0.326)	0.137
166	13.83	0.77	0.362	0.225	(0.326)	0.138
167	13.92	0.77	0.362	0.223	(0.326)	0.139
168	14.00	0.77	0.362	0.222	(0.326)	0.140
169	14.08	0.90	0.426	0.221	(0.383)	0.204
170	14.17	0.90	0.426	0.220	(0.383)	0.205
171	14.25	0.90	0.426	0.219	(0.383)	0.207
172	14.33	0.87	0.410	0.218	(0.369)	0.192
173	14.42	0.87	0.410	0.217	(0.369)	0.193
174	14.50	0.87	0.410	0.216	(0.369)	0.194
175	14.58	0.87	0.410	0.214	(0.369)	0.195
176	14.67	0.87	0.410	0.213	(0.369)	0.196
177	14.75	0.87	0.410	0.212	(0.369)	0.197
178	14.83	0.83	0.394	0.211	(0.355)	0.183
179	14.92	0.83	0.394	0.210	(0.355)	0.184
180	15.00	0.83	0.394	0.209	(0.355)	0.185
181	15.08	0.80	0.378	0.208	(0.340)	0.170
182	15.17	0.80	0.378	0.207	(0.340)	0.171
183	15.25	0.80	0.378	0.206	(0.340)	0.172
184	15.33	0.77	0.362	0.205	(0.326)	0.158
185	15.42	0.77	0.362	0.204	(0.326)	0.159
186	15.50	0.77	0.362	0.203	(0.326)	0.160
187	15.58	0.63	0.299	0.202	(0.269)	0.098
188	15.67	0.63	0.299	0.201	(0.269)	0.099
189	15.75	0.63	0.299	0.200	(0.269)	0.100
190	15.83	0.63	0.299	0.199	(0.269)	0.101
191	15.92	0.63	0.299	0.198	(0.269)	0.102
192	16.00	0.63	0.299	0.197	(0.269)	0.103
193	16.08	0.13	0.063	(0.196)	0.057	0.006

194	16.17	0.13	0.063	(0.195)	0.057	0.006
195	16.25	0.13	0.063	(0.194)	0.057	0.006
196	16.33	0.13	0.063	(0.193)	0.057	0.006
197	16.42	0.13	0.063	(0.192)	0.057	0.006
198	16.50	0.13	0.063	(0.191)	0.057	0.006
199	16.58	0.10	0.047	(0.190)	0.043	0.005
200	16.67	0.10	0.047	(0.189)	0.043	0.005
201	16.75	0.10	0.047	(0.188)	0.043	0.005
202	16.83	0.10	0.047	(0.187)	0.043	0.005
203	16.92	0.10	0.047	(0.186)	0.043	0.005
204	17.00	0.10	0.047	(0.185)	0.043	0.005
205	17.08	0.17	0.079	(0.184)	0.071	0.008
206	17.17	0.17	0.079	(0.183)	0.071	0.008
207	17.25	0.17	0.079	(0.182)	0.071	0.008
208	17.33	0.17	0.079	(0.181)	0.071	0.008
209	17.42	0.17	0.079	(0.180)	0.071	0.008
210	17.50	0.17	0.079	(0.179)	0.071	0.008
211	17.58	0.17	0.079	(0.178)	0.071	0.008
212	17.67	0.17	0.079	(0.178)	0.071	0.008
213	17.75	0.17	0.079	(0.177)	0.071	0.008
214	17.83	0.13	0.063	(0.176)	0.057	0.006
215	17.92	0.13	0.063	(0.175)	0.057	0.006
216	18.00	0.13	0.063	(0.174)	0.057	0.006
217	18.08	0.13	0.063	(0.173)	0.057	0.006
218	18.17	0.13	0.063	(0.172)	0.057	0.006
219	18.25	0.13	0.063	(0.172)	0.057	0.006
220	18.33	0.13	0.063	(0.171)	0.057	0.006
221	18.42	0.13	0.063	(0.170)	0.057	0.006
222	18.50	0.13	0.063	(0.169)	0.057	0.006
223	18.58	0.10	0.047	(0.168)	0.043	0.005
224	18.67	0.10	0.047	(0.167)	0.043	0.005
225	18.75	0.10	0.047	(0.167)	0.043	0.005
226	18.83	0.07	0.032	(0.166)	0.028	0.003
227	18.92	0.07	0.032	(0.165)	0.028	0.003
228	19.00	0.07	0.032	(0.164)	0.028	0.003
229	19.08	0.10	0.047	(0.163)	0.043	0.005
230	19.17	0.10	0.047	(0.163)	0.043	0.005
231	19.25	0.10	0.047	(0.162)	0.043	0.005
232	19.33	0.13	0.063	(0.161)	0.057	0.006
233	19.42	0.13	0.063	(0.160)	0.057	0.006
234	19.50	0.13	0.063	(0.160)	0.057	0.006
235	19.58	0.10	0.047	(0.159)	0.043	0.005
236	19.67	0.10	0.047	(0.158)	0.043	0.005
237	19.75	0.10	0.047	(0.157)	0.043	0.005
238	19.83	0.07	0.032	(0.157)	0.028	0.003
239	19.92	0.07	0.032	(0.156)	0.028	0.003
240	20.00	0.07	0.032	(0.155)	0.028	0.003
241	20.08	0.10	0.047	(0.155)	0.043	0.005
242	20.17	0.10	0.047	(0.154)	0.043	0.005
243	20.25	0.10	0.047	(0.153)	0.043	0.005
244	20.33	0.10	0.047	(0.153)	0.043	0.005
245	20.42	0.10	0.047	(0.152)	0.043	0.005
246	20.50	0.10	0.047	(0.151)	0.043	0.005
247	20.58	0.10	0.047	(0.151)	0.043	0.005
248	20.67	0.10	0.047	(0.150)	0.043	0.005
249	20.75	0.10	0.047	(0.150)	0.043	0.005
250	20.83	0.07	0.032	(0.149)	0.028	0.003
251	20.92	0.07	0.032	(0.148)	0.028	0.003
252	21.00	0.07	0.032	(0.148)	0.028	0.003
253	21.08	0.10	0.047	(0.147)	0.043	0.005

254	21.17	0.10	0.047	(0.147)	0.043	0.005
255	21.25	0.10	0.047	(0.146)	0.043	0.005
256	21.33	0.07	0.032	(0.145)	0.028	0.003
257	21.42	0.07	0.032	(0.145)	0.028	0.003
258	21.50	0.07	0.032	(0.144)	0.028	0.003
259	21.58	0.10	0.047	(0.144)	0.043	0.005
260	21.67	0.10	0.047	(0.143)	0.043	0.005
261	21.75	0.10	0.047	(0.143)	0.043	0.005
262	21.83	0.07	0.032	(0.142)	0.028	0.003
263	21.92	0.07	0.032	(0.142)	0.028	0.003
264	22.00	0.07	0.032	(0.141)	0.028	0.003
265	22.08	0.10	0.047	(0.141)	0.043	0.005
266	22.17	0.10	0.047	(0.140)	0.043	0.005
267	22.25	0.10	0.047	(0.140)	0.043	0.005
268	22.33	0.07	0.032	(0.139)	0.028	0.003
269	22.42	0.07	0.032	(0.139)	0.028	0.003
270	22.50	0.07	0.032	(0.139)	0.028	0.003
271	22.58	0.07	0.032	(0.138)	0.028	0.003
272	22.67	0.07	0.032	(0.138)	0.028	0.003
273	22.75	0.07	0.032	(0.137)	0.028	0.003
274	22.83	0.07	0.032	(0.137)	0.028	0.003
275	22.92	0.07	0.032	(0.137)	0.028	0.003
276	23.00	0.07	0.032	(0.136)	0.028	0.003
277	23.08	0.07	0.032	(0.136)	0.028	0.003
278	23.17	0.07	0.032	(0.136)	0.028	0.003
279	23.25	0.07	0.032	(0.136)	0.028	0.003
280	23.33	0.07	0.032	(0.135)	0.028	0.003
281	23.42	0.07	0.032	(0.135)	0.028	0.003
282	23.50	0.07	0.032	(0.135)	0.028	0.003
283	23.58	0.07	0.032	(0.135)	0.028	0.003
284	23.67	0.07	0.032	(0.134)	0.028	0.003
285	23.75	0.07	0.032	(0.134)	0.028	0.003
286	23.83	0.07	0.032	(0.134)	0.028	0.003
287	23.92	0.07	0.032	(0.134)	0.028	0.003
288	24.00	0.07	0.032	(0.134)	0.028	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 11.8

Flood volume = Effective rainfall 0.98(In)
times area 7.5(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 2.96(In)
Total soil loss = 1.838(Ac.Ft)
Total rainfall = 3.94(In)
Flood volume = 26630.6 Cubic Feet
Total soil loss = 80060.3 Cubic Feet

Peak flow rate of this hydrograph = 2.297(CFS)

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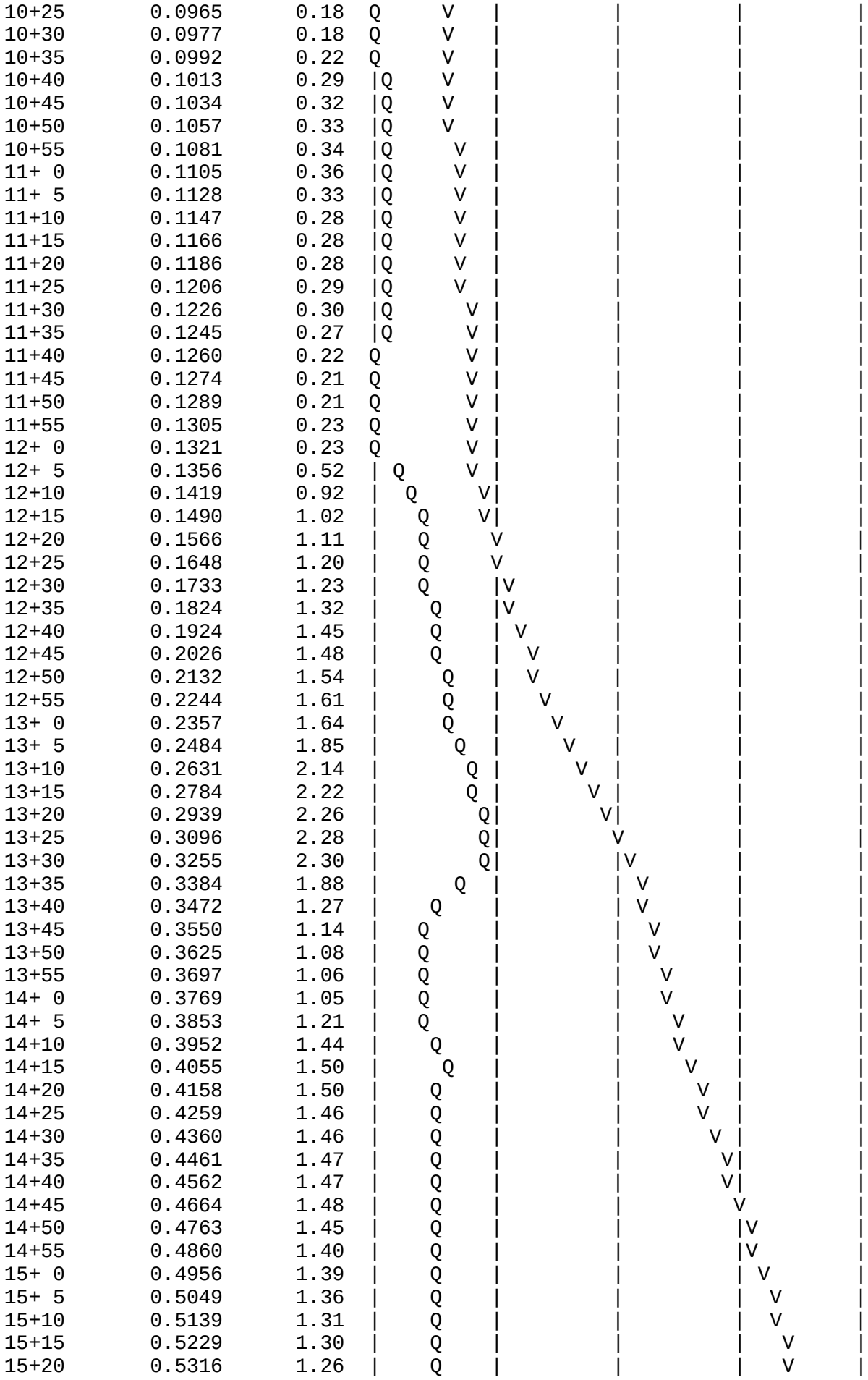
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	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	0.03	Q	|	|	|	|
0+30	0.0010	0.03	Q	|	|	|	|
0+35	0.0012	0.04	Q	|	|	|	|
0+40	0.0015	0.04	Q	|	|	|	|
0+45	0.0017	0.04	Q	|	|	|	|
0+50	0.0020	0.04	Q	|	|	|	|
0+55	0.0023	0.05	Q	|	|	|	|
1+ 0	0.0026	0.05	Q	|	|	|	|
1+ 5	0.0029	0.04	Q	|	|	|	|
1+10	0.0032	0.04	Q	|	|	|	|
1+15	0.0034	0.04	Q	|	|	|	|
1+20	0.0037	0.04	Q	|	|	|	|
1+25	0.0039	0.04	Q	|	|	|	|
1+30	0.0042	0.04	Q	|	|	|	|
1+35	0.0044	0.04	Q	|	|	|	|
1+40	0.0046	0.04	Q	|	|	|	|
1+45	0.0049	0.04	Q	|	|	|	|
1+50	0.0052	0.04	Q	|	|	|	|
1+55	0.0055	0.05	Q	|	|	|	|
2+ 0	0.0058	0.05	Q	|	|	|	|
2+ 5	0.0061	0.05	Q	|	|	|	|
2+10	0.0064	0.05	Q	|	|	|	|
2+15	0.0068	0.05	Q	|	|	|	|
2+20	0.0071	0.05	Q	|	|	|	|
2+25	0.0074	0.05	Q	|	|	|	|
2+30	0.0078	0.05	Q	|	|	|	|
2+35	0.0081	0.05	Q	|	|	|	|
2+40	0.0085	0.06	Q	|	|	|	|
2+45	0.0089	0.06	Q	|	|	|	|
2+50	0.0093	0.06	Q	|	|	|	|
2+55	0.0097	0.06	Q	|	|	|	|
3+ 0	0.0101	0.06	Q	|	|	|	|
3+ 5	0.0105	0.06	Q	|	|	|	|
3+10	0.0109	0.06	Q	|	|	|	|
3+15	0.0113	0.06	Q	|	|	|	|
3+20	0.0117	0.06	Q	|	|	|	|
3+25	0.0122	0.06	Q	|	|	|	|
3+30	0.0126	0.06	Q	|	|	|	|
3+35	0.0130	0.06	Q	|	|	|	|
3+40	0.0134	0.06	Q	|	|	|	|
3+45	0.0138	0.06	Q	|	|	|	|
3+50	0.0142	0.06	Q	|	|	|	|
3+55	0.0147	0.07	Q	|	|	|	|
4+ 0	0.0152	0.07	Q	|	|	|	|
4+ 5	0.0157	0.07	QV	|	|	|	|
4+10	0.0162	0.07	QV	|	|	|	|
4+15	0.0166	0.07	QV	|	|	|	|
4+20	0.0172	0.07	QV	|	|	|	|
4+25	0.0177	0.08	QV	|	|	|	|
4+30	0.0183	0.08	QV	|	|	|	|
4+35	0.0189	0.08	QV	|	|	|	|
4+40	0.0194	0.08	QV	|	|	|	|
4+45	0.0200	0.08	QV	|	|	|	|
4+50	0.0206	0.09	QV	|	|	|	|
4+55	0.0212	0.09	QV	|	|	|	|
5+ 0	0.0219	0.09	QV	|	|	|	|
5+ 5	0.0225	0.09	QV	|	|	|	|
5+10	0.0230	0.08	QV	|	|	|	|
5+15	0.0235	0.07	QV	|	|	|	|
5+20	0.0240	0.08	QV	|	|	|	|

5+25	0.0246	0.08	QV	|	|	|	|
5+30	0.0251	0.08	QV	|	|	|	|
5+35	0.0257	0.09	QV	|	|	|	|
5+40	0.0264	0.09	QV	|	|	|	|
5+45	0.0270	0.09	QV	|	|	|	|
5+50	0.0277	0.09	QV	|	|	|	|
5+55	0.0283	0.09	QV	|	|	|	|
6+ 0	0.0290	0.09	QV	|	|	|	|
6+ 5	0.0297	0.10	QV	|	|	|	|
6+10	0.0304	0.10	QV	|	|	|	|
6+15	0.0311	0.11	Q V	|	|	|	|
6+20	0.0318	0.11	Q V	|	|	|	|
6+25	0.0326	0.11	Q V	|	|	|	|
6+30	0.0333	0.11	Q V	|	|	|	|
6+35	0.0341	0.11	Q V	|	|	|	|
6+40	0.0349	0.12	Q V	|	|	|	|
6+45	0.0357	0.12	Q V	|	|	|	|
6+50	0.0365	0.12	Q V	|	|	|	|
6+55	0.0373	0.12	Q V	|	|	|	|
7+ 0	0.0381	0.12	Q V	|	|	|	|
7+ 5	0.0389	0.12	Q V	|	|	|	|
7+10	0.0397	0.12	Q V	|	|	|	|
7+15	0.0406	0.12	Q V	|	|	|	|
7+20	0.0414	0.12	Q V	|	|	|	|
7+25	0.0423	0.13	Q V	|	|	|	|
7+30	0.0432	0.13	Q V	|	|	|	|
7+35	0.0441	0.13	Q V	|	|	|	|
7+40	0.0451	0.14	Q V	|	|	|	|
7+45	0.0460	0.14	Q V	|	|	|	|
7+50	0.0470	0.15	Q V	|	|	|	|
7+55	0.0481	0.15	Q V	|	|	|	|
8+ 0	0.0491	0.15	Q V	|	|	|	|
8+ 5	0.0502	0.16	Q V	|	|	|	|
8+10	0.0514	0.17	Q V	|	|	|	|
8+15	0.0526	0.18	Q V	|	|	|	|
8+20	0.0539	0.18	Q V	|	|	|	|
8+25	0.0551	0.18	Q V	|	|	|	|
8+30	0.0563	0.18	Q V	|	|	|	|
8+35	0.0576	0.18	Q V	|	|	|	|
8+40	0.0589	0.19	Q V	|	|	|	|
8+45	0.0602	0.19	Q V	|	|	|	|
8+50	0.0615	0.19	Q V	|	|	|	|
8+55	0.0629	0.20	Q V	|	|	|	|
9+ 0	0.0642	0.20	Q V	|	|	|	|
9+ 5	0.0657	0.21	Q V	|	|	|	|
9+10	0.0672	0.22	Q V	|	|	|	|
9+15	0.0687	0.22	Q V	|	|	|	|
9+20	0.0703	0.23	Q V	|	|	|	|
9+25	0.0719	0.23	Q V	|	|	|	|
9+30	0.0735	0.24	Q V	|	|	|	|
9+35	0.0753	0.26	|Q V	|	|	|	|
9+40	0.0774	0.30	|Q V	|	|	|	|
9+45	0.0796	0.32	|Q V	|	|	|	|
9+50	0.0821	0.37	|Q V	|	|	|	|
9+55	0.0851	0.44	|Q V	|	|	|	|
10+ 0	0.0883	0.46	|Q V	|	|	|	|
10+ 5	0.0909	0.37	|Q V	|	|	|	|
10+10	0.0925	0.24	Q V	|	|	|	|
10+15	0.0939	0.20	Q V	|	|	|	|
10+20	0.0952	0.19	Q V	|	|	|	|



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15+25       0.5399      1.21  |   Q     |         |         |    V    |
15+30       0.5482      1.20  |   Q     |         |         |    V    |
15+35       0.5554      1.05  |   Q     |         |         |     V   |
15+40       0.5612      0.83  |  Q      |         |         |     V   |
15+45       0.5666      0.79  |  Q      |         |         |      V  |
15+50       0.5719      0.77  |  Q      |         |         |      V  |
15+55       0.5772      0.77  |  Q      |         |         |      V  |
16+ 0       0.5824      0.77  |  Q      |         |         |       V |
16+ 5       0.5861      0.53  | Q       |         |         |       V |
16+10       0.5875      0.19  Q         |         |         |       V |
16+15       0.5882      0.11  Q         |         |         |       V |
16+20       0.5887      0.08  Q         |         |         |       V |
16+25       0.5891      0.06  Q         |         |         |       V |
16+30       0.5895      0.05  Q         |         |         |       V |
16+35       0.5898      0.04  Q         |         |         |       V |
16+40       0.5900      0.04  Q         |         |         |       V |
16+45       0.5903      0.04  Q         |         |         |       V |
16+50       0.5905      0.04  Q         |         |         |       V |
16+55       0.5908      0.04  Q         |         |         |       V |
17+ 0       0.5910      0.04  Q         |         |         |       V |
17+ 5       0.5913      0.04  Q         |         |         |       V |
17+10       0.5917      0.05  Q         |         |         |       V |
17+15       0.5921      0.06  Q         |         |         |       V |
17+20       0.5925      0.06  Q         |         |         |       V |
17+25       0.5929      0.06  Q         |         |         |       V |
17+30       0.5933      0.06  Q         |         |         |       V |
17+35       0.5937      0.06  Q         |         |         |       V |
17+40       0.5941      0.06  Q         |         |         |       V |
17+45       0.5945      0.06  Q         |         |         |       V |
17+50       0.5949      0.06  Q         |         |         |       V |
17+55       0.5953      0.05  Q         |         |         |       V |
18+ 0       0.5956      0.05  Q         |         |         |       V |
18+ 5       0.5959      0.05  Q         |         |         |       V |
18+10       0.5962      0.05  Q         |         |         |        V|
18+15       0.5966      0.05  Q         |         |         |        V|
18+20       0.5969      0.05  Q         |         |         |        V|
18+25       0.5972      0.05  Q         |         |         |        V|
18+30       0.5976      0.05  Q         |         |         |        V|
18+35       0.5979      0.04  Q         |         |         |        V|
18+40       0.5981      0.04  Q         |         |         |        V|
18+45       0.5984      0.04  Q         |         |         |        V|
18+50       0.5986      0.03  Q         |         |         |        V|
18+55       0.5988      0.03  Q         |         |         |        V|
19+ 0       0.5989      0.02  Q         |         |         |        V|
19+ 5       0.5991      0.03  Q         |         |         |        V|
19+10       0.5994      0.03  Q         |         |         |        V|
19+15       0.5996      0.03  Q         |         |         |        V|
19+20       0.5999      0.04  Q         |         |         |        V|
19+25       0.6002      0.04  Q         |         |         |        V|
19+30       0.6005      0.05  Q         |         |         |        V|
19+35       0.6008      0.04  Q         |         |         |        V|
19+40       0.6011      0.04  Q         |         |         |        V|
19+45       0.6013      0.04  Q         |         |         |        V|
19+50       0.6015      0.03  Q         |         |         |        V|
19+55       0.6017      0.03  Q         |         |         |        V|
20+ 0       0.6019      0.02  Q         |         |         |        V|
20+ 5       0.6021      0.03  Q         |         |         |        V|
20+10       0.6023      0.03  Q         |         |         |        V|
20+15       0.6025      0.03  Q         |         |         |        V|
20+20       0.6028      0.04  Q         |         |         |        V|
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20+25	0.6030	0.04	Q	|	|	|	V|
20+30	0.6033	0.04	Q	|	|	|	V|
20+35	0.6035	0.04	Q	|	|	|	V|
20+40	0.6038	0.04	Q	|	|	|	V|
20+45	0.6040	0.04	Q	|	|	|	V|
20+50	0.6042	0.03	Q	|	|	|	V|
20+55	0.6044	0.03	Q	|	|	|	V|
21+ 0	0.6046	0.02	Q	|	|	|	V|
21+ 5	0.6048	0.03	Q	|	|	|	V|
21+10	0.6050	0.03	Q	|	|	|	V|
21+15	0.6052	0.03	Q	|	|	|	V|
21+20	0.6054	0.03	Q	|	|	|	V|
21+25	0.6056	0.03	Q	|	|	|	V|
21+30	0.6058	0.02	Q	|	|	|	V|
21+35	0.6060	0.03	Q	|	|	|	V|
21+40	0.6062	0.03	Q	|	|	|	V|
21+45	0.6065	0.03	Q	|	|	|	V|
21+50	0.6067	0.03	Q	|	|	|	V|
21+55	0.6068	0.03	Q	|	|	|	V|
22+ 0	0.6070	0.02	Q	|	|	|	V|
22+ 5	0.6072	0.03	Q	|	|	|	V|
22+10	0.6074	0.03	Q	|	|	|	V|
22+15	0.6077	0.03	Q	|	|	|	V|
22+20	0.6079	0.03	Q	|	|	|	V|
22+25	0.6081	0.03	Q	|	|	|	V|
22+30	0.6082	0.02	Q	|	|	|	V|
22+35	0.6084	0.02	Q	|	|	|	V|
22+40	0.6086	0.02	Q	|	|	|	V|
22+45	0.6087	0.02	Q	|	|	|	V|
22+50	0.6089	0.02	Q	|	|	|	V|
22+55	0.6091	0.02	Q	|	|	|	V|
23+ 0	0.6092	0.02	Q	|	|	|	V|
23+ 5	0.6094	0.02	Q	|	|	|	V|
23+10	0.6096	0.02	Q	|	|	|	V|
23+15	0.6097	0.02	Q	|	|	|	V|
23+20	0.6099	0.02	Q	|	|	|	V|
23+25	0.6100	0.02	Q	|	|	|	V|
23+30	0.6102	0.02	Q	|	|	|	V|
23+35	0.6104	0.02	Q	|	|	|	V|
23+40	0.6105	0.02	Q	|	|	|	V|
23+45	0.6107	0.02	Q	|	|	|	V|
23+50	0.6109	0.02	Q	|	|	|	V|
23+55	0.6110	0.02	Q	|	|	|	V|
24+ 0	0.6112	0.02	Q	|	|	|	V|
24+ 5	0.6113	0.02	Q	|	|	|	V|
24+10	0.6113	0.00	Q	|	|	|	V|
24+15	0.6113	0.00	Q	|	|	|	V|
24+20	0.6114	0.00	Q	|	|	|	V|
24+25	0.6114	0.00	Q	|	|	|	V|

100-YEAR STORM

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 08/15/22 File: THECOVE1100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
1-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	0.57	8.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.45	22.45

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 1.450(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.450(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	4.40	0.765	0.268	(0.689)	0.498
2	0.17	4.50	0.783	0.268	(0.705)	0.515
3	0.25	5.40	0.939	0.268	(0.846)	0.672
4	0.33	5.40	0.939	0.268	(0.846)	0.672
5	0.42	5.70	0.992	0.268	(0.892)	0.724
6	0.50	6.40	1.113	0.268	(1.002)	0.846
7	0.58	7.90	1.374	0.268	(1.237)	1.107
8	0.67	9.10	1.583	0.268	(1.425)	1.316
9	0.75	12.80	2.227	0.268	(2.004)	1.959
10	0.83	25.60	4.454	0.268	(4.008)	4.186

```
 11   0.92     7.90      1.374          0.268    (  1.237)        1.107
 12   1.00     4.90      0.852          0.268    (  0.767)        0.585
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.2
    Flood volume = Effective rainfall      1.18(In)
     times area      15.5(Ac.)/[(In)/(Ft.)] =       1.5(Ac.Ft)
    Total soil loss =      0.27(In)
    Total soil loss =     0.345(Ac.Ft)
    Total rainfall =      1.45(In)
    Flood volume =       66430.5 Cubic Feet
    Total soil loss =       15037.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     42.369(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0       12.5      25.0      37.5      50.0
 ------------------------------------------------------------------------
   0+ 5       0.0142      2.07  VQ        |         |         |         |
   0+10       0.0550      5.91  |V  Q     |         |         |         |
   0+15       0.1080      7.70  | V   Q   |         |         |         |
   0+20       0.1725      9.37  |   V  Q  |         |         |         |
   0+25       0.2425     10.17  |     V Q |         |         |         |
   0+30       0.3207     11.36  |       VQ|         |         |         |
   0+35       0.4147     13.64  |         Q         |         |         |
   0+40       0.5306     16.83  |         |  Q      |         |         |
   0+45       0.6805     21.77  |         |     Q   |         |         |
   0+50       0.9327     36.63  |         |         |   V    Q|         |
   0+55       1.2245     42.37  |         |         |         | VQ      |
   1+ 0       1.3770     22.14  |         |      Q  |         |     V   |
   1+ 5       1.4597     12.00  |        Q|         |         |       V |
   1+10       1.4946      5.07  |   Q     |         |         |        V|
   1+15       1.5125      2.61  | Q       |         |         |        V|
   1+20       1.5218      1.35  |Q        |         |         |        V|
   1+25       1.5243      0.36  Q         |         |         |        V|
   1+30       1.5250      0.10  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 08/15/22 File: THECOVE3100.out

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

Program License Serial Number 6094

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100-YR
3-HR
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Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.00	15.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	2.50	38.70

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	1.30	0.390	0.268	(0.351)	0.122
2	0.17	1.30	0.390	0.268	(0.351)	0.122
3	0.25	1.10	0.330	0.268	(0.297)	0.062
4	0.33	1.50	0.450	0.268	(0.405)	0.182
5	0.42	1.50	0.450	0.268	(0.405)	0.182
6	0.50	1.80	0.540	0.268	(0.486)	0.272
7	0.58	1.50	0.450	0.268	(0.405)	0.182
8	0.67	1.80	0.540	0.268	(0.486)	0.272
9	0.75	1.80	0.540	0.268	(0.486)	0.272
10	0.83	1.50	0.450	0.268	(0.405)	0.182
11	0.92	1.60	0.480	0.268	(0.432)	0.212
12	1.00	1.80	0.540	0.268	(0.486)	0.272

13	1.08	2.20	0.660	0.268	(	0.594)	0.392
14	1.17	2.20	0.660	0.268	(	0.594)	0.392
15	1.25	2.20	0.660	0.268	(	0.594)	0.392
16	1.33	2.00	0.600	0.268	(	0.540)	0.332
17	1.42	2.60	0.780	0.268	(	0.702)	0.512
18	1.50	2.70	0.810	0.268	(	0.729)	0.542
19	1.58	2.40	0.720	0.268	(	0.648)	0.452
20	1.67	2.70	0.810	0.268	(	0.729)	0.542
21	1.75	3.30	0.990	0.268	(	0.891)	0.722
22	1.83	3.10	0.930	0.268	(	0.837)	0.662
23	1.92	2.90	0.870	0.268	(	0.783)	0.602
24	2.00	3.00	0.900	0.268	(	0.810)	0.632
25	2.08	3.10	0.930	0.268	(	0.837)	0.662
26	2.17	4.20	1.260	0.268	(	1.134)	0.992
27	2.25	5.00	1.500	0.268	(	1.350)	1.232
28	2.33	3.50	1.050	0.268	(	0.945)	0.782
29	2.42	6.80	2.040	0.268	(	1.836)	1.772
30	2.50	7.30	2.190	0.268	(	1.971)	1.922
31	2.58	8.20	2.460	0.268	(	2.214)	2.192
32	2.67	5.90	1.770	0.268	(	1.593)	1.502
33	2.75	2.00	0.600	0.268	(	0.540)	0.332
34	2.83	1.80	0.540	0.268	(	0.486)	0.272
35	2.92	1.80	0.540	0.268	(	0.486)	0.272
36	3.00	0.60	0.180	(0.268)		0.162	0.018

(Loss Rate Not Used)

Sum = 100.0 Sum = 20.5

Flood volume = Effective rainfall 1.71(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 2.2(Ac.Ft)
Total soil loss = 0.79(In)
Total soil loss = 1.024(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 95854.8 Cubic Feet
Total soil loss = 44616.7 Cubic Feet

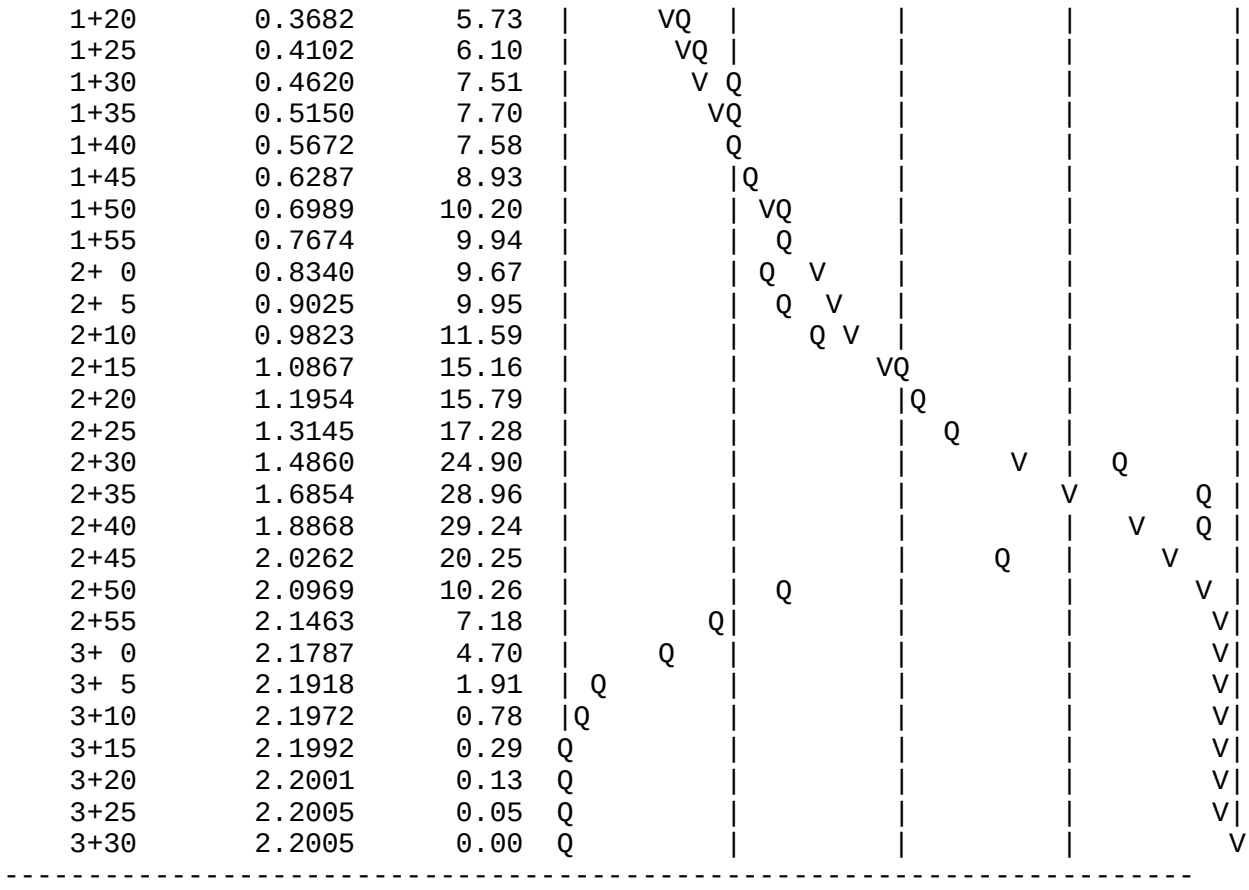
Peak flow rate of this hydrograph = 29.237(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0035	0.51	Q	|	|	|	|
0+10	0.0134	1.44	VQ	|	|	|	|
0+15	0.0233	1.43	VQ	|	|	|	|
0+20	0.0342	1.59	V Q	|	|	|	|
0+25	0.0510	2.44	V Q	|	|	|	|
0+30	0.0718	3.03	|V Q	|	|	|	|
0+35	0.0955	3.44	|V Q	|	|	|	|
0+40	0.1187	3.36	| V Q	|	|	|	|
0+45	0.1460	3.96	| V Q	|	|	|	|
0+50	0.1718	3.75	| V Q	|	|	|	|
0+55	0.1943	3.26	| VQ	|	|	|	|
1+ 0	0.2190	3.59	| VQ	|	|	|	|
1+ 5	0.2502	4.53	| V Q	|	|	|	|
1+10	0.2885	5.56	| V Q	|	|	|	|
1+15	0.3287	5.84	| V Q	|	|	|	|


1+20 0.3682 5.73
1+25 0.4102 6.10
1+30 0.4620 7.51
1+35 0.5150 7.70
1+40 0.5672 7.58
1+45 0.6287 8.93
1+50 0.6989 10.20
1+55 0.7674 9.94
2+ 0 0.8340 9.67
2+ 5 0.9025 9.95
2+10 0.9823 11.59
2+15 1.0867 15.16
2+20 1.1954 15.79
2+25 1.3145 17.28
2+30 1.4860 24.90
2+35 1.6854 28.96
2+40 1.8868 29.24
2+45 2.0262 20.25
2+50 2.0969 10.26
2+55 2.1463 7.18
3+ 0 2.1787 4.70
3+ 5 2.1918 1.91
3+10 2.1972 0.78
3+15 2.1992 0.29
3+20 2.2001 0.13
3+25 2.2005 0.05
3+30 2.2005 0.00

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 08/15/22 File: THECOVE6100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
6-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	1.40	21.67

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	3.50	54.18

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 3.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 3.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
			Sum = 100.000	Sum= 15.601

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	0.50	0.210	(0.268)		0.189	0.021
2	0.17	0.60	0.252	(0.268)		0.227	0.025
3	0.25	0.60	0.252	(0.268)		0.227	0.025
4	0.33	0.60	0.252	(0.268)		0.227	0.025
5	0.42	0.60	0.252	(0.268)		0.227	0.025
6	0.50	0.70	0.294	(0.268)		0.265	0.029
7	0.58	0.70	0.294	(0.268)		0.265	0.029
8	0.67	0.70	0.294	(0.268)		0.265	0.029
9	0.75	0.70	0.294	(0.268)		0.265	0.029
10	0.83	0.70	0.294	(0.268)		0.265	0.029
11	0.92	0.70	0.294	(0.268)		0.265	0.029
12	1.00	0.80	0.336	0.268	(	0.302)	0.068

13	1.08	0.80	0.336	0.268	(0.302)	0.068
14	1.17	0.80	0.336	0.268	(0.302)	0.068
15	1.25	0.80	0.336	0.268	(0.302)	0.068
16	1.33	0.80	0.336	0.268	(0.302)	0.068
17	1.42	0.80	0.336	0.268	(0.302)	0.068
18	1.50	0.80	0.336	0.268	(0.302)	0.068
19	1.58	0.80	0.336	0.268	(0.302)	0.068
20	1.67	0.80	0.336	0.268	(0.302)	0.068
21	1.75	0.80	0.336	0.268	(0.302)	0.068
22	1.83	0.80	0.336	0.268	(0.302)	0.068
23	1.92	0.80	0.336	0.268	(0.302)	0.068
24	2.00	0.90	0.378	0.268	(0.340)	0.110
25	2.08	0.80	0.336	0.268	(0.302)	0.068
26	2.17	0.90	0.378	0.268	(0.340)	0.110
27	2.25	0.90	0.378	0.268	(0.340)	0.110
28	2.33	0.90	0.378	0.268	(0.340)	0.110
29	2.42	0.90	0.378	0.268	(0.340)	0.110
30	2.50	0.90	0.378	0.268	(0.340)	0.110
31	2.58	0.90	0.378	0.268	(0.340)	0.110
32	2.67	0.90	0.378	0.268	(0.340)	0.110
33	2.75	1.00	0.420	0.268	(0.378)	0.152
34	2.83	1.00	0.420	0.268	(0.378)	0.152
35	2.92	1.00	0.420	0.268	(0.378)	0.152
36	3.00	1.00	0.420	0.268	(0.378)	0.152
37	3.08	1.00	0.420	0.268	(0.378)	0.152
38	3.17	1.10	0.462	0.268	(0.416)	0.194
39	3.25	1.10	0.462	0.268	(0.416)	0.194
40	3.33	1.10	0.462	0.268	(0.416)	0.194
41	3.42	1.20	0.504	0.268	(0.454)	0.236
42	3.50	1.30	0.546	0.268	(0.491)	0.278
43	3.58	1.40	0.588	0.268	(0.529)	0.320
44	3.67	1.40	0.588	0.268	(0.529)	0.320
45	3.75	1.50	0.630	0.268	(0.567)	0.362
46	3.83	1.50	0.630	0.268	(0.567)	0.362
47	3.92	1.60	0.672	0.268	(0.605)	0.404
48	4.00	1.60	0.672	0.268	(0.605)	0.404
49	4.08	1.70	0.714	0.268	(0.643)	0.446
50	4.17	1.80	0.756	0.268	(0.680)	0.488
51	4.25	1.90	0.798	0.268	(0.718)	0.530
52	4.33	2.00	0.840	0.268	(0.756)	0.572
53	4.42	2.10	0.882	0.268	(0.794)	0.614
54	4.50	2.10	0.882	0.268	(0.794)	0.614
55	4.58	2.20	0.924	0.268	(0.832)	0.656
56	4.67	2.30	0.966	0.268	(0.869)	0.698
57	4.75	2.40	1.008	0.268	(0.907)	0.740
58	4.83	2.40	1.008	0.268	(0.907)	0.740
59	4.92	2.50	1.050	0.268	(0.945)	0.782
60	5.00	2.60	1.092	0.268	(0.983)	0.824
61	5.08	3.10	1.302	0.268	(1.172)	1.034
62	5.17	3.60	1.512	0.268	(1.361)	1.244
63	5.25	3.90	1.638	0.268	(1.474)	1.370
64	5.33	4.20	1.764	0.268	(1.588)	1.496
65	5.42	4.70	1.974	0.268	(1.777)	1.706
66	5.50	5.60	2.352	0.268	(2.117)	2.084
67	5.58	1.90	0.798	0.268	(0.718)	0.530
68	5.67	0.90	0.378	0.268	(0.340)	0.110
69	5.75	0.60	0.252	(0.268)	0.227	0.025
70	5.83	0.50	0.210	(0.268)	0.189	0.021
71	5.92	0.30	0.126	(0.268)	0.113	0.013
72	6.00	0.20	0.084	(0.268)	0.076	0.008

(Loss Rate Not Used)
Sum = 100.0 Sum = 23.5
Flood volume = Effective rainfall 1.95(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 2.5(Ac.Ft)
Total soil loss = 1.55(In)
Total soil loss = 1.993(Ac.Ft)
Total rainfall = 3.50(In)
Flood volume = 109838.1 Cubic Feet
Total soil loss = 86824.9 Cubic Feet

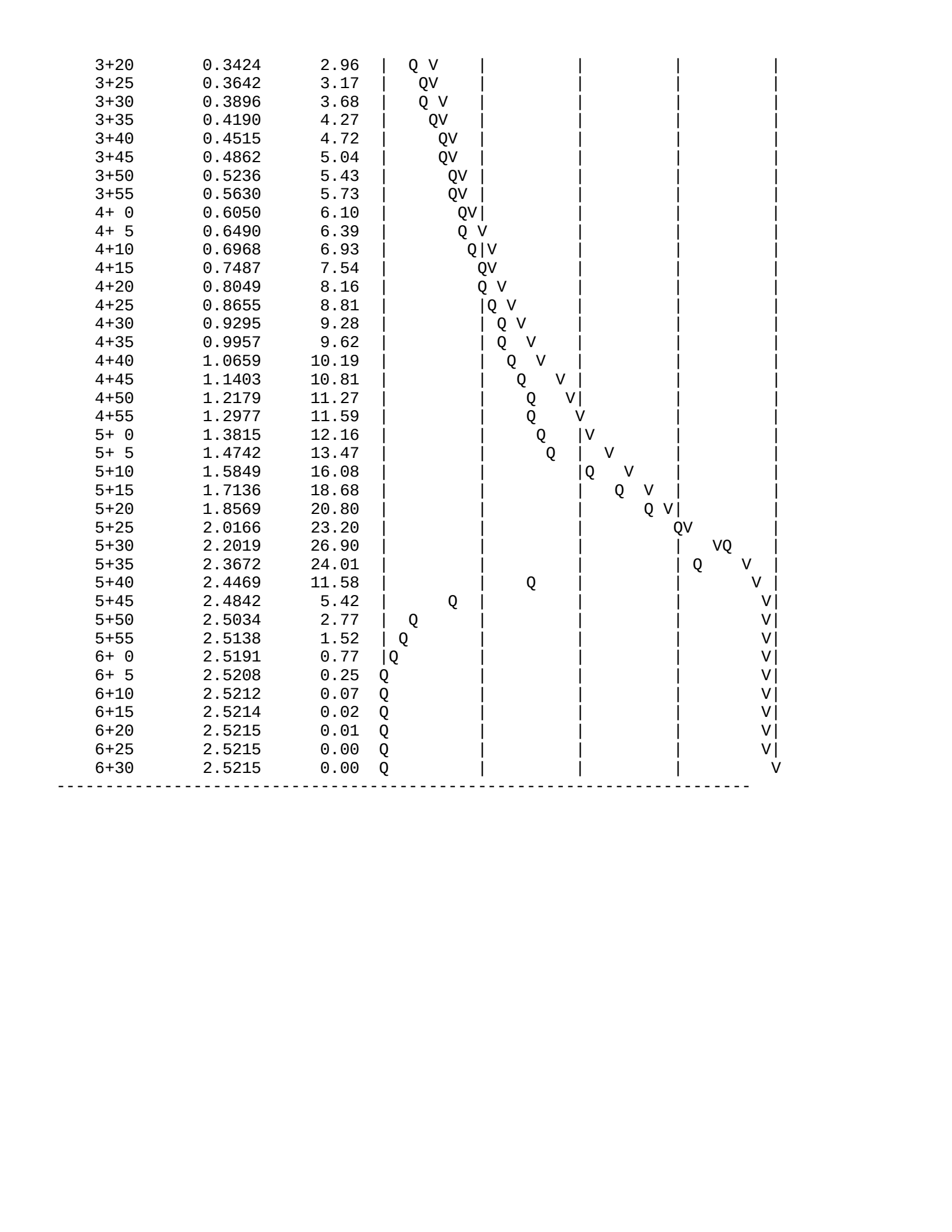
Peak flow rate of this hydrograph = 26.899(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0006	0.09	Q				
0+10	0.0024	0.26	Q				
0+15	0.0047	0.34	Q				
0+20	0.0073	0.37	Q				
0+25	0.0099	0.38	Q				
0+30	0.0127	0.41	Q				
0+35	0.0157	0.44	Q				
0+40	0.0188	0.45	Q				
0+45	0.0219	0.45	Q				
0+50	0.0251	0.46	Q				
0+55	0.0282	0.46	Q				
1+ 0	0.0325	0.62	Q				
1+ 5	0.0388	0.92	VQ				
1+10	0.0457	0.99	VQ				
1+15	0.0528	1.03	VQ				
1+20	0.0600	1.05	VQ				
1+25	0.0673	1.06	|Q				
1+30	0.0747	1.07	|Q				
1+35	0.0820	1.07	|Q				
1+40	0.0894	1.07	|Q				
1+45	0.0967	1.07	|Q				
1+50	0.1041	1.07	|Q				
1+55	0.1114	1.07	|Q				
2+ 0	0.1200	1.24	|Q				
2+ 5	0.1295	1.39	|QV				
2+10	0.1386	1.33	|QV				
2+15	0.1496	1.60	| Q				
2+20	0.1611	1.67	| Q				
2+25	0.1728	1.69	| Q				
2+30	0.1846	1.71	| Q				
2+35	0.1964	1.72	| QV				
2+40	0.2083	1.72	| QV				
2+45	0.2213	1.90	| QV				
2+50	0.2366	2.22	| QV				
2+55	0.2524	2.30	| QV				
3+ 0	0.2685	2.34	| QV				
3+ 5	0.2848	2.36	| QV				
3+10	0.3023	2.55	| QV				
3+15	0.3221	2.87	| Q V				


3+20 0.3424 2.96
3+25 0.3642 3.17
3+30 0.3896 3.68
3+35 0.4190 4.27
3+40 0.4515 4.72
3+45 0.4862 5.04
3+50 0.5236 5.43
3+55 0.5630 5.73
4+ 0 0.6050 6.10
4+ 5 0.6490 6.39
4+10 0.6968 6.93
4+15 0.7487 7.54
4+20 0.8049 8.16
4+25 0.8655 8.81
4+30 0.9295 9.28
4+35 0.9957 9.62
4+40 1.0659 10.19
4+45 1.1403 10.81
4+50 1.2179 11.27
4+55 1.2977 11.59
5+ 0 1.3815 12.16
5+ 5 1.4742 13.47
5+10 1.5849 16.08
5+15 1.7136 18.68
5+20 1.8569 20.80
5+25 2.0166 23.20
5+30 2.2019 26.90
5+35 2.3672 24.01
5+40 2.4469 11.58
5+45 2.4842 5.42
5+50 2.5034 2.77
5+55 2.5138 1.52
6+ 0 2.5191 0.77
6+ 5 2.5208 0.25
6+10 2.5212 0.07
6+15 2.5214 0.02
6+20 2.5215 0.01
6+25 2.5215 0.00
6+30 2.5215 0.00

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 08/15/22 File: THECOVE24100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
24-HR
AREA A

Drainage Area = 15.48(Ac.) = 0.024 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 15.48(Ac.) = 0.024 Sq. Mi.
Length along longest watercourse = 1051.00(Ft.)
Length along longest watercourse measured to centroid = 675.00(Ft.)
Length along longest watercourse = 0.199 Mi.
Length along longest watercourse measured to centroid = 0.128 Mi.
Difference in elevation = 35.30(Ft.)
Slope along watercourse = 177.3397 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.067 Hr.
Lag time = 4.00 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 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]
15.48	2.50	38.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
15.48	6.00	92.88

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
15.480	78.00	0.000

Total Area Entered = 15.48(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	124.916	26.606	4.151
2	0.167	249.831	48.536	7.572
3	0.250	374.747	12.895	2.012
4	0.333	499.662	5.804	0.905
5	0.417	624.578	3.228	0.504
6	0.500	749.494	1.792	0.280
7	0.583	874.409	1.140	0.178
		Sum = 100.000	Sum=	15.601

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	0.048	(0.474)	0.043	0.005
2	0.17	0.07	0.048	(0.473)	0.043	0.005
3	0.25	0.07	0.048	(0.471)	0.043	0.005
4	0.33	0.10	0.072	(0.469)	0.065	0.007
5	0.42	0.10	0.072	(0.467)	0.065	0.007
6	0.50	0.10	0.072	(0.465)	0.065	0.007
7	0.58	0.10	0.072	(0.463)	0.065	0.007
8	0.67	0.10	0.072	(0.462)	0.065	0.007
9	0.75	0.10	0.072	(0.460)	0.065	0.007
10	0.83	0.13	0.096	(0.458)	0.086	0.010
11	0.92	0.13	0.096	(0.456)	0.086	0.010
12	1.00	0.13	0.096	(0.454)	0.086	0.010

13	1.08	0.10	0.072	(0.453)	0.065	0.007
14	1.17	0.10	0.072	(0.451)	0.065	0.007
15	1.25	0.10	0.072	(0.449)	0.065	0.007
16	1.33	0.10	0.072	(0.447)	0.065	0.007
17	1.42	0.10	0.072	(0.445)	0.065	0.007
18	1.50	0.10	0.072	(0.444)	0.065	0.007
19	1.58	0.10	0.072	(0.442)	0.065	0.007
20	1.67	0.10	0.072	(0.440)	0.065	0.007
21	1.75	0.10	0.072	(0.438)	0.065	0.007
22	1.83	0.13	0.096	(0.437)	0.086	0.010
23	1.92	0.13	0.096	(0.435)	0.086	0.010
24	2.00	0.13	0.096	(0.433)	0.086	0.010
25	2.08	0.13	0.096	(0.431)	0.086	0.010
26	2.17	0.13	0.096	(0.430)	0.086	0.010
27	2.25	0.13	0.096	(0.428)	0.086	0.010
28	2.33	0.13	0.096	(0.426)	0.086	0.010
29	2.42	0.13	0.096	(0.424)	0.086	0.010
30	2.50	0.13	0.096	(0.423)	0.086	0.010
31	2.58	0.17	0.120	(0.421)	0.108	0.012
32	2.67	0.17	0.120	(0.419)	0.108	0.012
33	2.75	0.17	0.120	(0.417)	0.108	0.012
34	2.83	0.17	0.120	(0.416)	0.108	0.012
35	2.92	0.17	0.120	(0.414)	0.108	0.012
36	3.00	0.17	0.120	(0.412)	0.108	0.012
37	3.08	0.17	0.120	(0.411)	0.108	0.012
38	3.17	0.17	0.120	(0.409)	0.108	0.012
39	3.25	0.17	0.120	(0.407)	0.108	0.012
40	3.33	0.17	0.120	(0.405)	0.108	0.012
41	3.42	0.17	0.120	(0.404)	0.108	0.012
42	3.50	0.17	0.120	(0.402)	0.108	0.012
43	3.58	0.17	0.120	(0.400)	0.108	0.012
44	3.67	0.17	0.120	(0.399)	0.108	0.012
45	3.75	0.17	0.120	(0.397)	0.108	0.012
46	3.83	0.20	0.144	(0.395)	0.130	0.014
47	3.92	0.20	0.144	(0.394)	0.130	0.014
48	4.00	0.20	0.144	(0.392)	0.130	0.014
49	4.08	0.20	0.144	(0.390)	0.130	0.014
50	4.17	0.20	0.144	(0.389)	0.130	0.014
51	4.25	0.20	0.144	(0.387)	0.130	0.014
52	4.33	0.23	0.168	(0.385)	0.151	0.017
53	4.42	0.23	0.168	(0.384)	0.151	0.017
54	4.50	0.23	0.168	(0.382)	0.151	0.017
55	4.58	0.23	0.168	(0.381)	0.151	0.017
56	4.67	0.23	0.168	(0.379)	0.151	0.017
57	4.75	0.23	0.168	(0.377)	0.151	0.017
58	4.83	0.27	0.192	(0.376)	0.173	0.019
59	4.92	0.27	0.192	(0.374)	0.173	0.019
60	5.00	0.27	0.192	(0.372)	0.173	0.019
61	5.08	0.20	0.144	(0.371)	0.130	0.014
62	5.17	0.20	0.144	(0.369)	0.130	0.014
63	5.25	0.20	0.144	(0.368)	0.130	0.014
64	5.33	0.23	0.168	(0.366)	0.151	0.017
65	5.42	0.23	0.168	(0.364)	0.151	0.017
66	5.50	0.23	0.168	(0.363)	0.151	0.017
67	5.58	0.27	0.192	(0.361)	0.173	0.019
68	5.67	0.27	0.192	(0.360)	0.173	0.019
69	5.75	0.27	0.192	(0.358)	0.173	0.019
70	5.83	0.27	0.192	(0.356)	0.173	0.019
71	5.92	0.27	0.192	(0.355)	0.173	0.019
72	6.00	0.27	0.192	(0.353)	0.173	0.019

73	6.08	0.30	0.216	(0.352)	0.194	0.022
74	6.17	0.30	0.216	(0.350)	0.194	0.022
75	6.25	0.30	0.216	(0.349)	0.194	0.022
76	6.33	0.30	0.216	(0.347)	0.194	0.022
77	6.42	0.30	0.216	(0.345)	0.194	0.022
78	6.50	0.30	0.216	(0.344)	0.194	0.022
79	6.58	0.33	0.240	(0.342)	0.216	0.024
80	6.67	0.33	0.240	(0.341)	0.216	0.024
81	6.75	0.33	0.240	(0.339)	0.216	0.024
82	6.83	0.33	0.240	(0.338)	0.216	0.024
83	6.92	0.33	0.240	(0.336)	0.216	0.024
84	7.00	0.33	0.240	(0.335)	0.216	0.024
85	7.08	0.33	0.240	(0.333)	0.216	0.024
86	7.17	0.33	0.240	(0.332)	0.216	0.024
87	7.25	0.33	0.240	(0.330)	0.216	0.024
88	7.33	0.37	0.264	(0.329)	0.238	0.026
89	7.42	0.37	0.264	(0.327)	0.238	0.026
90	7.50	0.37	0.264	(0.326)	0.238	0.026
91	7.58	0.40	0.288	(0.324)	0.259	0.029
92	7.67	0.40	0.288	(0.323)	0.259	0.029
93	7.75	0.40	0.288	(0.321)	0.259	0.029
94	7.83	0.43	0.312	(0.320)	0.281	0.031
95	7.92	0.43	0.312	(0.318)	0.281	0.031
96	8.00	0.43	0.312	(0.317)	0.281	0.031
97	8.08	0.50	0.360	0.315	(0.324)	0.045
98	8.17	0.50	0.360	0.314	(0.324)	0.046
99	8.25	0.50	0.360	0.312	(0.324)	0.048
100	8.33	0.50	0.360	0.311	(0.324)	0.049
101	8.42	0.50	0.360	0.309	(0.324)	0.051
102	8.50	0.50	0.360	0.308	(0.324)	0.052
103	8.58	0.53	0.384	0.306	(0.346)	0.077
104	8.67	0.53	0.384	0.305	(0.346)	0.079
105	8.75	0.53	0.384	0.304	(0.346)	0.080
106	8.83	0.57	0.408	0.302	(0.367)	0.106
107	8.92	0.57	0.408	0.301	(0.367)	0.107
108	9.00	0.57	0.408	0.299	(0.367)	0.109
109	9.08	0.63	0.456	0.298	(0.410)	0.158
110	9.17	0.63	0.456	0.296	(0.410)	0.159
111	9.25	0.63	0.456	0.295	(0.410)	0.161
112	9.33	0.67	0.480	0.294	(0.432)	0.186
113	9.42	0.67	0.480	0.292	(0.432)	0.188
114	9.50	0.67	0.480	0.291	(0.432)	0.189
115	9.58	0.70	0.504	0.289	(0.454)	0.215
116	9.67	0.70	0.504	0.288	(0.454)	0.216
117	9.75	0.70	0.504	0.287	(0.454)	0.217
118	9.83	0.73	0.528	0.285	(0.475)	0.243
119	9.92	0.73	0.528	0.284	(0.475)	0.244
120	10.00	0.73	0.528	0.283	(0.475)	0.245
121	10.08	0.50	0.360	0.281	(0.324)	0.079
122	10.17	0.50	0.360	0.280	(0.324)	0.080
123	10.25	0.50	0.360	0.278	(0.324)	0.081
124	10.33	0.50	0.360	0.277	(0.324)	0.083
125	10.42	0.50	0.360	0.276	(0.324)	0.084
126	10.50	0.50	0.360	0.274	(0.324)	0.086
127	10.58	0.67	0.480	0.273	(0.432)	0.207
128	10.67	0.67	0.480	0.272	(0.432)	0.208
129	10.75	0.67	0.480	0.270	(0.432)	0.210
130	10.83	0.67	0.480	0.269	(0.432)	0.211
131	10.92	0.67	0.480	0.268	(0.432)	0.212
132	11.00	0.67	0.480	0.266	(0.432)	0.213

133	11.08	0.63	0.456	0.265	(0.410)	0.191
134	11.17	0.63	0.456	0.264	(0.410)	0.192
135	11.25	0.63	0.456	0.263	(0.410)	0.193
136	11.33	0.63	0.456	0.261	(0.410)	0.195
137	11.42	0.63	0.456	0.260	(0.410)	0.196
138	11.50	0.63	0.456	0.259	(0.410)	0.197
139	11.58	0.57	0.408	0.257	(0.367)	0.151
140	11.67	0.57	0.408	0.256	(0.367)	0.152
141	11.75	0.57	0.408	0.255	(0.367)	0.153
142	11.83	0.60	0.432	0.254	(0.389)	0.178
143	11.92	0.60	0.432	0.252	(0.389)	0.180
144	12.00	0.60	0.432	0.251	(0.389)	0.181
145	12.08	0.83	0.600	0.250	(0.540)	0.350
146	12.17	0.83	0.600	0.249	(0.540)	0.351
147	12.25	0.83	0.600	0.247	(0.540)	0.353
148	12.33	0.87	0.624	0.246	(0.562)	0.378
149	12.42	0.87	0.624	0.245	(0.562)	0.379
150	12.50	0.87	0.624	0.244	(0.562)	0.380
151	12.58	0.93	0.672	0.242	(0.605)	0.430
152	12.67	0.93	0.672	0.241	(0.605)	0.431
153	12.75	0.93	0.672	0.240	(0.605)	0.432
154	12.83	0.97	0.696	0.239	(0.626)	0.457
155	12.92	0.97	0.696	0.238	(0.626)	0.458
156	13.00	0.97	0.696	0.236	(0.626)	0.460
157	13.08	1.13	0.816	0.235	(0.734)	0.581
158	13.17	1.13	0.816	0.234	(0.734)	0.582
159	13.25	1.13	0.816	0.233	(0.734)	0.583
160	13.33	1.13	0.816	0.232	(0.734)	0.584
161	13.42	1.13	0.816	0.230	(0.734)	0.586
162	13.50	1.13	0.816	0.229	(0.734)	0.587
163	13.58	0.77	0.552	0.228	(0.497)	0.324
164	13.67	0.77	0.552	0.227	(0.497)	0.325
165	13.75	0.77	0.552	0.226	(0.497)	0.326
166	13.83	0.77	0.552	0.225	(0.497)	0.327
167	13.92	0.77	0.552	0.223	(0.497)	0.329
168	14.00	0.77	0.552	0.222	(0.497)	0.330
169	14.08	0.90	0.648	0.221	(0.583)	0.427
170	14.17	0.90	0.648	0.220	(0.583)	0.428
171	14.25	0.90	0.648	0.219	(0.583)	0.429
172	14.33	0.87	0.624	0.218	(0.562)	0.406
173	14.42	0.87	0.624	0.217	(0.562)	0.407
174	14.50	0.87	0.624	0.216	(0.562)	0.408
175	14.58	0.87	0.624	0.214	(0.562)	0.410
176	14.67	0.87	0.624	0.213	(0.562)	0.411
177	14.75	0.87	0.624	0.212	(0.562)	0.412
178	14.83	0.83	0.600	0.211	(0.540)	0.389
179	14.92	0.83	0.600	0.210	(0.540)	0.390
180	15.00	0.83	0.600	0.209	(0.540)	0.391
181	15.08	0.80	0.576	0.208	(0.518)	0.368
182	15.17	0.80	0.576	0.207	(0.518)	0.369
183	15.25	0.80	0.576	0.206	(0.518)	0.370
184	15.33	0.77	0.552	0.205	(0.497)	0.347
185	15.42	0.77	0.552	0.204	(0.497)	0.348
186	15.50	0.77	0.552	0.203	(0.497)	0.349
187	15.58	0.63	0.456	0.202	(0.410)	0.254
188	15.67	0.63	0.456	0.201	(0.410)	0.255
189	15.75	0.63	0.456	0.200	(0.410)	0.256
190	15.83	0.63	0.456	0.199	(0.410)	0.257
191	15.92	0.63	0.456	0.198	(0.410)	0.258
192	16.00	0.63	0.456	0.197	(0.410)	0.259

193	16.08	0.13	0.096	(0.196)	0.086	0.010
194	16.17	0.13	0.096	(0.195)	0.086	0.010
195	16.25	0.13	0.096	(0.194)	0.086	0.010
196	16.33	0.13	0.096	(0.193)	0.086	0.010
197	16.42	0.13	0.096	(0.192)	0.086	0.010
198	16.50	0.13	0.096	(0.191)	0.086	0.010
199	16.58	0.10	0.072	(0.190)	0.065	0.007
200	16.67	0.10	0.072	(0.189)	0.065	0.007
201	16.75	0.10	0.072	(0.188)	0.065	0.007
202	16.83	0.10	0.072	(0.187)	0.065	0.007
203	16.92	0.10	0.072	(0.186)	0.065	0.007
204	17.00	0.10	0.072	(0.185)	0.065	0.007
205	17.08	0.17	0.120	(0.184)	0.108	0.012
206	17.17	0.17	0.120	(0.183)	0.108	0.012
207	17.25	0.17	0.120	(0.182)	0.108	0.012
208	17.33	0.17	0.120	(0.181)	0.108	0.012
209	17.42	0.17	0.120	(0.180)	0.108	0.012
210	17.50	0.17	0.120	(0.179)	0.108	0.012
211	17.58	0.17	0.120	(0.178)	0.108	0.012
212	17.67	0.17	0.120	(0.178)	0.108	0.012
213	17.75	0.17	0.120	(0.177)	0.108	0.012
214	17.83	0.13	0.096	(0.176)	0.086	0.010
215	17.92	0.13	0.096	(0.175)	0.086	0.010
216	18.00	0.13	0.096	(0.174)	0.086	0.010
217	18.08	0.13	0.096	(0.173)	0.086	0.010
218	18.17	0.13	0.096	(0.172)	0.086	0.010
219	18.25	0.13	0.096	(0.172)	0.086	0.010
220	18.33	0.13	0.096	(0.171)	0.086	0.010
221	18.42	0.13	0.096	(0.170)	0.086	0.010
222	18.50	0.13	0.096	(0.169)	0.086	0.010
223	18.58	0.10	0.072	(0.168)	0.065	0.007
224	18.67	0.10	0.072	(0.167)	0.065	0.007
225	18.75	0.10	0.072	(0.167)	0.065	0.007
226	18.83	0.07	0.048	(0.166)	0.043	0.005
227	18.92	0.07	0.048	(0.165)	0.043	0.005
228	19.00	0.07	0.048	(0.164)	0.043	0.005
229	19.08	0.10	0.072	(0.163)	0.065	0.007
230	19.17	0.10	0.072	(0.163)	0.065	0.007
231	19.25	0.10	0.072	(0.162)	0.065	0.007
232	19.33	0.13	0.096	(0.161)	0.086	0.010
233	19.42	0.13	0.096	(0.160)	0.086	0.010
234	19.50	0.13	0.096	(0.160)	0.086	0.010
235	19.58	0.10	0.072	(0.159)	0.065	0.007
236	19.67	0.10	0.072	(0.158)	0.065	0.007
237	19.75	0.10	0.072	(0.157)	0.065	0.007
238	19.83	0.07	0.048	(0.157)	0.043	0.005
239	19.92	0.07	0.048	(0.156)	0.043	0.005
240	20.00	0.07	0.048	(0.155)	0.043	0.005
241	20.08	0.10	0.072	(0.155)	0.065	0.007
242	20.17	0.10	0.072	(0.154)	0.065	0.007
243	20.25	0.10	0.072	(0.153)	0.065	0.007
244	20.33	0.10	0.072	(0.153)	0.065	0.007
245	20.42	0.10	0.072	(0.152)	0.065	0.007
246	20.50	0.10	0.072	(0.151)	0.065	0.007
247	20.58	0.10	0.072	(0.151)	0.065	0.007
248	20.67	0.10	0.072	(0.150)	0.065	0.007
249	20.75	0.10	0.072	(0.150)	0.065	0.007
250	20.83	0.07	0.048	(0.149)	0.043	0.005
251	20.92	0.07	0.048	(0.148)	0.043	0.005
252	21.00	0.07	0.048	(0.148)	0.043	0.005

253	21.08	0.10	0.072	(0.147)	0.065	0.007
254	21.17	0.10	0.072	(0.147)	0.065	0.007
255	21.25	0.10	0.072	(0.146)	0.065	0.007
256	21.33	0.07	0.048	(0.145)	0.043	0.005
257	21.42	0.07	0.048	(0.145)	0.043	0.005
258	21.50	0.07	0.048	(0.144)	0.043	0.005
259	21.58	0.10	0.072	(0.144)	0.065	0.007
260	21.67	0.10	0.072	(0.143)	0.065	0.007
261	21.75	0.10	0.072	(0.143)	0.065	0.007
262	21.83	0.07	0.048	(0.142)	0.043	0.005
263	21.92	0.07	0.048	(0.142)	0.043	0.005
264	22.00	0.07	0.048	(0.141)	0.043	0.005
265	22.08	0.10	0.072	(0.141)	0.065	0.007
266	22.17	0.10	0.072	(0.140)	0.065	0.007
267	22.25	0.10	0.072	(0.140)	0.065	0.007
268	22.33	0.07	0.048	(0.139)	0.043	0.005
269	22.42	0.07	0.048	(0.139)	0.043	0.005
270	22.50	0.07	0.048	(0.139)	0.043	0.005
271	22.58	0.07	0.048	(0.138)	0.043	0.005
272	22.67	0.07	0.048	(0.138)	0.043	0.005
273	22.75	0.07	0.048	(0.137)	0.043	0.005
274	22.83	0.07	0.048	(0.137)	0.043	0.005
275	22.92	0.07	0.048	(0.137)	0.043	0.005
276	23.00	0.07	0.048	(0.136)	0.043	0.005
277	23.08	0.07	0.048	(0.136)	0.043	0.005
278	23.17	0.07	0.048	(0.136)	0.043	0.005
279	23.25	0.07	0.048	(0.136)	0.043	0.005
280	23.33	0.07	0.048	(0.135)	0.043	0.005
281	23.42	0.07	0.048	(0.135)	0.043	0.005
282	23.50	0.07	0.048	(0.135)	0.043	0.005
283	23.58	0.07	0.048	(0.135)	0.043	0.005
284	23.67	0.07	0.048	(0.134)	0.043	0.005
285	23.75	0.07	0.048	(0.134)	0.043	0.005
286	23.83	0.07	0.048	(0.134)	0.043	0.005
287	23.92	0.07	0.048	(0.134)	0.043	0.005
288	24.00	0.07	0.048	(0.134)	0.043	0.005

(Loss Rate Not Used)

Sum = 100.0 Sum = 28.3

Flood volume = Effective rainfall 2.36(In)
times area 15.5(Ac.)/[(In)/(Ft.)] = 3.0(Ac.Ft)
Total soil loss = 3.64(In)
Total soil loss = 4.700(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 132405.1 Cubic Feet
Total soil loss = 204739.1 Cubic Feet

Peak flow rate of this hydrograph = 9.115(CFS)

++

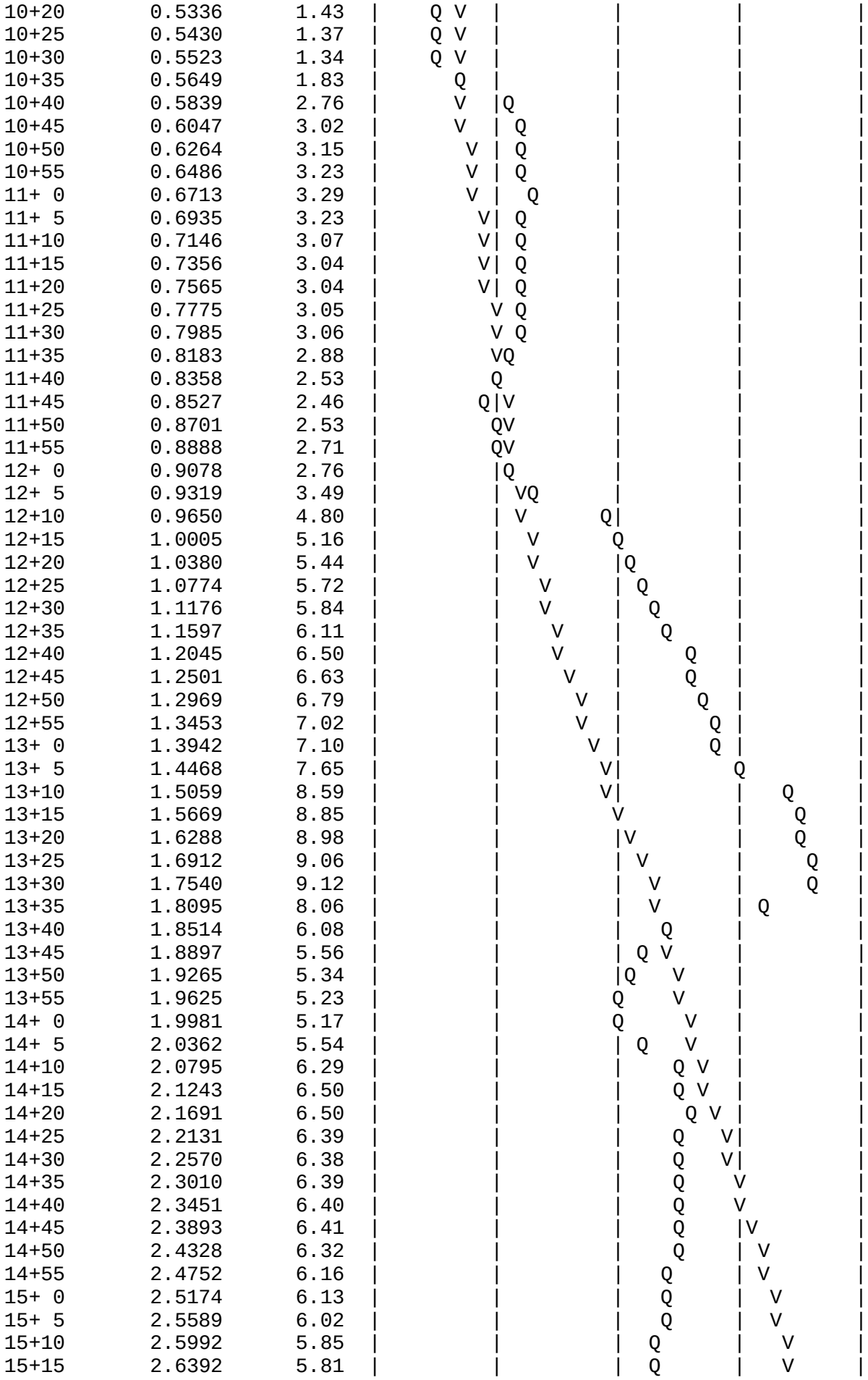
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

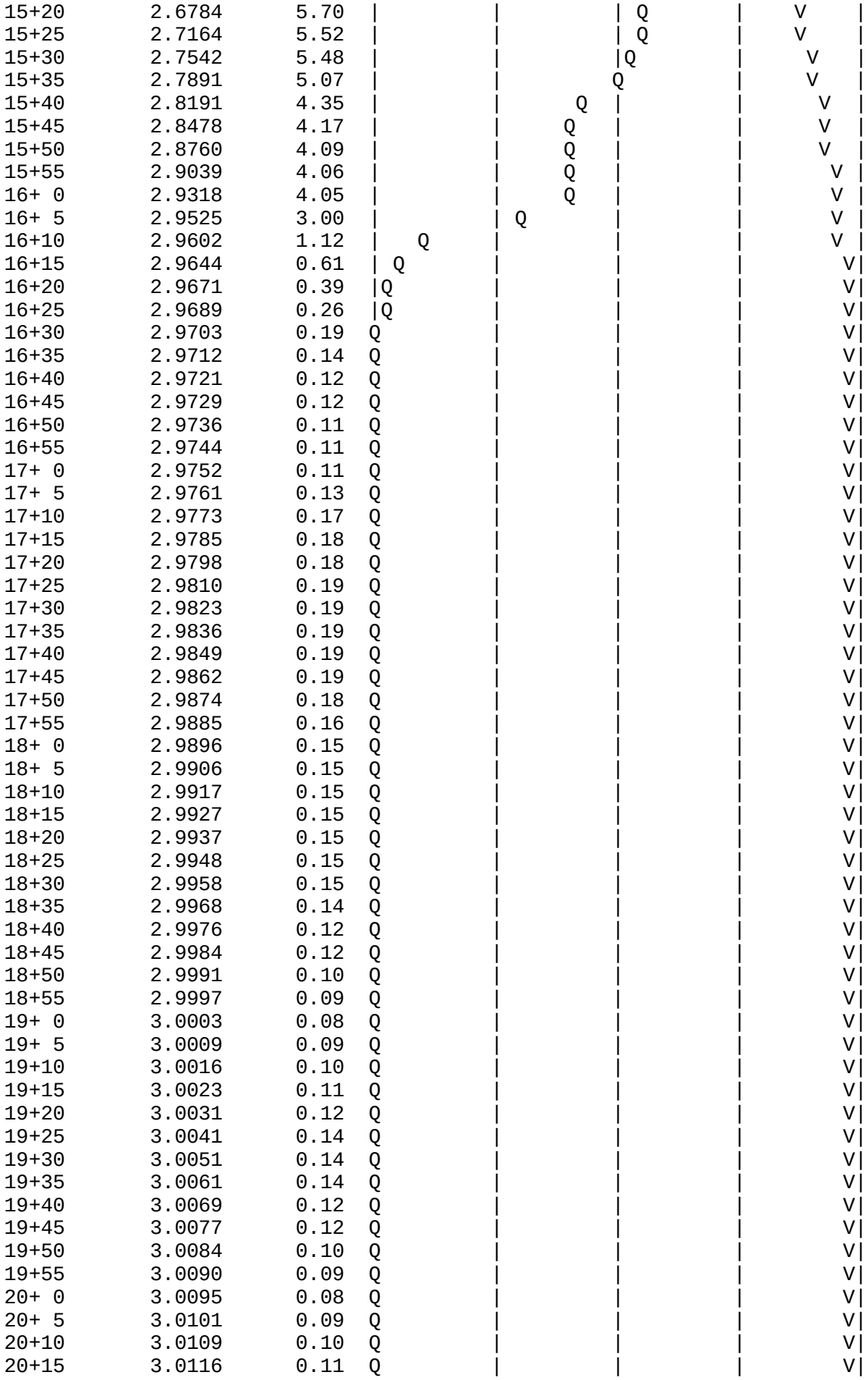
Hydrograph in 5 Minute intervals ((CFS))

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	0.0015	0.08	Q	|	|	|	|
0+25	0.0022	0.10	Q	|	|	|	|
0+30	0.0030	0.11	Q	|	|	|	|
0+35	0.0037	0.11	Q	|	|	|	|
0+40	0.0045	0.11	Q	|	|	|	|
0+45	0.0053	0.11	Q	|	|	|	|
0+50	0.0061	0.12	Q	|	|	|	|
0+55	0.0071	0.14	Q	|	|	|	|
1+ 0	0.0081	0.15	Q	|	|	|	|
1+ 5	0.0090	0.14	Q	|	|	|	|
1+10	0.0098	0.12	Q	|	|	|	|
1+15	0.0107	0.12	Q	|	|	|	|
1+20	0.0114	0.11	Q	|	|	|	|
1+25	0.0122	0.11	Q	|	|	|	|
1+30	0.0130	0.11	Q	|	|	|	|
1+35	0.0138	0.11	Q	|	|	|	|
1+40	0.0145	0.11	Q	|	|	|	|
1+45	0.0153	0.11	Q	|	|	|	|
1+50	0.0162	0.12	Q	|	|	|	|
1+55	0.0171	0.14	Q	|	|	|	|
2+ 0	0.0181	0.15	Q	|	|	|	|
2+ 5	0.0191	0.15	Q	|	|	|	|
2+10	0.0202	0.15	Q	|	|	|	|
2+15	0.0212	0.15	Q	|	|	|	|
2+20	0.0222	0.15	Q	|	|	|	|
2+25	0.0233	0.15	Q	|	|	|	|
2+30	0.0243	0.15	Q	|	|	|	|
2+35	0.0254	0.16	Q	|	|	|	|
2+40	0.0266	0.18	Q	|	|	|	|
2+45	0.0279	0.18	Q	|	|	|	|
2+50	0.0292	0.18	Q	|	|	|	|
2+55	0.0304	0.19	Q	|	|	|	|
3+ 0	0.0317	0.19	Q	|	|	|	|
3+ 5	0.0330	0.19	Q	|	|	|	|
3+10	0.0343	0.19	Q	|	|	|	|
3+15	0.0356	0.19	Q	|	|	|	|
3+20	0.0369	0.19	Q	|	|	|	|
3+25	0.0382	0.19	Q	|	|	|	|
3+30	0.0395	0.19	Q	|	|	|	|
3+35	0.0408	0.19	Q	|	|	|	|
3+40	0.0420	0.19	Q	|	|	|	|
3+45	0.0433	0.19	Q	|	|	|	|
3+50	0.0447	0.20	Q	|	|	|	|
3+55	0.0462	0.22	Q	|	|	|	|
4+ 0	0.0477	0.22	Q	|	|	|	|
4+ 5	0.0492	0.22	Q	|	|	|	|
4+10	0.0508	0.22	Q	|	|	|	|
4+15	0.0523	0.22	Q	|	|	|	|
4+20	0.0539	0.23	Q	|	|	|	|
4+25	0.0557	0.25	VQ	|	|	|	|
4+30	0.0574	0.26	VQ	|	|	|	|
4+35	0.0592	0.26	VQ	|	|	|	|
4+40	0.0610	0.26	VQ	|	|	|	|
4+45	0.0628	0.26	VQ	|	|	|	|
4+50	0.0647	0.27	VQ	|	|	|	|
4+55	0.0667	0.29	VQ	|	|	|	|
5+ 0	0.0687	0.30	VQ	|	|	|	|
5+ 5	0.0707	0.28	VQ	|	|	|	|
5+10	0.0723	0.24	Q	|	|	|	|
5+15	0.0739	0.23	Q	|	|	|	|

```
 5+20       0.0756      0.24  Q         |         |         |         |
 5+25       0.0773      0.26  |Q        |         |         |         |
 5+30       0.0791      0.26  |Q        |         |         |         |
 5+35       0.0810      0.27  |Q        |         |         |         |
 5+40       0.0830      0.29  |Q        |         |         |         |
 5+45       0.0850      0.29  |Q        |         |         |         |
 5+50       0.0870      0.30  |Q        |         |         |         |
 5+55       0.0891      0.30  |Q        |         |         |         |
 6+ 0       0.0912      0.30  |Q        |         |         |         |
 6+ 5       0.0933      0.31  |Q        |         |         |         |
 6+10       0.0956      0.33  |Q        |         |         |         |
 6+15       0.0978      0.33  |Q        |         |         |         |
 6+20       0.1002      0.33  |Q        |         |         |         |
 6+25       0.1025      0.34  |Q        |         |         |         |
 6+30       0.1048      0.34  |Q        |         |         |         |
 6+35       0.1072      0.35  |Q        |         |         |         |
 6+40       0.1097      0.37  |Q        |         |         |         |
 6+45       0.1122      0.37  |Q        |         |         |         |
 6+50       0.1148      0.37  |Q        |         |         |         |
 6+55       0.1174      0.37  |Q        |         |         |         |
 7+ 0       0.1200      0.37  |Q        |         |         |         |
 7+ 5       0.1225      0.37  |Q        |         |         |         |
 7+10       0.1251      0.37  |Q        |         |         |         |
 7+15       0.1277      0.37  |Q        |         |         |         |
 7+20       0.1303      0.38  |Q        |         |         |         |
 7+25       0.1331      0.40  |Q        |         |         |         |
 7+30       0.1359      0.41  |Q        |         |         |         |
 7+35       0.1388      0.42  |Q        |         |         |         |
 7+40       0.1418      0.44  |Q        |         |         |         |
 7+45       0.1449      0.44  |Q        |         |         |         |
 7+50       0.1480      0.46  |Q        |         |         |         |
 7+55       0.1513      0.48  |Q        |         |         |         |
 8+ 0       0.1547      0.48  |QV       |         |         |         |
 8+ 5       0.1584      0.54  | Q       |         |         |         |
 8+10       0.1629      0.65  | Q       |         |         |         |
 8+15       0.1677      0.70  | Q       |         |         |         |
 8+20       0.1727      0.73  | Q       |         |         |         |
 8+25       0.1779      0.76  | VQ      |         |         |         |
 8+30       0.1833      0.78  | VQ      |         |         |         |
 8+35       0.1895      0.91  | VQ      |         |         |         |
 8+40       0.1972      1.11  | V Q     |         |         |         |
 8+45       0.2053      1.18  | V Q     |         |         |         |
 8+50       0.2145      1.33  | V  Q    |         |         |         |
 8+55       0.2251      1.54  | V   Q   |         |         |         |
 9+ 0       0.2363      1.62  |  V  Q   |         |         |         |
 9+ 5       0.2491      1.87  |  V   Q  |         |         |         |
 9+10       0.2647      2.27  |  V     Q|         |         |         |
 9+15       0.2812      2.39  |  V     Q|         |         |         |
 9+20       0.2988      2.56  |  V      Q         |         |         |
 9+25       0.3180      2.79  |   V     |Q        |         |         |
 9+30       0.3378      2.87  |   V     |Q        |         |         |
 9+35       0.3586      3.02  |   V     | Q       |         |         |
 9+40       0.3809      3.24  |    V    | Q       |         |         |
 9+45       0.4038      3.32  |    V    |  Q      |         |         |
 9+50       0.4276      3.46  |    V    |  Q      |         |         |
 9+55       0.4530      3.68  |    V    |   Q     |         |         |
10+ 0       0.4788      3.76  |     V   |    Q    |         |         |
10+ 5       0.5002      3.11  |     V   | Q       |         |         |
10+10       0.5131      1.87  |     VQ  |         |         |         |
10+15       0.5238      1.56  |     Q   |         |         |         |
```





20+20	3.0124	0.11	Q	|	|	|	V|
20+25	3.0131	0.11	Q	|	|	|	V|
20+30	3.0139	0.11	Q	|	|	|	V|
20+35	3.0147	0.11	Q	|	|	|	V|
20+40	3.0155	0.11	Q	|	|	|	V|
20+45	3.0162	0.11	Q	|	|	|	V|
20+50	3.0169	0.10	Q	|	|	|	V|
20+55	3.0175	0.08	Q	|	|	|	V|
21+ 0	3.0181	0.08	Q	|	|	|	V|
21+ 5	3.0187	0.09	Q	|	|	|	V|
21+10	3.0194	0.10	Q	|	|	|	V|
21+15	3.0201	0.11	Q	|	|	|	V|
21+20	3.0208	0.10	Q	|	|	|	V|
21+25	3.0214	0.08	Q	|	|	|	V|
21+30	3.0219	0.08	Q	|	|	|	V|
21+35	3.0225	0.09	Q	|	|	|	V|
21+40	3.0232	0.10	Q	|	|	|	V|
21+45	3.0240	0.11	Q	|	|	|	V|
21+50	3.0247	0.10	Q	|	|	|	V|
21+55	3.0253	0.08	Q	|	|	|	V|
22+ 0	3.0258	0.08	Q	|	|	|	V|
22+ 5	3.0264	0.09	Q	|	|	|	V|
22+10	3.0271	0.10	Q	|	|	|	V|
22+15	3.0279	0.11	Q	|	|	|	V|
22+20	3.0286	0.10	Q	|	|	|	V|
22+25	3.0291	0.08	Q	|	|	|	V|
22+30	3.0297	0.08	Q	|	|	|	V|
22+35	3.0302	0.08	Q	|	|	|	V|
22+40	3.0307	0.08	Q	|	|	|	V|
22+45	3.0312	0.08	Q	|	|	|	V|
22+50	3.0318	0.07	Q	|	|	|	V|
22+55	3.0323	0.07	Q	|	|	|	V|
23+ 0	3.0328	0.07	Q	|	|	|	V|
23+ 5	3.0333	0.07	Q	|	|	|	V|
23+10	3.0338	0.07	Q	|	|	|	V|
23+15	3.0343	0.07	Q	|	|	|	V|
23+20	3.0349	0.07	Q	|	|	|	V|
23+25	3.0354	0.07	Q	|	|	|	V|
23+30	3.0359	0.07	Q	|	|	|	V|
23+35	3.0364	0.07	Q	|	|	|	V|
23+40	3.0369	0.07	Q	|	|	|	V|
23+45	3.0374	0.07	Q	|	|	|	V|
23+50	3.0380	0.07	Q	|	|	|	V|
23+55	3.0385	0.07	Q	|	|	|	V|
24+ 0	3.0390	0.07	Q	|	|	|	V|
24+ 5	3.0394	0.05	Q	|	|	|	V|
24+10	3.0395	0.02	Q	|	|	|	V|
24+15	3.0396	0.01	Q	|	|	|	V|
24+20	3.0396	0.00	Q	|	|	|	V|
24+25	3.0396	0.00	Q	|	|	|	V|
24+30	3.0396	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 09/12/22 File: DAC21100.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
100-YR
1-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	0.59	4.40

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.45	10.82

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 1.450(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.450(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	32.630	2.453
2	0.167	47.172	3.547
3	0.250	11.314	0.851
4	0.333	4.951	0.372
5	0.417	2.534	0.190
6	0.500	1.399	0.105
	Sum =	100.000 Sum=	7.518

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	4.40	0.766	0.268	(0.689)	0.498
2	0.17	4.50	0.783	0.268	(0.705)	0.515
3	0.25	5.40	0.940	0.268	(0.846)	0.672
4	0.33	5.40	0.940	0.268	(0.846)	0.672
5	0.42	5.70	0.992	0.268	(0.893)	0.724
6	0.50	6.40	1.114	0.268	(1.002)	0.846
7	0.58	7.90	1.375	0.268	(1.237)	1.107
8	0.67	9.10	1.583	0.268	(1.425)	1.316
9	0.75	12.80	2.227	0.268	(2.004)	1.959
10	0.83	25.60	4.454	0.268	(4.009)	4.186
11	0.92	7.90	1.375	0.268	(1.237)	1.107

```
 12   1.00     4.90      0.853          0.268    (  0.767)        0.585
           (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    14.2
     Flood volume = Effective rainfall      1.18(In)
      times area       7.5(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
     Total soil loss =      0.27(In)
     Total soil loss =     0.166(Ac.Ft)
     Total rainfall =      1.45(In)
     Flood volume =       32016.5 Cubic Feet
     Total soil loss =        7246.6 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =     20.030(CFS)
     ---------------------------------------------------------------------
     +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                         1 - H O U R    S T O R M
                    R u n o f f      H y d r o g r a p h
     ---------------------------------------------------------------------
                 Hydrograph in   5   Minute intervals ((CFS))

     ---------------------------------------------------------------------
  Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
  ------------------------------------------------------------------------
    0+ 5       0.0084      1.22  VQ        |         |         |         |
    0+10       0.0293      3.03  |V  Q     |         |         |         |
    0+15       0.0562      3.90  |  V Q    |         |         |         |
    0+20       0.0882      4.66  |   V Q   |         |         |         |
    0+25       0.1228      5.02  |     Q   |         |         |         |
    0+30       0.1615      5.62  |      QV |         |         |         |
    0+35       0.2081      6.77  |        Q|V        |         |         |
    0+40       0.2656      8.35  |         |Q  V     |         |         |
    0+45       0.3410     10.94  |         |   Q   V |         |         |
    0+50       0.4718     19.00  |         |         |    Q    |         |
    0+55       0.6098     20.03  |         |         |     Q   |  V      |
    1+ 0       0.6788     10.02  |         |  Q      |         |     V   |
    1+ 5       0.7138      5.09  |     Q   |         |         |       V |
    1+10       0.7270      1.91  | Q       |         |         |        V|
    1+15       0.7330      0.87  |Q        |         |         |        V|
    1+20       0.7346      0.23  Q         |         |         |        V|
    1+25       0.7350      0.06  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 09/12/22 File: DAC23100.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
100-YR
3-HR

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Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.00	7.46

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	2.50	18.65

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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

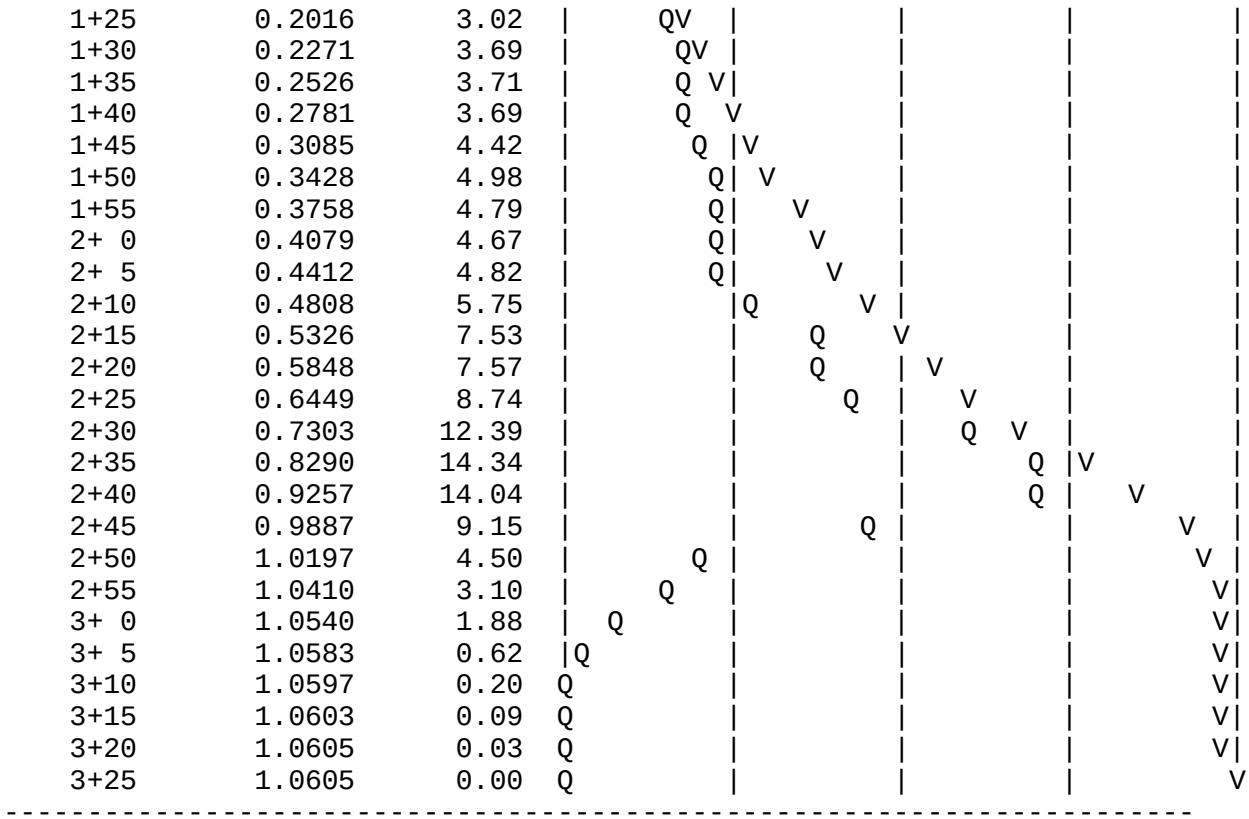
Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	1.30	0.390	0.268	(0.351)	0.122
2	0.17	1.30	0.390	0.268	(0.351)	0.122
3	0.25	1.10	0.330	0.268	(0.297)	0.062
4	0.33	1.50	0.450	0.268	(0.405)	0.182
5	0.42	1.50	0.450	0.268	(0.405)	0.182
6	0.50	1.80	0.540	0.268	(0.486)	0.272
7	0.58	1.50	0.450	0.268	(0.405)	0.182
8	0.67	1.80	0.540	0.268	(0.486)	0.272
9	0.75	1.80	0.540	0.268	(0.486)	0.272
10	0.83	1.50	0.450	0.268	(0.405)	0.182
11	0.92	1.60	0.480	0.268	(0.432)	0.212
12	1.00	1.80	0.540	0.268	(0.486)	0.272
13	1.08	2.20	0.660	0.268	(0.594)	0.392

```
14   1.17     2.20      0.660          0.268    (  0.594)        0.392
15   1.25     2.20      0.660          0.268    (  0.594)        0.392
16   1.33     2.00      0.600          0.268    (  0.540)        0.332
17   1.42     2.60      0.780          0.268    (  0.702)        0.512
18   1.50     2.70      0.810          0.268    (  0.729)        0.542
19   1.58     2.40      0.720          0.268    (  0.648)        0.452
20   1.67     2.70      0.810          0.268    (  0.729)        0.542
21   1.75     3.30      0.990          0.268    (  0.891)        0.722
22   1.83     3.10      0.930          0.268    (  0.837)        0.662
23   1.92     2.90      0.870          0.268    (  0.783)        0.602
24   2.00     3.00      0.900          0.268    (  0.810)        0.632
25   2.08     3.10      0.930          0.268    (  0.837)        0.662
26   2.17     4.20      1.260          0.268    (  1.134)        0.992
27   2.25     5.00      1.500          0.268    (  1.350)        1.232
28   2.33     3.50      1.050          0.268    (  0.945)        0.782
29   2.42     6.80      2.040          0.268    (  1.836)        1.772
30   2.50     7.30      2.190          0.268    (  1.971)        1.922
31   2.58     8.20      2.460          0.268    (  2.214)        2.192
32   2.67     5.90      1.770          0.268    (  1.593)        1.502
33   2.75     2.00      0.600          0.268    (  0.540)        0.332
34   2.83     1.80      0.540          0.268    (  0.486)        0.272
35   2.92     1.80      0.540          0.268    (  0.486)        0.272
36   3.00     0.60      0.180       (  0.268)       0.162        0.018
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    20.5
    Flood volume = Effective rainfall      1.71(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
    Total soil loss =      0.79(In)
    Total soil loss =     0.494(Ac.Ft)
    Total rainfall =      2.50(In)
    Flood volume =       46195.9 Cubic Feet
    Total soil loss =       21501.3 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     14.341(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        3 - 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       0.0021      0.30  Q         |         |         |         |
  0+10       0.0071      0.73  VQ        |         |         |         |
  0+15       0.0119      0.69  VQ        |         |         |         |
  0+20       0.0175      0.82  VQ        |         |         |         |
  0+25       0.0259      1.22  V Q       |         |         |         |
  0+30       0.0365      1.53  |V Q      |         |         |         |
  0+35       0.0479      1.66  |V Q      |         |         |         |
  0+40       0.0593      1.66  | VQ      |         |         |         |
  0+45       0.0727      1.95  | VQ      |         |         |         |
  0+50       0.0850      1.79  |  Q      |         |         |         |
  0+55       0.0958      1.57  |  Q      |         |         |         |
  1+ 0       0.1078      1.75  |  QV     |         |         |         |
  1+ 5       0.1234      2.26  |   Q     |         |         |         |
  1+10       0.1422      2.73  |    Q    |         |         |         |
  1+15       0.1618      2.85  |    QV   |         |         |         |
  1+20       0.1808      2.76  |    QV   |         |         |         |
```


1+25 0.2016 3.02
1+30 0.2271 3.69
1+35 0.2526 3.71
1+40 0.2781 3.69
1+45 0.3085 4.42
1+50 0.3428 4.98
1+55 0.3758 4.79
2+ 0 0.4079 4.67
2+ 5 0.4412 4.82
2+10 0.4808 5.75
2+15 0.5326 7.53
2+20 0.5848 7.57
2+25 0.6449 8.74
2+30 0.7303 12.39
2+35 0.8290 14.34
2+40 0.9257 14.04
2+45 0.9887 9.15
2+50 1.0197 4.50
2+55 1.0410 3.10
3+ 0 1.0540 1.88
3+ 5 1.0583 0.62
3+10 1.0597 0.20
3+15 1.0603 0.09
3+20 1.0605 0.03
3+25 1.0605 0.00

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 09/12/22 File: DAC26100.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
100-YR
6-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	1.40	10.44

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	3.50	26.11

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 3.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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

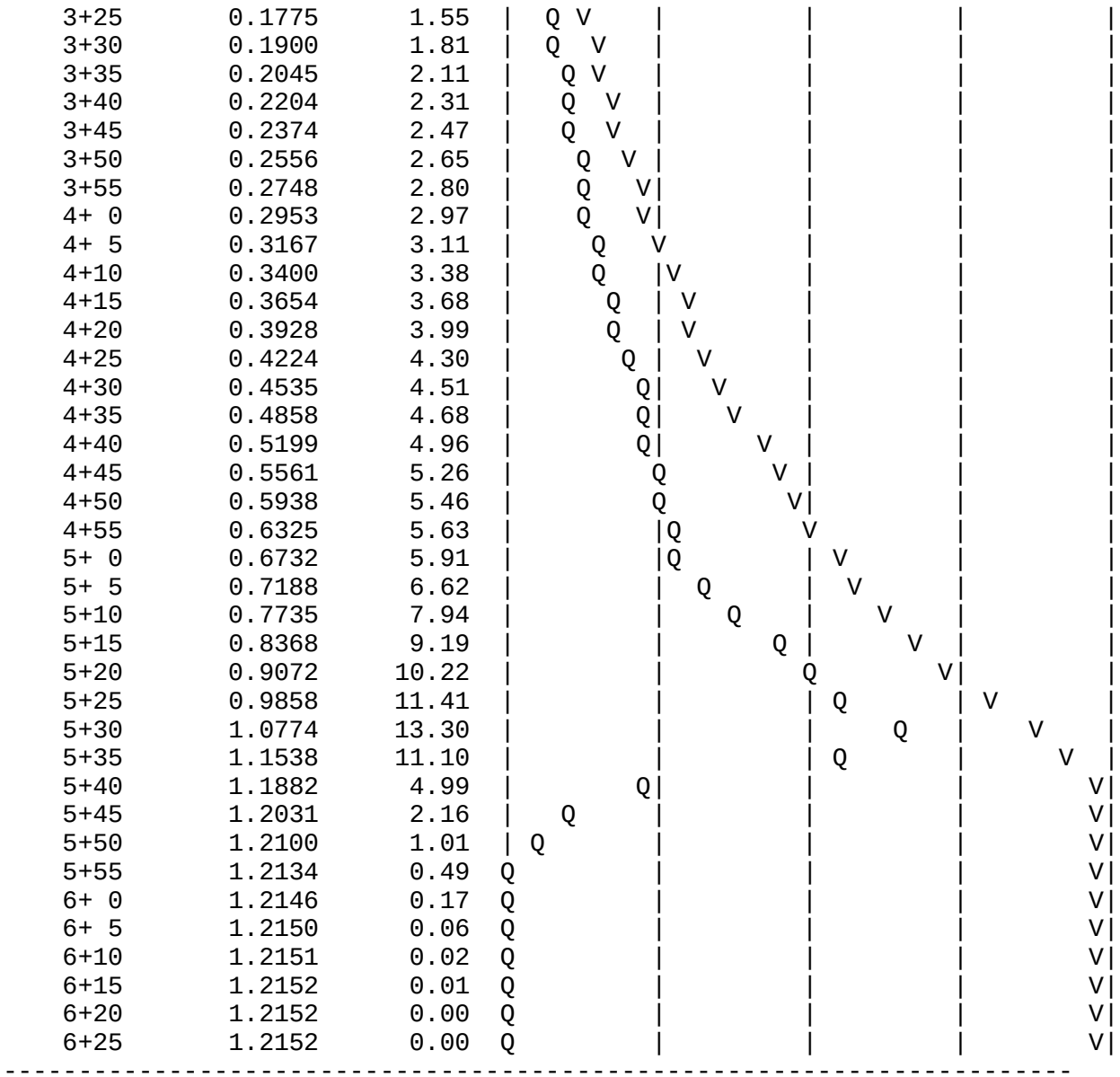
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.210	(0.268)		0.189	0.021
2	0.17	0.60	0.252	(0.268)		0.227	0.025
3	0.25	0.60	0.252	(0.268)		0.227	0.025
4	0.33	0.60	0.252	(0.268)		0.227	0.025
5	0.42	0.60	0.252	(0.268)		0.227	0.025
6	0.50	0.70	0.294	(0.268)		0.265	0.029
7	0.58	0.70	0.294	(0.268)		0.265	0.029
8	0.67	0.70	0.294	(0.268)		0.265	0.029
9	0.75	0.70	0.294	(0.268)		0.265	0.029
10	0.83	0.70	0.294	(0.268)		0.265	0.029
11	0.92	0.70	0.294	(0.268)		0.265	0.029
12	1.00	0.80	0.336	0.268	(	0.302)	0.068
13	1.08	0.80	0.336	0.268	(	0.302)	0.068

14	1.17	0.80	0.336	0.268	(0.302)	0.068
15	1.25	0.80	0.336	0.268	(0.302)	0.068
16	1.33	0.80	0.336	0.268	(0.302)	0.068
17	1.42	0.80	0.336	0.268	(0.302)	0.068
18	1.50	0.80	0.336	0.268	(0.302)	0.068
19	1.58	0.80	0.336	0.268	(0.302)	0.068
20	1.67	0.80	0.336	0.268	(0.302)	0.068
21	1.75	0.80	0.336	0.268	(0.302)	0.068
22	1.83	0.80	0.336	0.268	(0.302)	0.068
23	1.92	0.80	0.336	0.268	(0.302)	0.068
24	2.00	0.90	0.378	0.268	(0.340)	0.110
25	2.08	0.80	0.336	0.268	(0.302)	0.068
26	2.17	0.90	0.378	0.268	(0.340)	0.110
27	2.25	0.90	0.378	0.268	(0.340)	0.110
28	2.33	0.90	0.378	0.268	(0.340)	0.110
29	2.42	0.90	0.378	0.268	(0.340)	0.110
30	2.50	0.90	0.378	0.268	(0.340)	0.110
31	2.58	0.90	0.378	0.268	(0.340)	0.110
32	2.67	0.90	0.378	0.268	(0.340)	0.110
33	2.75	1.00	0.420	0.268	(0.378)	0.152
34	2.83	1.00	0.420	0.268	(0.378)	0.152
35	2.92	1.00	0.420	0.268	(0.378)	0.152
36	3.00	1.00	0.420	0.268	(0.378)	0.152
37	3.08	1.00	0.420	0.268	(0.378)	0.152
38	3.17	1.10	0.462	0.268	(0.416)	0.194
39	3.25	1.10	0.462	0.268	(0.416)	0.194
40	3.33	1.10	0.462	0.268	(0.416)	0.194
41	3.42	1.20	0.504	0.268	(0.454)	0.236
42	3.50	1.30	0.546	0.268	(0.491)	0.278
43	3.58	1.40	0.588	0.268	(0.529)	0.320
44	3.67	1.40	0.588	0.268	(0.529)	0.320
45	3.75	1.50	0.630	0.268	(0.567)	0.362
46	3.83	1.50	0.630	0.268	(0.567)	0.362
47	3.92	1.60	0.672	0.268	(0.605)	0.404
48	4.00	1.60	0.672	0.268	(0.605)	0.404
49	4.08	1.70	0.714	0.268	(0.643)	0.446
50	4.17	1.80	0.756	0.268	(0.680)	0.488
51	4.25	1.90	0.798	0.268	(0.718)	0.530
52	4.33	2.00	0.840	0.268	(0.756)	0.572
53	4.42	2.10	0.882	0.268	(0.794)	0.614
54	4.50	2.10	0.882	0.268	(0.794)	0.614
55	4.58	2.20	0.924	0.268	(0.832)	0.656
56	4.67	2.30	0.966	0.268	(0.869)	0.698
57	4.75	2.40	1.008	0.268	(0.907)	0.740
58	4.83	2.40	1.008	0.268	(0.907)	0.740
59	4.92	2.50	1.050	0.268	(0.945)	0.782
60	5.00	2.60	1.092	0.268	(0.983)	0.824
61	5.08	3.10	1.302	0.268	(1.172)	1.034
62	5.17	3.60	1.512	0.268	(1.361)	1.244
63	5.25	3.90	1.638	0.268	(1.474)	1.370
64	5.33	4.20	1.764	0.268	(1.588)	1.496
65	5.42	4.70	1.974	0.268	(1.777)	1.706
66	5.50	5.60	2.352	0.268	(2.117)	2.084
67	5.58	1.90	0.798	0.268	(0.718)	0.530
68	5.67	0.90	0.378	0.268	(0.340)	0.110
69	5.75	0.60	0.252	(0.268)	0.227	0.025
70	5.83	0.50	0.210	(0.268)	0.189	0.021
71	5.92	0.30	0.126	(0.268)	0.113	0.013
72	6.00	0.20	0.084	(0.268)	0.076	0.008

(Loss Rate Not Used)

```
   Sum =     100.0                                        Sum =    23.5
    Flood volume = Effective rainfall      1.95(In)
     times area       7.5(Ac.)/[(In)/(Ft.)] =       1.2(Ac.Ft)
    Total soil loss =      1.55(In)
    Total soil loss =     0.961(Ac.Ft)
    Total rainfall =      3.50(In)
    Flood volume =       52934.7 Cubic Feet
    Total soil loss =       41842.2 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     13.301(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        6 - H O U R    S T O R M
                    R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        5.0      10.0      15.0      20.0
-------------------------------------------------------------------------
  0+ 5       0.0004      0.05  Q         |         |         |         |
  0+10       0.0013      0.14  Q         |         |         |         |
  0+15       0.0025      0.17  Q         |         |         |         |
  0+20       0.0037      0.18  Q         |         |         |         |
  0+25       0.0050      0.19  Q         |         |         |         |
  0+30       0.0064      0.20  Q         |         |         |         |
  0+35       0.0078      0.21  Q         |         |         |         |
  0+40       0.0093      0.22  Q         |         |         |         |
  0+45       0.0109      0.22  Q         |         |         |         |
  0+50       0.0124      0.22  Q         |         |         |         |
  0+55       0.0139      0.22  Q         |         |         |         |
  1+ 0       0.0161      0.32  Q         |         |         |         |
  1+ 5       0.0192      0.46  Q         |         |         |         |
  1+10       0.0226      0.49  Q         |         |         |         |
  1+15       0.0260      0.50  VQ        |         |         |         |
  1+20       0.0296      0.51  VQ        |         |         |         |
  1+25       0.0331      0.51  |Q        |         |         |         |
  1+30       0.0366      0.51  |Q        |         |         |         |
  1+35       0.0402      0.51  |Q        |         |         |         |
  1+40       0.0437      0.51  |Q        |         |         |         |
  1+45       0.0473      0.51  |Q        |         |         |         |
  1+50       0.0508      0.51  |Q        |         |         |         |
  1+55       0.0544      0.51  |Q        |         |         |         |
  2+ 0       0.0586      0.62  |Q        |         |         |         |
  2+ 5       0.0632      0.66  |QV       |         |         |         |
  2+10       0.0677      0.65  |QV       |         |         |         |
  2+15       0.0731      0.78  |QV       |         |         |         |
  2+20       0.0786      0.81  |QV       |         |         |         |
  2+25       0.0843      0.82  |QV       |         |         |         |
  2+30       0.0900      0.83  |QV       |         |         |         |
  2+35       0.0957      0.83  |Q V      |         |         |         |
  2+40       0.1014      0.83  |Q V      |         |         |         |
  2+45       0.1079      0.93  |Q V      |         |         |         |
  2+50       0.1153      1.08  | QV      |         |         |         |
  2+55       0.1230      1.12  | Q V     |         |         |         |
  3+ 0       0.1308      1.13  | Q V     |         |         |         |
  3+ 5       0.1387      1.14  | Q V     |         |         |         |
  3+10       0.1473      1.25  | Q V     |         |         |         |
  3+15       0.1569      1.40  | Q  V    |         |         |         |
  3+20       0.1668      1.43  | 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 09/12/22 File: DAC224100.out

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

Program License Serial Number 6094

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

English Units used in output format

EXISTING CONDITIONS
AREA B
100-YR
24-HR

Drainage Area = 7.46(Ac.) = 0.012 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.46(Ac.) = 0.012 Sq. Mi.
Length along longest watercourse = 815.00(Ft.)
Length along longest watercourse measured to centroid = 490.00(Ft.)
Length along longest watercourse = 0.154 Mi.
Length along longest watercourse measured to centroid = 0.093 Mi.
Difference in elevation = 21.00(Ft.)
Slope along watercourse = 136.0491 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.056 Hr.
Lag time = 3.38 Min.
25% of lag time = 0.85 Min.
40% of lag time = 1.35 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]
7.46	2.50	18.65

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.46	6.00	44.76

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.460	78.00	0.000

Total Area Entered = 7.46(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
78.0	78.0	0.268	0.000	0.268	1.000	0.268
					Sum (F) =	0.268

Area averaged mean soil loss (F) (In/Hr) = 0.268
Minimum soil loss rate ((In/Hr)) = 0.134
(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	147.766	32.630	2.453
2	0.167	295.533	47.172	3.547
3	0.250	443.299	11.314	0.851
4	0.333	591.066	4.951	0.372
5	0.417	738.832	2.534	0.190
6	0.500	886.599	1.399	0.105
		Sum =	100.000 Sum=	7.518

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	0.048	(0.474)		0.043	0.005
2	0.17	0.07	0.048	(0.473)		0.043	0.005
3	0.25	0.07	0.048	(0.471)		0.043	0.005
4	0.33	0.10	0.072	(0.469)		0.065	0.007
5	0.42	0.10	0.072	(0.467)		0.065	0.007
6	0.50	0.10	0.072	(0.465)		0.065	0.007
7	0.58	0.10	0.072	(0.463)		0.065	0.007
8	0.67	0.10	0.072	(0.462)		0.065	0.007
9	0.75	0.10	0.072	(0.460)		0.065	0.007
10	0.83	0.13	0.096	(0.458)		0.086	0.010
11	0.92	0.13	0.096	(0.456)		0.086	0.010
12	1.00	0.13	0.096	(0.454)		0.086	0.010
13	1.08	0.10	0.072	(0.453)		0.065	0.007

14	1.17	0.10	0.072	(0.451)	0.065	0.007
15	1.25	0.10	0.072	(0.449)	0.065	0.007
16	1.33	0.10	0.072	(0.447)	0.065	0.007
17	1.42	0.10	0.072	(0.445)	0.065	0.007
18	1.50	0.10	0.072	(0.444)	0.065	0.007
19	1.58	0.10	0.072	(0.442)	0.065	0.007
20	1.67	0.10	0.072	(0.440)	0.065	0.007
21	1.75	0.10	0.072	(0.438)	0.065	0.007
22	1.83	0.13	0.096	(0.437)	0.086	0.010
23	1.92	0.13	0.096	(0.435)	0.086	0.010
24	2.00	0.13	0.096	(0.433)	0.086	0.010
25	2.08	0.13	0.096	(0.431)	0.086	0.010
26	2.17	0.13	0.096	(0.430)	0.086	0.010
27	2.25	0.13	0.096	(0.428)	0.086	0.010
28	2.33	0.13	0.096	(0.426)	0.086	0.010
29	2.42	0.13	0.096	(0.424)	0.086	0.010
30	2.50	0.13	0.096	(0.423)	0.086	0.010
31	2.58	0.17	0.120	(0.421)	0.108	0.012
32	2.67	0.17	0.120	(0.419)	0.108	0.012
33	2.75	0.17	0.120	(0.417)	0.108	0.012
34	2.83	0.17	0.120	(0.416)	0.108	0.012
35	2.92	0.17	0.120	(0.414)	0.108	0.012
36	3.00	0.17	0.120	(0.412)	0.108	0.012
37	3.08	0.17	0.120	(0.411)	0.108	0.012
38	3.17	0.17	0.120	(0.409)	0.108	0.012
39	3.25	0.17	0.120	(0.407)	0.108	0.012
40	3.33	0.17	0.120	(0.405)	0.108	0.012
41	3.42	0.17	0.120	(0.404)	0.108	0.012
42	3.50	0.17	0.120	(0.402)	0.108	0.012
43	3.58	0.17	0.120	(0.400)	0.108	0.012
44	3.67	0.17	0.120	(0.399)	0.108	0.012
45	3.75	0.17	0.120	(0.397)	0.108	0.012
46	3.83	0.20	0.144	(0.395)	0.130	0.014
47	3.92	0.20	0.144	(0.394)	0.130	0.014
48	4.00	0.20	0.144	(0.392)	0.130	0.014
49	4.08	0.20	0.144	(0.390)	0.130	0.014
50	4.17	0.20	0.144	(0.389)	0.130	0.014
51	4.25	0.20	0.144	(0.387)	0.130	0.014
52	4.33	0.23	0.168	(0.385)	0.151	0.017
53	4.42	0.23	0.168	(0.384)	0.151	0.017
54	4.50	0.23	0.168	(0.382)	0.151	0.017
55	4.58	0.23	0.168	(0.381)	0.151	0.017
56	4.67	0.23	0.168	(0.379)	0.151	0.017
57	4.75	0.23	0.168	(0.377)	0.151	0.017
58	4.83	0.27	0.192	(0.376)	0.173	0.019
59	4.92	0.27	0.192	(0.374)	0.173	0.019
60	5.00	0.27	0.192	(0.372)	0.173	0.019
61	5.08	0.20	0.144	(0.371)	0.130	0.014
62	5.17	0.20	0.144	(0.369)	0.130	0.014
63	5.25	0.20	0.144	(0.368)	0.130	0.014
64	5.33	0.23	0.168	(0.366)	0.151	0.017
65	5.42	0.23	0.168	(0.364)	0.151	0.017
66	5.50	0.23	0.168	(0.363)	0.151	0.017
67	5.58	0.27	0.192	(0.361)	0.173	0.019
68	5.67	0.27	0.192	(0.360)	0.173	0.019
69	5.75	0.27	0.192	(0.358)	0.173	0.019
70	5.83	0.27	0.192	(0.356)	0.173	0.019
71	5.92	0.27	0.192	(0.355)	0.173	0.019
72	6.00	0.27	0.192	(0.353)	0.173	0.019
73	6.08	0.30	0.216	(0.352)	0.194	0.022

74	6.17	0.30	0.216	(0.350)	0.194	0.022
75	6.25	0.30	0.216	(0.349)	0.194	0.022
76	6.33	0.30	0.216	(0.347)	0.194	0.022
77	6.42	0.30	0.216	(0.345)	0.194	0.022
78	6.50	0.30	0.216	(0.344)	0.194	0.022
79	6.58	0.33	0.240	(0.342)	0.216	0.024
80	6.67	0.33	0.240	(0.341)	0.216	0.024
81	6.75	0.33	0.240	(0.339)	0.216	0.024
82	6.83	0.33	0.240	(0.338)	0.216	0.024
83	6.92	0.33	0.240	(0.336)	0.216	0.024
84	7.00	0.33	0.240	(0.335)	0.216	0.024
85	7.08	0.33	0.240	(0.333)	0.216	0.024
86	7.17	0.33	0.240	(0.332)	0.216	0.024
87	7.25	0.33	0.240	(0.330)	0.216	0.024
88	7.33	0.37	0.264	(0.329)	0.238	0.026
89	7.42	0.37	0.264	(0.327)	0.238	0.026
90	7.50	0.37	0.264	(0.326)	0.238	0.026
91	7.58	0.40	0.288	(0.324)	0.259	0.029
92	7.67	0.40	0.288	(0.323)	0.259	0.029
93	7.75	0.40	0.288	(0.321)	0.259	0.029
94	7.83	0.43	0.312	(0.320)	0.281	0.031
95	7.92	0.43	0.312	(0.318)	0.281	0.031
96	8.00	0.43	0.312	(0.317)	0.281	0.031
97	8.08	0.50	0.360	0.315	(0.324)	0.045
98	8.17	0.50	0.360	0.314	(0.324)	0.046
99	8.25	0.50	0.360	0.312	(0.324)	0.048
100	8.33	0.50	0.360	0.311	(0.324)	0.049
101	8.42	0.50	0.360	0.309	(0.324)	0.051
102	8.50	0.50	0.360	0.308	(0.324)	0.052
103	8.58	0.53	0.384	0.306	(0.346)	0.078
104	8.67	0.53	0.384	0.305	(0.346)	0.079
105	8.75	0.53	0.384	0.304	(0.346)	0.080
106	8.83	0.57	0.408	0.302	(0.367)	0.106
107	8.92	0.57	0.408	0.301	(0.367)	0.107
108	9.00	0.57	0.408	0.299	(0.367)	0.109
109	9.08	0.63	0.456	0.298	(0.410)	0.158
110	9.17	0.63	0.456	0.296	(0.410)	0.159
111	9.25	0.63	0.456	0.295	(0.410)	0.161
112	9.33	0.67	0.480	0.294	(0.432)	0.186
113	9.42	0.67	0.480	0.292	(0.432)	0.188
114	9.50	0.67	0.480	0.291	(0.432)	0.189
115	9.58	0.70	0.504	0.289	(0.454)	0.215
116	9.67	0.70	0.504	0.288	(0.454)	0.216
117	9.75	0.70	0.504	0.287	(0.454)	0.217
118	9.83	0.73	0.528	0.285	(0.475)	0.243
119	9.92	0.73	0.528	0.284	(0.475)	0.244
120	10.00	0.73	0.528	0.283	(0.475)	0.245
121	10.08	0.50	0.360	0.281	(0.324)	0.079
122	10.17	0.50	0.360	0.280	(0.324)	0.080
123	10.25	0.50	0.360	0.278	(0.324)	0.081
124	10.33	0.50	0.360	0.277	(0.324)	0.083
125	10.42	0.50	0.360	0.276	(0.324)	0.084
126	10.50	0.50	0.360	0.274	(0.324)	0.086
127	10.58	0.67	0.480	0.273	(0.432)	0.207
128	10.67	0.67	0.480	0.272	(0.432)	0.208
129	10.75	0.67	0.480	0.270	(0.432)	0.210
130	10.83	0.67	0.480	0.269	(0.432)	0.211
131	10.92	0.67	0.480	0.268	(0.432)	0.212
132	11.00	0.67	0.480	0.266	(0.432)	0.214
133	11.08	0.63	0.456	0.265	(0.410)	0.191

134	11.17	0.63	0.456	0.264	(0.410)	0.192
135	11.25	0.63	0.456	0.263	(0.410)	0.193
136	11.33	0.63	0.456	0.261	(0.410)	0.195
137	11.42	0.63	0.456	0.260	(0.410)	0.196
138	11.50	0.63	0.456	0.259	(0.410)	0.197
139	11.58	0.57	0.408	0.257	(0.367)	0.151
140	11.67	0.57	0.408	0.256	(0.367)	0.152
141	11.75	0.57	0.408	0.255	(0.367)	0.153
142	11.83	0.60	0.432	0.254	(0.389)	0.178
143	11.92	0.60	0.432	0.252	(0.389)	0.180
144	12.00	0.60	0.432	0.251	(0.389)	0.181
145	12.08	0.83	0.600	0.250	(0.540)	0.350
146	12.17	0.83	0.600	0.249	(0.540)	0.351
147	12.25	0.83	0.600	0.247	(0.540)	0.353
148	12.33	0.87	0.624	0.246	(0.562)	0.378
149	12.42	0.87	0.624	0.245	(0.562)	0.379
150	12.50	0.87	0.624	0.244	(0.562)	0.380
151	12.58	0.93	0.672	0.242	(0.605)	0.430
152	12.67	0.93	0.672	0.241	(0.605)	0.431
153	12.75	0.93	0.672	0.240	(0.605)	0.432
154	12.83	0.97	0.696	0.239	(0.626)	0.457
155	12.92	0.97	0.696	0.238	(0.626)	0.458
156	13.00	0.97	0.696	0.236	(0.626)	0.460
157	13.08	1.13	0.816	0.235	(0.734)	0.581
158	13.17	1.13	0.816	0.234	(0.734)	0.582
159	13.25	1.13	0.816	0.233	(0.734)	0.583
160	13.33	1.13	0.816	0.232	(0.734)	0.584
161	13.42	1.13	0.816	0.230	(0.734)	0.586
162	13.50	1.13	0.816	0.229	(0.734)	0.587
163	13.58	0.77	0.552	0.228	(0.497)	0.324
164	13.67	0.77	0.552	0.227	(0.497)	0.325
165	13.75	0.77	0.552	0.226	(0.497)	0.326
166	13.83	0.77	0.552	0.225	(0.497)	0.327
167	13.92	0.77	0.552	0.223	(0.497)	0.329
168	14.00	0.77	0.552	0.222	(0.497)	0.330
169	14.08	0.90	0.648	0.221	(0.583)	0.427
170	14.17	0.90	0.648	0.220	(0.583)	0.428
171	14.25	0.90	0.648	0.219	(0.583)	0.429
172	14.33	0.87	0.624	0.218	(0.562)	0.406
173	14.42	0.87	0.624	0.217	(0.562)	0.407
174	14.50	0.87	0.624	0.216	(0.562)	0.408
175	14.58	0.87	0.624	0.214	(0.562)	0.410
176	14.67	0.87	0.624	0.213	(0.562)	0.411
177	14.75	0.87	0.624	0.212	(0.562)	0.412
178	14.83	0.83	0.600	0.211	(0.540)	0.389
179	14.92	0.83	0.600	0.210	(0.540)	0.390
180	15.00	0.83	0.600	0.209	(0.540)	0.391
181	15.08	0.80	0.576	0.208	(0.518)	0.368
182	15.17	0.80	0.576	0.207	(0.518)	0.369
183	15.25	0.80	0.576	0.206	(0.518)	0.370
184	15.33	0.77	0.552	0.205	(0.497)	0.347
185	15.42	0.77	0.552	0.204	(0.497)	0.348
186	15.50	0.77	0.552	0.203	(0.497)	0.349
187	15.58	0.63	0.456	0.202	(0.410)	0.254
188	15.67	0.63	0.456	0.201	(0.410)	0.255
189	15.75	0.63	0.456	0.200	(0.410)	0.256
190	15.83	0.63	0.456	0.199	(0.410)	0.257
191	15.92	0.63	0.456	0.198	(0.410)	0.258
192	16.00	0.63	0.456	0.197	(0.410)	0.259
193	16.08	0.13	0.096	(0.196)	0.086	0.010

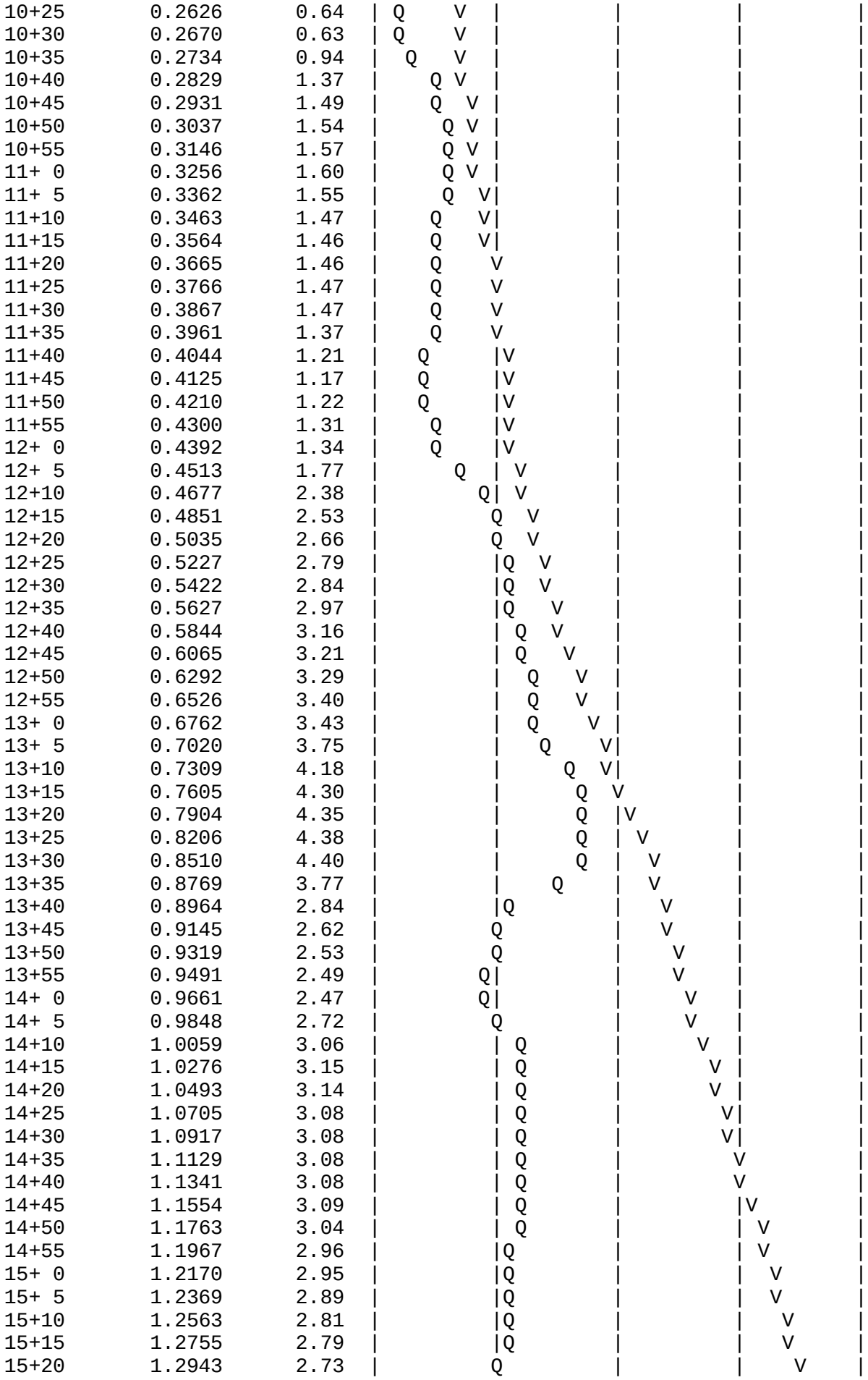
194	16.17	0.13	0.096	(0.195)	0.086	0.010
195	16.25	0.13	0.096	(0.194)	0.086	0.010
196	16.33	0.13	0.096	(0.193)	0.086	0.010
197	16.42	0.13	0.096	(0.192)	0.086	0.010
198	16.50	0.13	0.096	(0.191)	0.086	0.010
199	16.58	0.10	0.072	(0.190)	0.065	0.007
200	16.67	0.10	0.072	(0.189)	0.065	0.007
201	16.75	0.10	0.072	(0.188)	0.065	0.007
202	16.83	0.10	0.072	(0.187)	0.065	0.007
203	16.92	0.10	0.072	(0.186)	0.065	0.007
204	17.00	0.10	0.072	(0.185)	0.065	0.007
205	17.08	0.17	0.120	(0.184)	0.108	0.012
206	17.17	0.17	0.120	(0.183)	0.108	0.012
207	17.25	0.17	0.120	(0.182)	0.108	0.012
208	17.33	0.17	0.120	(0.181)	0.108	0.012
209	17.42	0.17	0.120	(0.180)	0.108	0.012
210	17.50	0.17	0.120	(0.179)	0.108	0.012
211	17.58	0.17	0.120	(0.178)	0.108	0.012
212	17.67	0.17	0.120	(0.178)	0.108	0.012
213	17.75	0.17	0.120	(0.177)	0.108	0.012
214	17.83	0.13	0.096	(0.176)	0.086	0.010
215	17.92	0.13	0.096	(0.175)	0.086	0.010
216	18.00	0.13	0.096	(0.174)	0.086	0.010
217	18.08	0.13	0.096	(0.173)	0.086	0.010
218	18.17	0.13	0.096	(0.172)	0.086	0.010
219	18.25	0.13	0.096	(0.172)	0.086	0.010
220	18.33	0.13	0.096	(0.171)	0.086	0.010
221	18.42	0.13	0.096	(0.170)	0.086	0.010
222	18.50	0.13	0.096	(0.169)	0.086	0.010
223	18.58	0.10	0.072	(0.168)	0.065	0.007
224	18.67	0.10	0.072	(0.167)	0.065	0.007
225	18.75	0.10	0.072	(0.167)	0.065	0.007
226	18.83	0.07	0.048	(0.166)	0.043	0.005
227	18.92	0.07	0.048	(0.165)	0.043	0.005
228	19.00	0.07	0.048	(0.164)	0.043	0.005
229	19.08	0.10	0.072	(0.163)	0.065	0.007
230	19.17	0.10	0.072	(0.163)	0.065	0.007
231	19.25	0.10	0.072	(0.162)	0.065	0.007
232	19.33	0.13	0.096	(0.161)	0.086	0.010
233	19.42	0.13	0.096	(0.160)	0.086	0.010
234	19.50	0.13	0.096	(0.160)	0.086	0.010
235	19.58	0.10	0.072	(0.159)	0.065	0.007
236	19.67	0.10	0.072	(0.158)	0.065	0.007
237	19.75	0.10	0.072	(0.157)	0.065	0.007
238	19.83	0.07	0.048	(0.157)	0.043	0.005
239	19.92	0.07	0.048	(0.156)	0.043	0.005
240	20.00	0.07	0.048	(0.155)	0.043	0.005
241	20.08	0.10	0.072	(0.155)	0.065	0.007
242	20.17	0.10	0.072	(0.154)	0.065	0.007
243	20.25	0.10	0.072	(0.153)	0.065	0.007
244	20.33	0.10	0.072	(0.153)	0.065	0.007
245	20.42	0.10	0.072	(0.152)	0.065	0.007
246	20.50	0.10	0.072	(0.151)	0.065	0.007
247	20.58	0.10	0.072	(0.151)	0.065	0.007
248	20.67	0.10	0.072	(0.150)	0.065	0.007
249	20.75	0.10	0.072	(0.150)	0.065	0.007
250	20.83	0.07	0.048	(0.149)	0.043	0.005
251	20.92	0.07	0.048	(0.148)	0.043	0.005
252	21.00	0.07	0.048	(0.148)	0.043	0.005
253	21.08	0.10	0.072	(0.147)	0.065	0.007

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254  21.17     0.10      0.072       (  0.147)       0.065        0.007
255  21.25     0.10      0.072       (  0.146)       0.065        0.007
256  21.33     0.07      0.048       (  0.145)       0.043        0.005
257  21.42     0.07      0.048       (  0.145)       0.043        0.005
258  21.50     0.07      0.048       (  0.144)       0.043        0.005
259  21.58     0.10      0.072       (  0.144)       0.065        0.007
260  21.67     0.10      0.072       (  0.143)       0.065        0.007
261  21.75     0.10      0.072       (  0.143)       0.065        0.007
262  21.83     0.07      0.048       (  0.142)       0.043        0.005
263  21.92     0.07      0.048       (  0.142)       0.043        0.005
264  22.00     0.07      0.048       (  0.141)       0.043        0.005
265  22.08     0.10      0.072       (  0.141)       0.065        0.007
266  22.17     0.10      0.072       (  0.140)       0.065        0.007
267  22.25     0.10      0.072       (  0.140)       0.065        0.007
268  22.33     0.07      0.048       (  0.139)       0.043        0.005
269  22.42     0.07      0.048       (  0.139)       0.043        0.005
270  22.50     0.07      0.048       (  0.139)       0.043        0.005
271  22.58     0.07      0.048       (  0.138)       0.043        0.005
272  22.67     0.07      0.048       (  0.138)       0.043        0.005
273  22.75     0.07      0.048       (  0.137)       0.043        0.005
274  22.83     0.07      0.048       (  0.137)       0.043        0.005
275  22.92     0.07      0.048       (  0.137)       0.043        0.005
276  23.00     0.07      0.048       (  0.136)       0.043        0.005
277  23.08     0.07      0.048       (  0.136)       0.043        0.005
278  23.17     0.07      0.048       (  0.136)       0.043        0.005
279  23.25     0.07      0.048       (  0.136)       0.043        0.005
280  23.33     0.07      0.048       (  0.135)       0.043        0.005
281  23.42     0.07      0.048       (  0.135)       0.043        0.005
282  23.50     0.07      0.048       (  0.135)       0.043        0.005
283  23.58     0.07      0.048       (  0.135)       0.043        0.005
284  23.67     0.07      0.048       (  0.134)       0.043        0.005
285  23.75     0.07      0.048       (  0.134)       0.043        0.005
286  23.83     0.07      0.048       (  0.134)       0.043        0.005
287  23.92     0.07      0.048       (  0.134)       0.043        0.005
288  24.00     0.07      0.048       (  0.134)       0.043        0.005
          (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    28.3
     Flood volume = Effective rainfall      2.36(In)
      times area       7.5(Ac.)/[(In)/(Ft.)] =       1.5(Ac.Ft)
     Total soil loss =      3.64(In)
     Total soil loss =     2.265(Ac.Ft)
     Total rainfall =      6.00(In)
     Flood volume =       63809.5 Cubic Feet
     Total soil loss =       98666.9 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      4.405(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      0.03  Q         |         |         |         |
   0+15       0.0005      0.03  Q         |         |         |         |
   0+20       0.0008      0.04  Q         |         |         |         |
```

0+25	0.0011	0.05	Q	|	|	|	|
0+30	0.0015	0.05	Q	|	|	|	|
0+35	0.0019	0.05	Q	|	|	|	|
0+40	0.0022	0.05	Q	|	|	|	|
0+45	0.0026	0.05	Q	|	|	|	|
0+50	0.0030	0.06	Q	|	|	|	|
0+55	0.0035	0.07	Q	|	|	|	|
1+ 0	0.0040	0.07	Q	|	|	|	|
1+ 5	0.0044	0.07	Q	|	|	|	|
1+10	0.0048	0.06	Q	|	|	|	|
1+15	0.0052	0.06	Q	|	|	|	|
1+20	0.0056	0.05	Q	|	|	|	|
1+25	0.0060	0.05	Q	|	|	|	|
1+30	0.0063	0.05	Q	|	|	|	|
1+35	0.0067	0.05	Q	|	|	|	|
1+40	0.0071	0.05	Q	|	|	|	|
1+45	0.0075	0.05	Q	|	|	|	|
1+50	0.0079	0.06	Q	|	|	|	|
1+55	0.0083	0.07	Q	|	|	|	|
2+ 0	0.0088	0.07	Q	|	|	|	|
2+ 5	0.0093	0.07	Q	|	|	|	|
2+10	0.0098	0.07	Q	|	|	|	|
2+15	0.0103	0.07	Q	|	|	|	|
2+20	0.0108	0.07	Q	|	|	|	|
2+25	0.0113	0.07	Q	|	|	|	|
2+30	0.0118	0.07	Q	|	|	|	|
2+35	0.0123	0.08	Q	|	|	|	|
2+40	0.0129	0.09	Q	|	|	|	|
2+45	0.0135	0.09	Q	|	|	|	|
2+50	0.0142	0.09	Q	|	|	|	|
2+55	0.0148	0.09	Q	|	|	|	|
3+ 0	0.0154	0.09	Q	|	|	|	|
3+ 5	0.0160	0.09	Q	|	|	|	|
3+10	0.0166	0.09	Q	|	|	|	|
3+15	0.0173	0.09	Q	|	|	|	|
3+20	0.0179	0.09	Q	|	|	|	|
3+25	0.0185	0.09	Q	|	|	|	|
3+30	0.0191	0.09	Q	|	|	|	|
3+35	0.0198	0.09	Q	|	|	|	|
3+40	0.0204	0.09	Q	|	|	|	|
3+45	0.0210	0.09	Q	|	|	|	|
3+50	0.0217	0.10	Q	|	|	|	|
3+55	0.0224	0.10	Q	|	|	|	|
4+ 0	0.0231	0.11	Q	|	|	|	|
4+ 5	0.0239	0.11	Q	|	|	|	|
4+10	0.0246	0.11	Q	|	|	|	|
4+15	0.0254	0.11	Q	|	|	|	|
4+20	0.0261	0.11	Q	|	|	|	|
4+25	0.0270	0.12	Q	|	|	|	|
4+30	0.0278	0.12	Q	|	|	|	|
4+35	0.0287	0.13	Q	|	|	|	|
4+40	0.0296	0.13	Q	|	|	|	|
4+45	0.0304	0.13	Q	|	|	|	|
4+50	0.0314	0.13	Q	|	|	|	|
4+55	0.0323	0.14	Q	|	|	|	|
5+ 0	0.0333	0.14	Q	|	|	|	|
5+ 5	0.0342	0.13	Q	|	|	|	|
5+10	0.0350	0.12	Q	|	|	|	|
5+15	0.0358	0.11	Q	|	|	|	|
5+20	0.0366	0.12	Q	|	|	|	|

```
 5+25       0.0374      0.12  QV        |         |         |         |
 5+30       0.0383      0.12  QV        |         |         |         |
 5+35       0.0392      0.13  QV        |         |         |         |
 5+40       0.0402      0.14  QV        |         |         |         |
 5+45       0.0411      0.14  QV        |         |         |         |
 5+50       0.0421      0.14  QV        |         |         |         |
 5+55       0.0431      0.14  QV        |         |         |         |
 6+ 0       0.0441      0.14  QV        |         |         |         |
 6+ 5       0.0452      0.15  QV        |         |         |         |
 6+10       0.0462      0.16  QV        |         |         |         |
 6+15       0.0474      0.16  QV        |         |         |         |
 6+20       0.0485      0.16  QV        |         |         |         |
 6+25       0.0496      0.16  QV        |         |         |         |
 6+30       0.0507      0.16  QV        |         |         |         |
 6+35       0.0519      0.17  QV        |         |         |         |
 6+40       0.0531      0.18  QV        |         |         |         |
 6+45       0.0543      0.18  QV        |         |         |         |
 6+50       0.0556      0.18  QV        |         |         |         |
 6+55       0.0568      0.18  QV        |         |         |         |
 7+ 0       0.0580      0.18  QV        |         |         |         |
 7+ 5       0.0593      0.18  QV        |         |         |         |
 7+10       0.0605      0.18  QV        |         |         |         |
 7+15       0.0618      0.18  QV        |         |         |         |
 7+20       0.0631      0.19  QV        |         |         |         |
 7+25       0.0644      0.19  QV        |         |         |         |
 7+30       0.0658      0.20  QV        |         |         |         |
 7+35       0.0672      0.20  QV        |         |         |         |
 7+40       0.0686      0.21  QV        |         |         |         |
 7+45       0.0701      0.22  QV        |         |         |         |
 7+50       0.0716      0.22  QV        |         |         |         |
 7+55       0.0732      0.23  QV        |         |         |         |
 8+ 0       0.0748      0.23  Q V       |         |         |         |
 8+ 5       0.0767      0.27  |QV       |         |         |         |
 8+10       0.0789      0.32  |QV       |         |         |         |
 8+15       0.0812      0.34  |QV       |         |         |         |
 8+20       0.0837      0.36  |QV       |         |         |         |
 8+25       0.0862      0.37  |QV       |         |         |         |
 8+30       0.0888      0.38  |QV       |         |         |         |
 8+35       0.0919      0.45  |QV       |         |         |         |
 8+40       0.0957      0.55  | Q       |         |         |         |
 8+45       0.0997      0.58  | Q       |         |         |         |
 8+50       0.1042      0.66  | Q       |         |         |         |
 8+55       0.1094      0.76  | VQ      |         |         |         |
 9+ 0       0.1148      0.79  |  Q      |         |         |         |
 9+ 5       0.1212      0.93  |  Q      |         |         |         |
 9+10       0.1289      1.11  |  VQ     |         |         |         |
 9+15       0.1369      1.17  |  VQ     |         |         |         |
 9+20       0.1456      1.25  |  V Q    |         |         |         |
 9+25       0.1549      1.36  |   VQ    |         |         |         |
 9+30       0.1645      1.40  |   VQ    |         |         |         |
 9+35       0.1747      1.47  |   VQ    |         |         |         |
 9+40       0.1855      1.57  |    VQ   |         |         |         |
 9+45       0.1966      1.61  |    VQ   |         |         |         |
 9+50       0.2082      1.69  |    VQ   |         |         |         |
 9+55       0.2205      1.79  |     VQ  |         |         |         |
10+ 0       0.2331      1.82  |     VQ  |         |         |         |
10+ 5       0.2429      1.43  |    QV   |         |         |         |
10+10       0.2487      0.85  |  Q  V   |         |         |         |
10+15       0.2536      0.71  | Q   V   |         |         |         |
10+20       0.2582      0.66  | Q    V  |         |         |         |
```



```
15+25      1.3126      2.65  |         Q         |         |    V    |
15+30      1.3307      2.64  |         Q         |         |     V   |
15+35      1.3473      2.40  |        Q|         |         |     V   |
15+40      1.3615      2.06  |       Q |         |         |      V  |
15+45      1.3751      1.99  |      Q  |         |         |      V  |
15+50      1.3886      1.96  |      Q  |         |         |      V  |
15+55      1.4020      1.95  |      Q  |         |         |       V |
16+ 0      1.4154      1.94  |      Q  |         |         |       V |
16+ 5      1.4246      1.34  |    Q    |         |         |       V |
16+10      1.4277      0.45  |Q        |         |         |       V |
16+15      1.4294      0.24  Q         |         |         |        V|
16+20      1.4304      0.15  Q         |         |         |        V|
16+25      1.4310      0.10  Q         |         |         |        V|
16+30      1.4315      0.07  Q         |         |         |        V|
16+35      1.4320      0.07  Q         |         |         |        V|
16+40      1.4324      0.06  Q         |         |         |        V|
16+45      1.4328      0.06  Q         |         |         |        V|
16+50      1.4332      0.05  Q         |         |         |        V|
16+55      1.4335      0.05  Q         |         |         |        V|
17+ 0      1.4339      0.05  Q         |         |         |        V|
17+ 5      1.4344      0.07  Q         |         |         |        V|
17+10      1.4349      0.08  Q         |         |         |        V|
17+15      1.4355      0.09  Q         |         |         |        V|
17+20      1.4361      0.09  Q         |         |         |        V|
17+25      1.4368      0.09  Q         |         |         |        V|
17+30      1.4374      0.09  Q         |         |         |        V|
17+35      1.4380      0.09  Q         |         |         |        V|
17+40      1.4386      0.09  Q         |         |         |        V|
17+45      1.4392      0.09  Q         |         |         |        V|
17+50      1.4398      0.08  Q         |         |         |        V|
17+55      1.4403      0.08  Q         |         |         |        V|
18+ 0      1.4409      0.07  Q         |         |         |        V|
18+ 5      1.4414      0.07  Q         |         |         |        V|
18+10      1.4419      0.07  Q         |         |         |        V|
18+15      1.4424      0.07  Q         |         |         |        V|
18+20      1.4428      0.07  Q         |         |         |        V|
18+25      1.4433      0.07  Q         |         |         |        V|
18+30      1.4438      0.07  Q         |         |         |        V|
18+35      1.4443      0.07  Q         |         |         |        V|
18+40      1.4447      0.06  Q         |         |         |        V|
18+45      1.4451      0.06  Q         |         |         |        V|
18+50      1.4454      0.05  Q         |         |         |        V|
18+55      1.4457      0.04  Q         |         |         |        V|
19+ 0      1.4460      0.04  Q         |         |         |        V|
19+ 5      1.4462      0.04  Q         |         |         |        V|
19+10      1.4466      0.05  Q         |         |         |        V|
19+15      1.4470      0.05  Q         |         |         |        V|
19+20      1.4474      0.06  Q         |         |         |        V|
19+25      1.4478      0.07  Q         |         |         |        V|
19+30      1.4483      0.07  Q         |         |         |        V|
19+35      1.4488      0.07  Q         |         |         |        V|
19+40      1.4492      0.06  Q         |         |         |        V|
19+45      1.4496      0.06  Q         |         |         |        V|
19+50      1.4499      0.05  Q         |         |         |        V|
19+55      1.4502      0.04  Q         |         |         |        V|
20+ 0      1.4504      0.04  Q         |         |         |        V|
20+ 5      1.4507      0.04  Q         |         |         |        V|
20+10      1.4511      0.05  Q         |         |         |        V|
20+15      1.4514      0.05  Q         |         |         |        V|
20+20      1.4518      0.05  Q         |         |         |        V|
```

20+25	1.4522	0.05	Q	|	|	|	V|
20+30	1.4525	0.05	Q	|	|	|	V|
20+35	1.4529	0.05	Q	|	|	|	V|
20+40	1.4533	0.05	Q	|	|	|	V|
20+45	1.4537	0.05	Q	|	|	|	V|
20+50	1.4540	0.05	Q	|	|	|	V|
20+55	1.4543	0.04	Q	|	|	|	V|
21+ 0	1.4545	0.04	Q	|	|	|	V|
21+ 5	1.4548	0.04	Q	|	|	|	V|
21+10	1.4552	0.05	Q	|	|	|	V|
21+15	1.4555	0.05	Q	|	|	|	V|
21+20	1.4559	0.05	Q	|	|	|	V|
21+25	1.4561	0.04	Q	|	|	|	V|
21+30	1.4564	0.04	Q	|	|	|	V|
21+35	1.4567	0.04	Q	|	|	|	V|
21+40	1.4570	0.05	Q	|	|	|	V|
21+45	1.4574	0.05	Q	|	|	|	V|
21+50	1.4577	0.05	Q	|	|	|	V|
21+55	1.4580	0.04	Q	|	|	|	V|
22+ 0	1.4583	0.04	Q	|	|	|	V|
22+ 5	1.4586	0.04	Q	|	|	|	V|
22+10	1.4589	0.05	Q	|	|	|	V|
22+15	1.4593	0.05	Q	|	|	|	V|
22+20	1.4596	0.05	Q	|	|	|	V|
22+25	1.4599	0.04	Q	|	|	|	V|
22+30	1.4601	0.04	Q	|	|	|	V|
22+35	1.4604	0.04	Q	|	|	|	V|
22+40	1.4606	0.04	Q	|	|	|	V|
22+45	1.4609	0.04	Q	|	|	|	V|
22+50	1.4611	0.04	Q	|	|	|	V|
22+55	1.4614	0.04	Q	|	|	|	V|
23+ 0	1.4616	0.04	Q	|	|	|	V|
23+ 5	1.4619	0.04	Q	|	|	|	V|
23+10	1.4621	0.04	Q	|	|	|	V|
23+15	1.4624	0.04	Q	|	|	|	V|
23+20	1.4626	0.04	Q	|	|	|	V|
23+25	1.4629	0.04	Q	|	|	|	V|
23+30	1.4631	0.04	Q	|	|	|	V|
23+35	1.4634	0.04	Q	|	|	|	V|
23+40	1.4636	0.04	Q	|	|	|	V|
23+45	1.4639	0.04	Q	|	|	|	V|
23+50	1.4641	0.04	Q	|	|	|	V|
23+55	1.4644	0.04	Q	|	|	|	V|
24+ 0	1.4646	0.04	Q	|	|	|	V|
24+ 5	1.4648	0.02	Q	|	|	|	V|
24+10	1.4648	0.01	Q	|	|	|	V|
24+15	1.4649	0.00	Q	|	|	|	V|
24+20	1.4649	0.00	Q	|	|	|	V|
24+25	1.4649	0.00	Q	|	|	|	V|

DEVELOPED CONDITIONS

2-YEAR STORM

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 10/24/24 File: THECOVE12.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
1-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	0.57	3.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.45	9.71

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.570(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.570(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum = 100.000	Sum=	6.752

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	4.40	0.301	(0.143)	0.078	0.223
2	0.17	4.50	0.308	(0.143)	0.080	0.228
3	0.25	5.40	0.369	(0.143)	0.096	0.273
4	0.33	5.40	0.369	(0.143)	0.096	0.273
5	0.42	5.70	0.390	(0.143)	0.101	0.288
6	0.50	6.40	0.438	(0.143)	0.114	0.324
7	0.58	7.90	0.540	(0.143)	0.140	0.400
8	0.67	9.10	0.622	0.143	(0.162)	0.479
9	0.75	12.80	0.875	0.143	(0.228)	0.732
10	0.83	25.60	1.751	0.143	(0.455)	1.608
11	0.92	7.90	0.540	(0.143)	0.140	0.400
12	1.00	4.90	0.335	(0.143)	0.087	0.248

(Loss Rate Not Used)
Sum = 100.0 Sum = 5.5
Flood volume = Effective rainfall 0.46(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.11(In)
Total soil loss = 0.063(Ac.Ft)
Total rainfall = 0.57(In)
Flood volume = 11100.3 Cubic Feet
Total soil loss = 2761.8 Cubic Feet

Peak flow rate of this hydrograph = 7.059(CFS)

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1 - 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	0.0042	0.61	V Q				
0+10	0.0131	1.29	| V Q				
0+15	0.0240	1.58	| V Q				
0+20	0.0362	1.77	| V Q				
0+25	0.0491	1.87	| Q				
0+30	0.0630	2.03	| QV				
0+35	0.0793	2.36	| Q| V				
0+40	0.0987	2.83	| |Q V				
0+45	0.1251	3.82	| | Q V|				
0+50	0.1737	7.06	| | | VQ |			
0+55	0.2189	6.56	| | | Q | V			
1+ 0	0.2405	3.15	| | Q | | V			
1+ 5	0.2509	1.50	| Q | | | V|			
1+10	0.2539	0.44	|Q | | | V|			
1+15	0.2546	0.11	Q | | | V|			
1+20	0.2548	0.03	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 10/24/24 File: THECOVE32.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
3-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.00	6.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	2.50	16.75

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

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	1.30	0.156	(0.143)		0.041	0.115
2	0.17	1.30	0.156	(0.143)		0.041	0.115
3	0.25	1.10	0.132	(0.143)		0.034	0.098
4	0.33	1.50	0.180	(0.143)		0.047	0.133
5	0.42	1.50	0.180	(0.143)		0.047	0.133
6	0.50	1.80	0.216	(0.143)		0.056	0.160
7	0.58	1.50	0.180	(0.143)		0.047	0.133
8	0.67	1.80	0.216	(0.143)		0.056	0.160
9	0.75	1.80	0.216	(0.143)		0.056	0.160
10	0.83	1.50	0.180	(0.143)		0.047	0.133
11	0.92	1.60	0.192	(0.143)		0.050	0.142
12	1.00	1.80	0.216	(0.143)		0.056	0.160
13	1.08	2.20	0.264	(0.143)		0.069	0.195
14	1.17	2.20	0.264	(0.143)		0.069	0.195

15	1.25	2.20	0.264	(	0.143)	0.069	0.195
16	1.33	2.00	0.240	(	0.143)	0.062	0.178
17	1.42	2.60	0.312	(	0.143)	0.081	0.231
18	1.50	2.70	0.324	(	0.143)	0.084	0.240
19	1.58	2.40	0.288	(	0.143)	0.075	0.213
20	1.67	2.70	0.324	(	0.143)	0.084	0.240
21	1.75	3.30	0.396	(	0.143)	0.103	0.293
22	1.83	3.10	0.372	(	0.143)	0.097	0.275
23	1.92	2.90	0.348	(	0.143)	0.090	0.258
24	2.00	3.00	0.360	(	0.143)	0.094	0.266
25	2.08	3.10	0.372	(	0.143)	0.097	0.275
26	2.17	4.20	0.504	(	0.143)	0.131	0.373
27	2.25	5.00	0.600		0.143	(0.156)	0.457
28	2.33	3.50	0.420	(	0.143)	0.109	0.311
29	2.42	6.80	0.816		0.143	(0.212)	0.673
30	2.50	7.30	0.876		0.143	(0.228)	0.733
31	2.58	8.20	0.984		0.143	(0.256)	0.841
32	2.67	5.90	0.708		0.143	(0.184)	0.565
33	2.75	2.00	0.240	(	0.143)	0.062	0.178
34	2.83	1.80	0.216	(	0.143)	0.056	0.160
35	2.92	1.80	0.216	(	0.143)	0.056	0.160
36	3.00	0.60	0.072	(	0.143)	0.019	0.053

(Loss Rate Not Used)

Sum = 100.0 Sum = 9.2

Flood volume = Effective rainfall 0.77(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.23(In)
Total soil loss = 0.130(Ac.Ft)
Total rainfall = 1.00(In)
Flood volume = 18647.0 Cubic Feet
Total soil loss = 5673.3 Cubic Feet

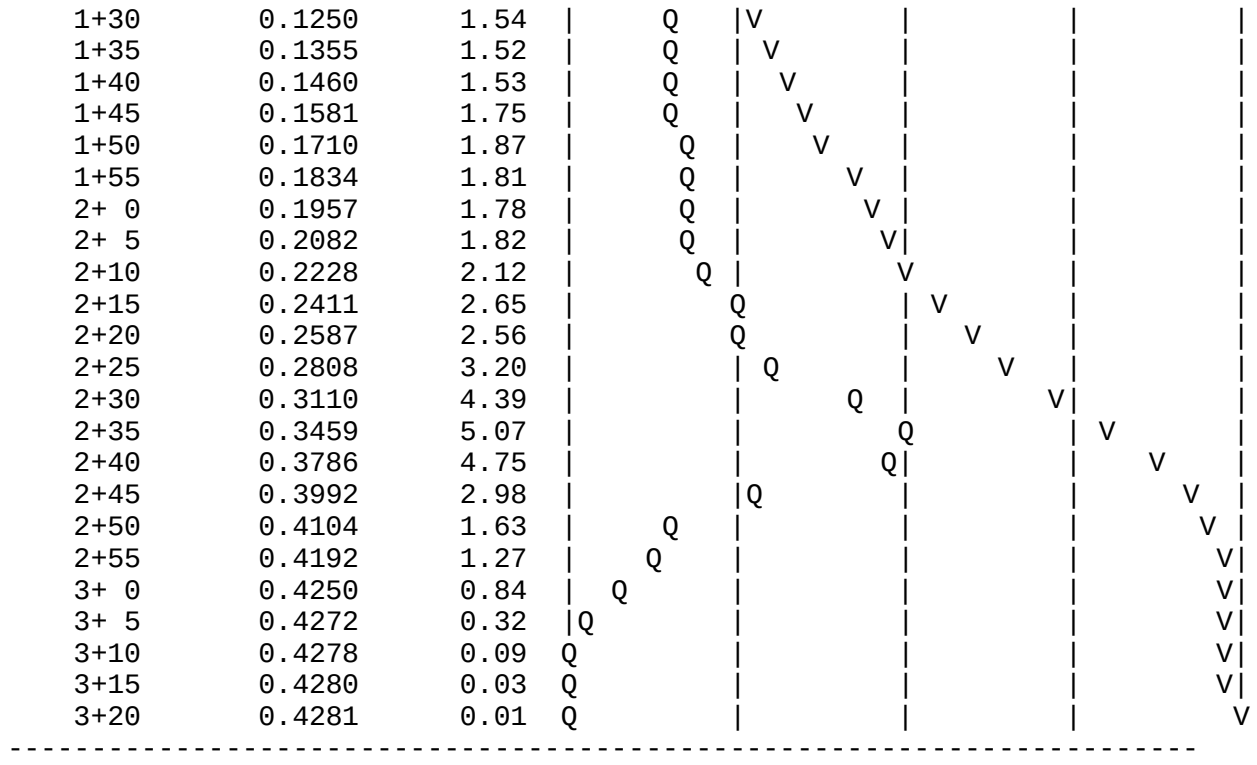
Peak flow rate of this hydrograph = 5.070(CFS)

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3 - 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	0.0022	0.32	VQ				
0+10	0.0068	0.66	V Q				
0+15	0.0115	0.69	|VQ				
0+20	0.0167	0.76	|V Q				
0+25	0.0227	0.87	| VQ				
0+30	0.0294	0.96	| VQ				
0+35	0.0361	0.98	| Q				
0+40	0.0429	0.99	| QV				
0+45	0.0502	1.06	| Q				
0+50	0.0571	1.00	| Q V				
0+55	0.0636	0.95	| Q V				
1+ 0	0.0706	1.01	| Q V				
1+ 5	0.0786	1.16	| Q V				
1+10	0.0873	1.28	| Q V				
1+15	0.0963	1.30	| Q V|				
1+20	0.1051	1.27	| Q V|				
1+25	0.1145	1.36	| Q V				


1+30 0.1250 1.54
1+35 0.1355 1.52
1+40 0.1460 1.53
1+45 0.1581 1.75
1+50 0.1710 1.87
1+55 0.1834 1.81
2+ 0 0.1957 1.78
2+ 5 0.2082 1.82
2+10 0.2228 2.12
2+15 0.2411 2.65
2+20 0.2587 2.56
2+25 0.2808 3.20
2+30 0.3110 4.39
2+35 0.3459 5.07
2+40 0.3786 4.75
2+45 0.3992 2.98
2+50 0.4104 1.63
2+55 0.4192 1.27
3+ 0 0.4250 0.84
3+ 5 0.4272 0.32
3+10 0.4278 0.09
3+15 0.4280 0.03
3+20 0.4281 0.01

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 10/24/24 File: THECOVE62.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
6-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.40	9.38

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	3.50	23.45

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

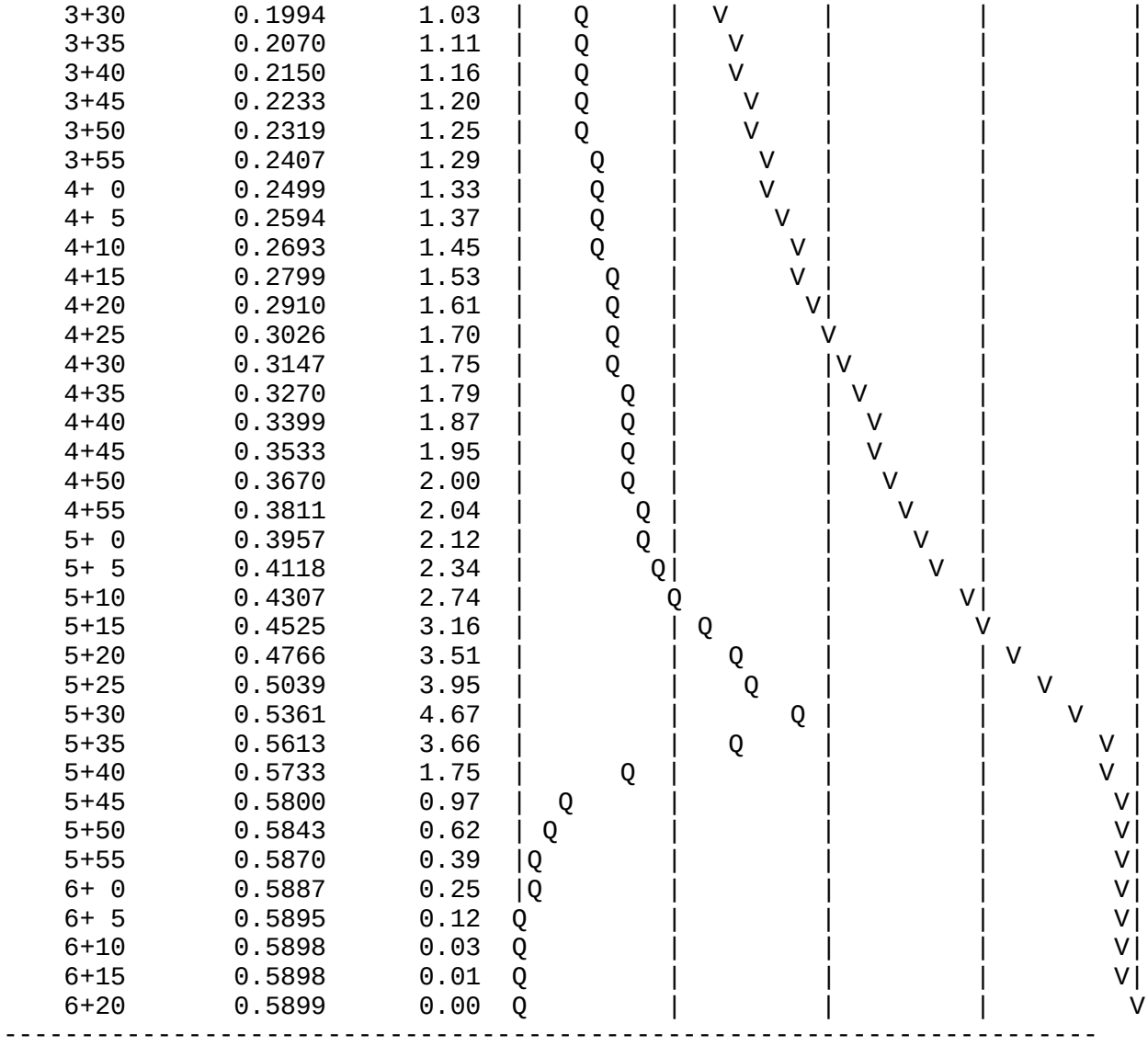
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.084	(0.143)		0.022	0.062
2	0.17	0.60	0.101	(0.143)		0.026	0.075
3	0.25	0.60	0.101	(0.143)		0.026	0.075
4	0.33	0.60	0.101	(0.143)		0.026	0.075
5	0.42	0.60	0.101	(0.143)		0.026	0.075
6	0.50	0.70	0.118	(0.143)		0.031	0.087
7	0.58	0.70	0.118	(0.143)		0.031	0.087
8	0.67	0.70	0.118	(0.143)		0.031	0.087
9	0.75	0.70	0.118	(0.143)		0.031	0.087
10	0.83	0.70	0.118	(0.143)		0.031	0.087
11	0.92	0.70	0.118	(0.143)		0.031	0.087
12	1.00	0.80	0.134	(0.143)		0.035	0.099
13	1.08	0.80	0.134	(0.143)		0.035	0.099
14	1.17	0.80	0.134	(0.143)		0.035	0.099

15	1.25	0.80	0.134	(0.143)	0.035	0.099
16	1.33	0.80	0.134	(0.143)	0.035	0.099
17	1.42	0.80	0.134	(0.143)	0.035	0.099
18	1.50	0.80	0.134	(0.143)	0.035	0.099
19	1.58	0.80	0.134	(0.143)	0.035	0.099
20	1.67	0.80	0.134	(0.143)	0.035	0.099
21	1.75	0.80	0.134	(0.143)	0.035	0.099
22	1.83	0.80	0.134	(0.143)	0.035	0.099
23	1.92	0.80	0.134	(0.143)	0.035	0.099
24	2.00	0.90	0.151	(0.143)	0.039	0.112
25	2.08	0.80	0.134	(0.143)	0.035	0.099
26	2.17	0.90	0.151	(0.143)	0.039	0.112
27	2.25	0.90	0.151	(0.143)	0.039	0.112
28	2.33	0.90	0.151	(0.143)	0.039	0.112
29	2.42	0.90	0.151	(0.143)	0.039	0.112
30	2.50	0.90	0.151	(0.143)	0.039	0.112
31	2.58	0.90	0.151	(0.143)	0.039	0.112
32	2.67	0.90	0.151	(0.143)	0.039	0.112
33	2.75	1.00	0.168	(0.143)	0.044	0.124
34	2.83	1.00	0.168	(0.143)	0.044	0.124
35	2.92	1.00	0.168	(0.143)	0.044	0.124
36	3.00	1.00	0.168	(0.143)	0.044	0.124
37	3.08	1.00	0.168	(0.143)	0.044	0.124
38	3.17	1.10	0.185	(0.143)	0.048	0.137
39	3.25	1.10	0.185	(0.143)	0.048	0.137
40	3.33	1.10	0.185	(0.143)	0.048	0.137
41	3.42	1.20	0.202	(0.143)	0.052	0.149
42	3.50	1.30	0.218	(0.143)	0.057	0.162
43	3.58	1.40	0.235	(0.143)	0.061	0.174
44	3.67	1.40	0.235	(0.143)	0.061	0.174
45	3.75	1.50	0.252	(0.143)	0.066	0.186
46	3.83	1.50	0.252	(0.143)	0.066	0.186
47	3.92	1.60	0.269	(0.143)	0.070	0.199
48	4.00	1.60	0.269	(0.143)	0.070	0.199
49	4.08	1.70	0.286	(0.143)	0.074	0.211
50	4.17	1.80	0.302	(0.143)	0.079	0.224
51	4.25	1.90	0.319	(0.143)	0.083	0.236
52	4.33	2.00	0.336	(0.143)	0.087	0.249
53	4.42	2.10	0.353	(0.143)	0.092	0.261
54	4.50	2.10	0.353	(0.143)	0.092	0.261
55	4.58	2.20	0.370	(0.143)	0.096	0.273
56	4.67	2.30	0.386	(0.143)	0.100	0.286
57	4.75	2.40	0.403	(0.143)	0.105	0.298
58	4.83	2.40	0.403	(0.143)	0.105	0.298
59	4.92	2.50	0.420	(0.143)	0.109	0.311
60	5.00	2.60	0.437	(0.143)	0.114	0.323
61	5.08	3.10	0.521	(0.143)	0.135	0.385
62	5.17	3.60	0.605	0.143	(0.157)	0.462
63	5.25	3.90	0.655	0.143	(0.170)	0.512
64	5.33	4.20	0.706	0.143	(0.183)	0.563
65	5.42	4.70	0.790	0.143	(0.205)	0.647
66	5.50	5.60	0.941	0.143	(0.245)	0.798
67	5.58	1.90	0.319	(0.143)	0.083	0.236
68	5.67	0.90	0.151	(0.143)	0.039	0.112
69	5.75	0.60	0.101	(0.143)	0.026	0.075
70	5.83	0.50	0.084	(0.143)	0.022	0.062
71	5.92	0.30	0.050	(0.143)	0.013	0.037
72	6.00	0.20	0.034	(0.143)	0.009	0.025
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	12.7

```
   Flood volume = Effective rainfall      1.06(In)
    times area       6.7(Ac.)/[(In)/(Ft.)] =       0.6(Ac.Ft)
   Total soil loss =      0.34(In)
   Total soil loss =     0.192(Ac.Ft)
   Total rainfall =      1.40(In)
   Flood volume =       25694.2 Cubic Feet
   Total soil loss =        8354.4 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =      4.674(CFS)
   ---------------------------------------------------------------------
   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - H O U R    S T O R M
                  R u n o f f      H y d r o g r a p h
   ---------------------------------------------------------------------
               Hydrograph in   5   Minute intervals ((CFS))

   ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
---------------------------------------------------------------------------
  0+ 5       0.0012      0.17  Q         |         |         |         |
  0+10       0.0039      0.39  VQ        |         |         |         |
  0+15       0.0071      0.47  VQ        |         |         |         |
  0+20       0.0105      0.49  VQ        |         |         |         |
  0+25       0.0139      0.50  V Q       |         |         |         |
  0+30       0.0177      0.54  |VQ       |         |         |         |
  0+35       0.0216      0.58  |VQ       |         |         |         |
  0+40       0.0256      0.58  |VQ       |         |         |         |
  0+45       0.0297      0.59  | Q       |         |         |         |
  0+50       0.0337      0.59  | Q       |         |         |         |
  0+55       0.0378      0.59  | Q       |         |         |         |
  1+ 0       0.0421      0.62  | Q       |         |         |         |
  1+ 5       0.0466      0.66  | QV      |         |         |         |
  1+10       0.0512      0.67  | QV      |         |         |         |
  1+15       0.0558      0.67  | QV      |         |         |         |
  1+20       0.0604      0.67  | Q V     |         |         |         |
  1+25       0.0651      0.67  | Q V     |         |         |         |
  1+30       0.0697      0.67  | Q V     |         |         |         |
  1+35       0.0743      0.67  | Q  V    |         |         |         |
  1+40       0.0789      0.67  | Q  V    |         |         |         |
  1+45       0.0836      0.67  | Q  V    |         |         |         |
  1+50       0.0882      0.67  | Q  V    |         |         |         |
  1+55       0.0928      0.67  | Q   V   |         |         |         |
  2+ 0       0.0977      0.71  | Q   V   |         |         |         |
  2+ 5       0.1026      0.71  | Q   V   |         |         |         |
  2+10       0.1075      0.71  | Q    V  |         |         |         |
  2+15       0.1126      0.75  | Q    V  |         |         |         |
  2+20       0.1178      0.75  |  Q   V  |         |         |         |
  2+25       0.1230      0.75  |  Q    V |         |         |         |
  2+30       0.1282      0.76  |  Q    V |         |         |         |
  2+35       0.1334      0.76  |  Q     V|         |         |         |
  2+40       0.1386      0.76  |  Q     V|         |         |         |
  2+45       0.1441      0.79  |  Q     V|         |         |         |
  2+50       0.1498      0.83  |  Q      V         |         |         |
  2+55       0.1555      0.84  |  Q      V         |         |         |
  3+ 0       0.1613      0.84  |  Q      V         |         |         |
  3+ 5       0.1671      0.84  |  Q      |V        |         |         |
  3+10       0.1731      0.87  |  Q      |V        |         |         |
  3+15       0.1794      0.91  |  Q      | V       |         |         |
  3+20       0.1857      0.92  |  Q      | V       |         |         |
  3+25       0.1923      0.96  |  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 10/24/24 File: THECOVE242.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
24-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 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]
6.70	2.50	16.75

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	6.00	40.20

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum = 100.000	Sum=	6.752

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	0.020	(0.254)		0.005	0.015
2	0.17	0.07	0.020	(0.253)		0.005	0.015
3	0.25	0.07	0.020	(0.252)		0.005	0.015
4	0.33	0.10	0.030	(0.251)		0.008	0.022
5	0.42	0.10	0.030	(0.250)		0.008	0.022
6	0.50	0.10	0.030	(0.249)		0.008	0.022
7	0.58	0.10	0.030	(0.248)		0.008	0.022
8	0.67	0.10	0.030	(0.247)		0.008	0.022
9	0.75	0.10	0.030	(0.246)		0.008	0.022
10	0.83	0.13	0.040	(0.245)		0.010	0.030
11	0.92	0.13	0.040	(0.244)		0.010	0.030
12	1.00	0.13	0.040	(0.243)		0.010	0.030
13	1.08	0.10	0.030	(0.242)		0.008	0.022
14	1.17	0.10	0.030	(0.241)		0.008	0.022

15	1.25	0.10	0.030	(0.240)	0.008	0.022
16	1.33	0.10	0.030	(0.239)	0.008	0.022
17	1.42	0.10	0.030	(0.238)	0.008	0.022
18	1.50	0.10	0.030	(0.237)	0.008	0.022
19	1.58	0.10	0.030	(0.236)	0.008	0.022
20	1.67	0.10	0.030	(0.235)	0.008	0.022
21	1.75	0.10	0.030	(0.234)	0.008	0.022
22	1.83	0.13	0.040	(0.233)	0.010	0.030
23	1.92	0.13	0.040	(0.232)	0.010	0.030
24	2.00	0.13	0.040	(0.231)	0.010	0.030
25	2.08	0.13	0.040	(0.231)	0.010	0.030
26	2.17	0.13	0.040	(0.230)	0.010	0.030
27	2.25	0.13	0.040	(0.229)	0.010	0.030
28	2.33	0.13	0.040	(0.228)	0.010	0.030
29	2.42	0.13	0.040	(0.227)	0.010	0.030
30	2.50	0.13	0.040	(0.226)	0.010	0.030
31	2.58	0.17	0.050	(0.225)	0.013	0.037
32	2.67	0.17	0.050	(0.224)	0.013	0.037
33	2.75	0.17	0.050	(0.223)	0.013	0.037
34	2.83	0.17	0.050	(0.222)	0.013	0.037
35	2.92	0.17	0.050	(0.221)	0.013	0.037
36	3.00	0.17	0.050	(0.220)	0.013	0.037
37	3.08	0.17	0.050	(0.219)	0.013	0.037
38	3.17	0.17	0.050	(0.219)	0.013	0.037
39	3.25	0.17	0.050	(0.218)	0.013	0.037
40	3.33	0.17	0.050	(0.217)	0.013	0.037
41	3.42	0.17	0.050	(0.216)	0.013	0.037
42	3.50	0.17	0.050	(0.215)	0.013	0.037
43	3.58	0.17	0.050	(0.214)	0.013	0.037
44	3.67	0.17	0.050	(0.213)	0.013	0.037
45	3.75	0.17	0.050	(0.212)	0.013	0.037
46	3.83	0.20	0.060	(0.211)	0.016	0.044
47	3.92	0.20	0.060	(0.210)	0.016	0.044
48	4.00	0.20	0.060	(0.210)	0.016	0.044
49	4.08	0.20	0.060	(0.209)	0.016	0.044
50	4.17	0.20	0.060	(0.208)	0.016	0.044
51	4.25	0.20	0.060	(0.207)	0.016	0.044
52	4.33	0.23	0.070	(0.206)	0.018	0.052
53	4.42	0.23	0.070	(0.205)	0.018	0.052
54	4.50	0.23	0.070	(0.204)	0.018	0.052
55	4.58	0.23	0.070	(0.203)	0.018	0.052
56	4.67	0.23	0.070	(0.202)	0.018	0.052
57	4.75	0.23	0.070	(0.202)	0.018	0.052
58	4.83	0.27	0.080	(0.201)	0.021	0.059
59	4.92	0.27	0.080	(0.200)	0.021	0.059
60	5.00	0.27	0.080	(0.199)	0.021	0.059
61	5.08	0.20	0.060	(0.198)	0.016	0.044
62	5.17	0.20	0.060	(0.197)	0.016	0.044
63	5.25	0.20	0.060	(0.196)	0.016	0.044
64	5.33	0.23	0.070	(0.196)	0.018	0.052
65	5.42	0.23	0.070	(0.195)	0.018	0.052
66	5.50	0.23	0.070	(0.194)	0.018	0.052
67	5.58	0.27	0.080	(0.193)	0.021	0.059
68	5.67	0.27	0.080	(0.192)	0.021	0.059
69	5.75	0.27	0.080	(0.191)	0.021	0.059
70	5.83	0.27	0.080	(0.190)	0.021	0.059
71	5.92	0.27	0.080	(0.190)	0.021	0.059
72	6.00	0.27	0.080	(0.189)	0.021	0.059
73	6.08	0.30	0.090	(0.188)	0.023	0.067
74	6.17	0.30	0.090	(0.187)	0.023	0.067

75	6.25	0.30	0.090	(0.186)	0.023	0.067
76	6.33	0.30	0.090	(0.185)	0.023	0.067
77	6.42	0.30	0.090	(0.185)	0.023	0.067
78	6.50	0.30	0.090	(0.184)	0.023	0.067
79	6.58	0.33	0.100	(0.183)	0.026	0.074
80	6.67	0.33	0.100	(0.182)	0.026	0.074
81	6.75	0.33	0.100	(0.181)	0.026	0.074
82	6.83	0.33	0.100	(0.181)	0.026	0.074
83	6.92	0.33	0.100	(0.180)	0.026	0.074
84	7.00	0.33	0.100	(0.179)	0.026	0.074
85	7.08	0.33	0.100	(0.178)	0.026	0.074
86	7.17	0.33	0.100	(0.177)	0.026	0.074
87	7.25	0.33	0.100	(0.176)	0.026	0.074
88	7.33	0.37	0.110	(0.176)	0.029	0.081
89	7.42	0.37	0.110	(0.175)	0.029	0.081
90	7.50	0.37	0.110	(0.174)	0.029	0.081
91	7.58	0.40	0.120	(0.173)	0.031	0.089
92	7.67	0.40	0.120	(0.172)	0.031	0.089
93	7.75	0.40	0.120	(0.172)	0.031	0.089
94	7.83	0.43	0.130	(0.171)	0.034	0.096
95	7.92	0.43	0.130	(0.170)	0.034	0.096
96	8.00	0.43	0.130	(0.169)	0.034	0.096
97	8.08	0.50	0.150	(0.168)	0.039	0.111
98	8.17	0.50	0.150	(0.168)	0.039	0.111
99	8.25	0.50	0.150	(0.167)	0.039	0.111
100	8.33	0.50	0.150	(0.166)	0.039	0.111
101	8.42	0.50	0.150	(0.165)	0.039	0.111
102	8.50	0.50	0.150	(0.165)	0.039	0.111
103	8.58	0.53	0.160	(0.164)	0.042	0.118
104	8.67	0.53	0.160	(0.163)	0.042	0.118
105	8.75	0.53	0.160	(0.162)	0.042	0.118
106	8.83	0.57	0.170	(0.162)	0.044	0.126
107	8.92	0.57	0.170	(0.161)	0.044	0.126
108	9.00	0.57	0.170	(0.160)	0.044	0.126
109	9.08	0.63	0.190	(0.159)	0.049	0.141
110	9.17	0.63	0.190	(0.158)	0.049	0.141
111	9.25	0.63	0.190	(0.158)	0.049	0.141
112	9.33	0.67	0.200	(0.157)	0.052	0.148
113	9.42	0.67	0.200	(0.156)	0.052	0.148
114	9.50	0.67	0.200	(0.155)	0.052	0.148
115	9.58	0.70	0.210	(0.155)	0.055	0.155
116	9.67	0.70	0.210	(0.154)	0.055	0.155
117	9.75	0.70	0.210	(0.153)	0.055	0.155
118	9.83	0.73	0.220	(0.153)	0.057	0.163
119	9.92	0.73	0.220	(0.152)	0.057	0.163
120	10.00	0.73	0.220	(0.151)	0.057	0.163
121	10.08	0.50	0.150	(0.150)	0.039	0.111
122	10.17	0.50	0.150	(0.150)	0.039	0.111
123	10.25	0.50	0.150	(0.149)	0.039	0.111
124	10.33	0.50	0.150	(0.148)	0.039	0.111
125	10.42	0.50	0.150	(0.147)	0.039	0.111
126	10.50	0.50	0.150	(0.147)	0.039	0.111
127	10.58	0.67	0.200	(0.146)	0.052	0.148
128	10.67	0.67	0.200	(0.145)	0.052	0.148
129	10.75	0.67	0.200	(0.145)	0.052	0.148
130	10.83	0.67	0.200	(0.144)	0.052	0.148
131	10.92	0.67	0.200	(0.143)	0.052	0.148
132	11.00	0.67	0.200	(0.142)	0.052	0.148
133	11.08	0.63	0.190	(0.142)	0.049	0.141
134	11.17	0.63	0.190	(0.141)	0.049	0.141

135	11.25	0.63	0.190	(0.140)	0.049	0.141
136	11.33	0.63	0.190	(0.140)	0.049	0.141
137	11.42	0.63	0.190	(0.139)	0.049	0.141
138	11.50	0.63	0.190	(0.138)	0.049	0.141
139	11.58	0.57	0.170	(0.138)	0.044	0.126
140	11.67	0.57	0.170	(0.137)	0.044	0.126
141	11.75	0.57	0.170	(0.136)	0.044	0.126
142	11.83	0.60	0.180	(0.136)	0.047	0.133
143	11.92	0.60	0.180	(0.135)	0.047	0.133
144	12.00	0.60	0.180	(0.134)	0.047	0.133
145	12.08	0.83	0.250	(0.134)	0.065	0.185
146	12.17	0.83	0.250	(0.133)	0.065	0.185
147	12.25	0.83	0.250	(0.132)	0.065	0.185
148	12.33	0.87	0.260	(0.132)	0.068	0.192
149	12.42	0.87	0.260	(0.131)	0.068	0.192
150	12.50	0.87	0.260	(0.130)	0.068	0.192
151	12.58	0.93	0.280	(0.130)	0.073	0.207
152	12.67	0.93	0.280	(0.129)	0.073	0.207
153	12.75	0.93	0.280	(0.128)	0.073	0.207
154	12.83	0.97	0.290	(0.128)	0.075	0.215
155	12.92	0.97	0.290	(0.127)	0.075	0.215
156	13.00	0.97	0.290	(0.126)	0.075	0.215
157	13.08	1.13	0.340	(0.126)	0.088	0.252
158	13.17	1.13	0.340	(0.125)	0.088	0.252
159	13.25	1.13	0.340	(0.124)	0.088	0.252
160	13.33	1.13	0.340	(0.124)	0.088	0.252
161	13.42	1.13	0.340	(0.123)	0.088	0.252
162	13.50	1.13	0.340	(0.123)	0.088	0.252
163	13.58	0.77	0.230	(0.122)	0.060	0.170
164	13.67	0.77	0.230	(0.121)	0.060	0.170
165	13.75	0.77	0.230	(0.121)	0.060	0.170
166	13.83	0.77	0.230	(0.120)	0.060	0.170
167	13.92	0.77	0.230	(0.119)	0.060	0.170
168	14.00	0.77	0.230	(0.119)	0.060	0.170
169	14.08	0.90	0.270	(0.118)	0.070	0.200
170	14.17	0.90	0.270	(0.118)	0.070	0.200
171	14.25	0.90	0.270	(0.117)	0.070	0.200
172	14.33	0.87	0.260	(0.116)	0.068	0.192
173	14.42	0.87	0.260	(0.116)	0.068	0.192
174	14.50	0.87	0.260	(0.115)	0.068	0.192
175	14.58	0.87	0.260	(0.115)	0.068	0.192
176	14.67	0.87	0.260	(0.114)	0.068	0.192
177	14.75	0.87	0.260	(0.113)	0.068	0.192
178	14.83	0.83	0.250	(0.113)	0.065	0.185
179	14.92	0.83	0.250	(0.112)	0.065	0.185
180	15.00	0.83	0.250	(0.112)	0.065	0.185
181	15.08	0.80	0.240	(0.111)	0.062	0.178
182	15.17	0.80	0.240	(0.111)	0.062	0.178
183	15.25	0.80	0.240	(0.110)	0.062	0.178
184	15.33	0.77	0.230	(0.109)	0.060	0.170
185	15.42	0.77	0.230	(0.109)	0.060	0.170
186	15.50	0.77	0.230	(0.108)	0.060	0.170
187	15.58	0.63	0.190	(0.108)	0.049	0.141
188	15.67	0.63	0.190	(0.107)	0.049	0.141
189	15.75	0.63	0.190	(0.107)	0.049	0.141
190	15.83	0.63	0.190	(0.106)	0.049	0.141
191	15.92	0.63	0.190	(0.106)	0.049	0.141
192	16.00	0.63	0.190	(0.105)	0.049	0.141
193	16.08	0.13	0.040	(0.104)	0.010	0.030
194	16.17	0.13	0.040	(0.104)	0.010	0.030

195	16.25	0.13	0.040	(0.103)	0.010	0.030
196	16.33	0.13	0.040	(0.103)	0.010	0.030
197	16.42	0.13	0.040	(0.102)	0.010	0.030
198	16.50	0.13	0.040	(0.102)	0.010	0.030
199	16.58	0.10	0.030	(0.101)	0.008	0.022
200	16.67	0.10	0.030	(0.101)	0.008	0.022
201	16.75	0.10	0.030	(0.100)	0.008	0.022
202	16.83	0.10	0.030	(0.100)	0.008	0.022
203	16.92	0.10	0.030	(0.099)	0.008	0.022
204	17.00	0.10	0.030	(0.099)	0.008	0.022
205	17.08	0.17	0.050	(0.098)	0.013	0.037
206	17.17	0.17	0.050	(0.098)	0.013	0.037
207	17.25	0.17	0.050	(0.097)	0.013	0.037
208	17.33	0.17	0.050	(0.097)	0.013	0.037
209	17.42	0.17	0.050	(0.096)	0.013	0.037
210	17.50	0.17	0.050	(0.096)	0.013	0.037
211	17.58	0.17	0.050	(0.095)	0.013	0.037
212	17.67	0.17	0.050	(0.095)	0.013	0.037
213	17.75	0.17	0.050	(0.094)	0.013	0.037
214	17.83	0.13	0.040	(0.094)	0.010	0.030
215	17.92	0.13	0.040	(0.093)	0.010	0.030
216	18.00	0.13	0.040	(0.093)	0.010	0.030
217	18.08	0.13	0.040	(0.093)	0.010	0.030
218	18.17	0.13	0.040	(0.092)	0.010	0.030
219	18.25	0.13	0.040	(0.092)	0.010	0.030
220	18.33	0.13	0.040	(0.091)	0.010	0.030
221	18.42	0.13	0.040	(0.091)	0.010	0.030
222	18.50	0.13	0.040	(0.090)	0.010	0.030
223	18.58	0.10	0.030	(0.090)	0.008	0.022
224	18.67	0.10	0.030	(0.089)	0.008	0.022
225	18.75	0.10	0.030	(0.089)	0.008	0.022
226	18.83	0.07	0.020	(0.089)	0.005	0.015
227	18.92	0.07	0.020	(0.088)	0.005	0.015
228	19.00	0.07	0.020	(0.088)	0.005	0.015
229	19.08	0.10	0.030	(0.087)	0.008	0.022
230	19.17	0.10	0.030	(0.087)	0.008	0.022
231	19.25	0.10	0.030	(0.087)	0.008	0.022
232	19.33	0.13	0.040	(0.086)	0.010	0.030
233	19.42	0.13	0.040	(0.086)	0.010	0.030
234	19.50	0.13	0.040	(0.085)	0.010	0.030
235	19.58	0.10	0.030	(0.085)	0.008	0.022
236	19.67	0.10	0.030	(0.085)	0.008	0.022
237	19.75	0.10	0.030	(0.084)	0.008	0.022
238	19.83	0.07	0.020	(0.084)	0.005	0.015
239	19.92	0.07	0.020	(0.083)	0.005	0.015
240	20.00	0.07	0.020	(0.083)	0.005	0.015
241	20.08	0.10	0.030	(0.083)	0.008	0.022
242	20.17	0.10	0.030	(0.082)	0.008	0.022
243	20.25	0.10	0.030	(0.082)	0.008	0.022
244	20.33	0.10	0.030	(0.082)	0.008	0.022
245	20.42	0.10	0.030	(0.081)	0.008	0.022
246	20.50	0.10	0.030	(0.081)	0.008	0.022
247	20.58	0.10	0.030	(0.081)	0.008	0.022
248	20.67	0.10	0.030	(0.080)	0.008	0.022
249	20.75	0.10	0.030	(0.080)	0.008	0.022
250	20.83	0.07	0.020	(0.080)	0.005	0.015
251	20.92	0.07	0.020	(0.079)	0.005	0.015
252	21.00	0.07	0.020	(0.079)	0.005	0.015
253	21.08	0.10	0.030	(0.079)	0.008	0.022
254	21.17	0.10	0.030	(0.078)	0.008	0.022

255	21.25	0.10	0.030	(	0.078)	0.008	0.022
256	21.33	0.07	0.020	(	0.078)	0.005	0.015
257	21.42	0.07	0.020	(	0.077)	0.005	0.015
258	21.50	0.07	0.020	(	0.077)	0.005	0.015
259	21.58	0.10	0.030	(	0.077)	0.008	0.022
260	21.67	0.10	0.030	(	0.077)	0.008	0.022
261	21.75	0.10	0.030	(	0.076)	0.008	0.022
262	21.83	0.07	0.020	(	0.076)	0.005	0.015
263	21.92	0.07	0.020	(	0.076)	0.005	0.015
264	22.00	0.07	0.020	(	0.076)	0.005	0.015
265	22.08	0.10	0.030	(	0.075)	0.008	0.022
266	22.17	0.10	0.030	(	0.075)	0.008	0.022
267	22.25	0.10	0.030	(	0.075)	0.008	0.022
268	22.33	0.07	0.020	(	0.075)	0.005	0.015
269	22.42	0.07	0.020	(	0.074)	0.005	0.015
270	22.50	0.07	0.020	(	0.074)	0.005	0.015
271	22.58	0.07	0.020	(	0.074)	0.005	0.015
272	22.67	0.07	0.020	(	0.074)	0.005	0.015
273	22.75	0.07	0.020	(	0.073)	0.005	0.015
274	22.83	0.07	0.020	(	0.073)	0.005	0.015
275	22.92	0.07	0.020	(	0.073)	0.005	0.015
276	23.00	0.07	0.020	(	0.073)	0.005	0.015
277	23.08	0.07	0.020	(	0.073)	0.005	0.015
278	23.17	0.07	0.020	(	0.073)	0.005	0.015
279	23.25	0.07	0.020	(	0.072)	0.005	0.015
280	23.33	0.07	0.020	(	0.072)	0.005	0.015
281	23.42	0.07	0.020	(	0.072)	0.005	0.015
282	23.50	0.07	0.020	(	0.072)	0.005	0.015
283	23.58	0.07	0.020	(	0.072)	0.005	0.015
284	23.67	0.07	0.020	(	0.072)	0.005	0.015
285	23.75	0.07	0.020	(	0.072)	0.005	0.015
286	23.83	0.07	0.020	(	0.072)	0.005	0.015
287	23.92	0.07	0.020	(	0.072)	0.005	0.015
288	24.00	0.07	0.020	(	0.072)	0.005	0.015

(Loss Rate Not Used)

Sum = 100.0 Sum = 22.2

Flood volume = Effective rainfall 1.85(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 1.0(Ac.Ft)
Total soil loss = 0.65(In)
Total soil loss = 0.363(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 44993.3 Cubic Feet
Total soil loss = 15808.4 Cubic Feet

Peak flow rate of this hydrograph = 1.700(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0003	0.04	Q	|	|	|	|
0+10	0.0009	0.09	Q	|	|	|	|
0+15	0.0015	0.09	Q	|	|	|	|
0+20	0.0023	0.12	Q	|	|	|	|
0+25	0.0033	0.14	Q	|	|	|	|

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0+30       0.0043      0.15  Q         |          |          |          |
0+35       0.0054      0.15  Q         |          |          |          |
0+40       0.0064      0.15  Q         |          |          |          |
0+45       0.0074      0.15  Q         |          |          |          |
0+50       0.0086      0.17  Q         |          |          |          |
0+55       0.0099      0.19  Q         |          |          |          |
1+ 0       0.0113      0.20  Q         |          |          |          |
1+ 5       0.0125      0.18  Q         |          |          |          |
1+10       0.0136      0.16  Q         |          |          |          |
1+15       0.0146      0.15  Q         |          |          |          |
1+20       0.0157      0.15  Q         |          |          |          |
1+25       0.0167      0.15  Q         |          |          |          |
1+30       0.0178      0.15  Q         |          |          |          |
1+35       0.0188      0.15  Q         |          |          |          |
1+40       0.0198      0.15  Q         |          |          |          |
1+45       0.0209      0.15  Q         |          |          |          |
1+50       0.0220      0.17  Q         |          |          |          |
1+55       0.0233      0.19  Q         |          |          |          |
2+ 0       0.0247      0.20  Q         |          |          |          |
2+ 5       0.0261      0.20  QV        |          |          |          |
2+10       0.0275      0.20  QV        |          |          |          |
2+15       0.0288      0.20  QV        |          |          |          |
2+20       0.0302      0.20  QV        |          |          |          |
2+25       0.0316      0.20  QV        |          |          |          |
2+30       0.0330      0.20  QV        |          |          |          |
2+35       0.0345      0.22  QV        |          |          |          |
2+40       0.0362      0.24  QV        |          |          |          |
2+45       0.0379      0.25  QV        |          |          |          |
2+50       0.0396      0.25  QV        |          |          |          |
2+55       0.0413      0.25  QV        |          |          |          |
3+ 0       0.0430      0.25  QV        |          |          |          |
3+ 5       0.0447      0.25  QV        |          |          |          |
3+10       0.0465      0.25  QV        |          |          |          |
3+15       0.0482      0.25  QV        |          |          |          |
3+20       0.0499      0.25  QV        |          |          |          |
3+25       0.0516      0.25  QV        |          |          |          |
3+30       0.0533      0.25  Q V       |          |          |          |
3+35       0.0551      0.25  Q V       |          |          |          |
3+40       0.0568      0.25  Q V       |          |          |          |
3+45       0.0585      0.25  Q V       |          |          |          |
3+50       0.0604      0.27  |QV       |          |          |          |
3+55       0.0624      0.29  |QV       |          |          |          |
4+ 0       0.0644      0.30  |QV       |          |          |          |
4+ 5       0.0665      0.30  |QV       |          |          |          |
4+10       0.0686      0.30  |QV       |          |          |          |
4+15       0.0706      0.30  |QV       |          |          |          |
4+20       0.0728      0.32  |QV       |          |          |          |
4+25       0.0752      0.34  |QV       |          |          |          |
4+30       0.0776      0.35  |Q V      |          |          |          |
4+35       0.0800      0.35  |Q V      |          |          |          |
4+40       0.0824      0.35  |Q V      |          |          |          |
4+45       0.0848      0.35  |Q V      |          |          |          |
4+50       0.0874      0.37  |Q V      |          |          |          |
4+55       0.0901      0.39  |Q V      |          |          |          |
5+ 0       0.0928      0.40  |Q V      |          |          |          |
5+ 5       0.0953      0.36  |Q V      |          |          |          |
5+10       0.0974      0.31  |Q V      |          |          |          |
5+15       0.0995      0.31  |Q V      |          |          |          |
5+20       0.1017      0.32  |Q V      |          |          |          |
5+25       0.1041      0.34  |Q  V     |          |          |          |
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5+30	0.1065	0.35	Q V				
5+35	0.1090	0.37	Q V				
5+40	0.1117	0.39	Q V				
5+45	0.1145	0.40	Q V				
5+50	0.1172	0.40	Q V				
5+55	0.1200	0.40	Q V				
6+ 0	0.1227	0.40	Q V				
6+ 5	0.1256	0.42	Q V				
6+10	0.1287	0.44	Q V				
6+15	0.1318	0.45	Q V				
6+20	0.1349	0.45	Q V				
6+25	0.1380	0.45	Q V				
6+30	0.1411	0.45	Q V				
6+35	0.1443	0.47	Q V				
6+40	0.1477	0.49	Q V				
6+45	0.1511	0.50	Q V				
6+50	0.1545	0.50	Q V				
6+55	0.1580	0.50	Q V				
7+ 0	0.1614	0.50	Q V				
7+ 5	0.1649	0.50	Q V				
7+10	0.1683	0.50	Q V				
7+15	0.1718	0.50	Q V				
7+20	0.1753	0.52	Q V				
7+25	0.1791	0.54	Q V				
7+30	0.1828	0.55	Q V				
7+35	0.1868	0.57	Q V				
7+40	0.1908	0.59	Q V				
7+45	0.1950	0.60	Q V				
7+50	0.1992	0.62	Q V				
7+55	0.2037	0.64	Q V				
8+ 0	0.2081	0.65	Q V				
8+ 5	0.2129	0.69	Q V				
8+10	0.2179	0.73	Q V				
8+15	0.2230	0.74	Q V				
8+20	0.2282	0.75	Q V				
8+25	0.2334	0.75	Q V				
8+30	0.2385	0.75	Q V				
8+35	0.2438	0.77	Q V				
8+40	0.2493	0.79	Q V				
8+45	0.2548	0.80	Q V				
8+50	0.2604	0.82	Q V				
8+55	0.2662	0.84	Q V				
9+ 0	0.2721	0.85	Q V				
9+ 5	0.2782	0.89	Q V				
9+10	0.2846	0.93	Q V				
9+15	0.2911	0.94	Q V				
9+20	0.2978	0.97	Q V				
9+25	0.3046	0.99	Q V				
9+30	0.3115	1.00	Q V				
9+35	0.3185	1.02	Q V				
9+40	0.3257	1.04	Q V				
9+45	0.3329	1.05	Q V				
9+50	0.3403	1.07	Q V				
9+55	0.3478	1.09	Q V				
10+ 0	0.3554	1.10	Q V				
10+ 5	0.3619	0.96	Q V				
10+10	0.3675	0.80	Q V				
10+15	0.3728	0.77	Q V				
10+20	0.3780	0.76	Q V				
10+25	0.3831	0.75	Q V				

10+30	0.3883	0.75	Q		V			
10+35	0.3942	0.85	Q		V			
10+40	0.4008	0.96	Q		V			
10+45	0.4076	0.99	Q		V			
10+50	0.4144	1.00	Q		V			
10+55	0.4213	1.00	Q		V			
11+ 0	0.4282	1.00	Q		V			
11+ 5	0.4350	0.98	Q		V			
11+10	0.4416	0.96	Q		V			
11+15	0.4481	0.95	Q		V			
11+20	0.4547	0.95	Q		V			
11+25	0.4612	0.95	Q		V			
11+30	0.4677	0.95	Q		V			
11+35	0.4740	0.91	Q		V			
11+40	0.4800	0.86	Q		V			
11+45	0.4859	0.86	Q		V			
11+50	0.4919	0.87	Q		V			
11+55	0.4980	0.89	Q		V			
12+ 0	0.5042	0.90	Q		V			
12+ 5	0.5114	1.04	Q		V			
12+10	0.5196	1.20	Q		V			
12+15	0.5281	1.23	Q		V			
12+20	0.5368	1.26	Q		V			
12+25	0.5457	1.29	Q		V			
12+30	0.5546	1.30	Q		V			
12+35	0.5638	1.34	Q		V			
12+40	0.5734	1.38	Q		V			
12+45	0.5830	1.39	Q		V			
12+50	0.5928	1.42	Q		V			
12+55	0.6027	1.44	Q		V			
13+ 0	0.6127	1.45	Q		V			
13+ 5	0.6233	1.55	Q		V			
13+10	0.6348	1.66	Q		V			
13+15	0.6464	1.69	Q		V			
13+20	0.6581	1.70	Q		V			
13+25	0.6698	1.70	Q		V			
13+30	0.6815	1.70	Q		V			
13+35	0.6917	1.48	Q		V			
13+40	0.7001	1.23	Q		V			
13+45	0.7083	1.18	Q		V			
13+50	0.7162	1.16	Q		V			
13+55	0.7242	1.15	Q		V			
14+ 0	0.7321	1.15	Q		V			
14+ 5	0.7406	1.23	Q		V			
14+10	0.7496	1.32	Q		V			
14+15	0.7589	1.34	Q		V			
14+20	0.7680	1.33	Q		V			
14+25	0.7770	1.31	Q		V			
14+30	0.7860	1.30	Q		V			
14+35	0.7949	1.30	Q		V			
14+40	0.8039	1.30	Q		V			
14+45	0.8128	1.30	Q		V			
14+50	0.8217	1.28	Q		V			
14+55	0.8303	1.26	Q		V			
15+ 0	0.8389	1.25	Q		V			
15+ 5	0.8474	1.23	Q		V			
15+10	0.8557	1.21	Q		V			
15+15	0.8640	1.20	Q		V			
15+20	0.8721	1.18	Q		V			
15+25	0.8801	1.16	Q		V			

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15+30       0.8880      1.15  |   Q     |         |         |   V     |
15+35       0.8954      1.07  |   Q     |         |         |   V     |
15+40       0.9022      0.98  |  Q      |         |         |   V     |
15+45       0.9088      0.96  |  Q      |         |         |    V    |
15+50       0.9153      0.95  |  Q      |         |         |    V    |
15+55       0.9219      0.95  |  Q      |         |         |    V    |
16+ 0       0.9284      0.95  |  Q      |         |         |    V    |
16+ 5       0.9329      0.65  | Q       |         |         |     V   |
16+10       0.9350      0.31  |Q        |         |         |     V   |
16+15       0.9367      0.24  Q         |         |         |     V   |
16+20       0.9381      0.21  Q         |         |         |     V   |
16+25       0.9395      0.20  Q         |         |         |     V   |
16+30       0.9409      0.20  Q         |         |         |     V   |
16+35       0.9421      0.18  Q         |         |         |     V   |
16+40       0.9432      0.16  Q         |         |         |     V   |
16+45       0.9443      0.15  Q         |         |         |     V   |
16+50       0.9453      0.15  Q         |         |         |     V   |
16+55       0.9463      0.15  Q         |         |         |     V   |
17+ 0       0.9474      0.15  Q         |         |         |     V   |
17+ 5       0.9487      0.19  Q         |         |         |     V   |
17+10       0.9503      0.24  Q         |         |         |     V   |
17+15       0.9520      0.24  Q         |         |         |     V   |
17+20       0.9537      0.25  Q         |         |         |     V   |
17+25       0.9554      0.25  Q         |         |         |     V   |
17+30       0.9571      0.25  Q         |         |         |      V  |
17+35       0.9589      0.25  Q         |         |         |      V  |
17+40       0.9606      0.25  Q         |         |         |      V  |
17+45       0.9623      0.25  Q         |         |         |      V  |
17+50       0.9639      0.23  Q         |         |         |      V  |
17+55       0.9653      0.21  Q         |         |         |      V  |
18+ 0       0.9667      0.20  Q         |         |         |      V  |
18+ 5       0.9681      0.20  Q         |         |         |      V  |
18+10       0.9695      0.20  Q         |         |         |      V  |
18+15       0.9708      0.20  Q         |         |         |      V  |
18+20       0.9722      0.20  Q         |         |         |      V  |
18+25       0.9736      0.20  Q         |         |         |      V  |
18+30       0.9750      0.20  Q         |         |         |      V  |
18+35       0.9762      0.18  Q         |         |         |      V  |
18+40       0.9773      0.16  Q         |         |         |      V  |
18+45       0.9783      0.15  Q         |         |         |      V  |
18+50       0.9792      0.13  Q         |         |         |      V  |
18+55       0.9800      0.11  Q         |         |         |      V  |
19+ 0       0.9807      0.10  Q         |         |         |      V  |
19+ 5       0.9815      0.12  Q         |         |         |       V |
19+10       0.9825      0.14  Q         |         |         |       V |
19+15       0.9835      0.15  Q         |         |         |       V |
19+20       0.9847      0.17  Q         |         |         |       V |
19+25       0.9860      0.19  Q         |         |         |       V |
19+30       0.9874      0.20  Q         |         |         |       V |
19+35       0.9886      0.18  Q         |         |         |       V |
19+40       0.9897      0.16  Q         |         |         |       V |
19+45       0.9907      0.15  Q         |         |         |       V |
19+50       0.9916      0.13  Q         |         |         |       V |
19+55       0.9924      0.11  Q         |         |         |       V |
20+ 0       0.9931      0.10  Q         |         |         |       V |
20+ 5       0.9939      0.12  Q         |         |         |       V |
20+10       0.9949      0.14  Q         |         |         |       V |
20+15       0.9959      0.15  Q         |         |         |       V |
20+20       0.9969      0.15  Q         |         |         |       V |
20+25       0.9980      0.15  Q         |         |         |       V |
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  20+30       0.9990      0.15  Q          |          |          |        V |
  20+35       1.0000      0.15  Q          |          |          |        V |
  20+40       1.0011      0.15  Q          |          |          |        V |
  20+45       1.0021      0.15  Q          |          |          |        V |
  20+50       1.0030      0.13  Q          |          |          |        V |
  20+55       1.0037      0.11  Q          |          |          |        V |
  21+ 0       1.0044      0.10  Q          |          |          |        V |
  21+ 5       1.0053      0.12  Q          |          |          |        V |
  21+10       1.0063      0.14  Q          |          |          |        V |
  21+15       1.0073      0.15  Q          |          |          |         V|
  21+20       1.0082      0.13  Q          |          |          |         V|
  21+25       1.0089      0.11  Q          |          |          |         V|
  21+30       1.0096      0.10  Q          |          |          |         V|
  21+35       1.0104      0.12  Q          |          |          |         V|
  21+40       1.0114      0.14  Q          |          |          |         V|
  21+45       1.0124      0.15  Q          |          |          |         V|
  21+50       1.0133      0.13  Q          |          |          |         V|
  21+55       1.0141      0.11  Q          |          |          |         V|
  22+ 0       1.0148      0.10  Q          |          |          |         V|
  22+ 5       1.0156      0.12  Q          |          |          |         V|
  22+10       1.0166      0.14  Q          |          |          |         V|
  22+15       1.0176      0.15  Q          |          |          |         V|
  22+20       1.0185      0.13  Q          |          |          |         V|
  22+25       1.0192      0.11  Q          |          |          |         V|
  22+30       1.0199      0.10  Q          |          |          |         V|
  22+35       1.0206      0.10  Q          |          |          |         V|
  22+40       1.0213      0.10  Q          |          |          |         V|
  22+45       1.0220      0.10  Q          |          |          |         V|
  22+50       1.0227      0.10  Q          |          |          |         V|
  22+55       1.0234      0.10  Q          |          |          |         V|
  23+ 0       1.0241      0.10  Q          |          |          |         V|
  23+ 5       1.0248      0.10  Q          |          |          |         V|
  23+10       1.0255      0.10  Q          |          |          |         V|
  23+15       1.0261      0.10  Q          |          |          |         V|
  23+20       1.0268      0.10  Q          |          |          |         V|
  23+25       1.0275      0.10  Q          |          |          |         V|
  23+30       1.0282      0.10  Q          |          |          |         V|
  23+35       1.0289      0.10  Q          |          |          |         V|
  23+40       1.0296      0.10  Q          |          |          |         V|
  23+45       1.0303      0.10  Q          |          |          |         V|
  23+50       1.0310      0.10  Q          |          |          |         V|
  23+55       1.0317      0.10  Q          |          |          |         V|
  24+ 0       1.0323      0.10  Q          |          |          |         V|
  24+ 5       1.0328      0.06  Q          |          |          |         V|
  24+10       1.0329      0.01  Q          |          |          |         V|
  24+15       1.0329      0.01  Q          |          |          |         V|
  24+20       1.0329      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 10/24/24 File: THECOVE12.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
1-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	0.57	5.66

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.45	14.40

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.570(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.570(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
		Sum = 100.000	Sum=	10.008

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	4.40	0.301	(0.189)	0.102	0.199
2	0.17	4.50	0.308	(0.189)	0.105	0.203
3	0.25	5.40	0.369	(0.189)	0.126	0.244
4	0.33	5.40	0.369	(0.189)	0.126	0.244
5	0.42	5.70	0.390	(0.189)	0.133	0.257
6	0.50	6.40	0.438	(0.189)	0.149	0.289
7	0.58	7.90	0.540	(0.189)	0.184	0.357
8	0.67	9.10	0.622	0.189	(0.212)	0.433
9	0.75	12.80	0.875	0.189	(0.298)	0.686
10	0.83	25.60	1.751	0.189	(0.595)	1.562
11	0.92	7.90	0.540	(0.189)	0.184	0.357
12	1.00	4.90	0.335	(0.189)	0.114	0.221
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	5.1

```
    Flood volume = Effective rainfall      0.42(In)
     times area       9.9(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
    Total soil loss =      0.15(In)
    Total soil loss =     0.123(Ac.Ft)
    Total rainfall =      0.57(In)
    Flood volume =       15174.0 Cubic Feet
    Total soil loss =        5370.3 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     11.320(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0073      1.05  V Q       |          |          |          |
   0+10       0.0200      1.85  | VQ      |          |          |          |
   0+15       0.0355      2.25  |   Q     |          |          |          |
   0+20       0.0521      2.41  |   QV    |          |          |          |
   0+25       0.0694      2.51  |    Q V  |          |          |          |
   0+30       0.0882      2.73  |    Q    V          |          |          |
   0+35       0.1104      3.23  |     Q   | V        |          |          |
   0+40       0.1375      3.92  |      Q  |    V     |          |          |
   0+45       0.1762      5.62  |         |Q         V          |          |
   0+50       0.2542     11.32  |         |          | Q      V|          |
   0+55       0.3130      8.54  |         |      Q   |          |    V     |
   1+ 0       0.3392      3.81  |      Q  |          |          |       V  |
   1+ 5       0.3471      1.15  | Q       |          |          |        V |
   1+10       0.3483      0.18  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 10/24/24 File: THECOVE32.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
3-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.00	9.93

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	2.50	24.82

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	1.30	0.156	(0.189)		0.053	0.103
2	0.17	1.30	0.156	(0.189)		0.053	0.103
3	0.25	1.10	0.132	(0.189)		0.045	0.087
4	0.33	1.50	0.180	(0.189)		0.061	0.119
5	0.42	1.50	0.180	(0.189)		0.061	0.119
6	0.50	1.80	0.216	(0.189)		0.073	0.143
7	0.58	1.50	0.180	(0.189)		0.061	0.119
8	0.67	1.80	0.216	(0.189)		0.073	0.143
9	0.75	1.80	0.216	(0.189)		0.073	0.143
10	0.83	1.50	0.180	(0.189)		0.061	0.119
11	0.92	1.60	0.192	(0.189)		0.065	0.127
12	1.00	1.80	0.216	(0.189)		0.073	0.143
13	1.08	2.20	0.264	(0.189)		0.090	0.174
14	1.17	2.20	0.264	(0.189)		0.090	0.174
15	1.25	2.20	0.264	(0.189)		0.090	0.174
16	1.33	2.00	0.240	(0.189)		0.082	0.158

17	1.42	2.60	0.312	(0.189)	0.106	0.206
18	1.50	2.70	0.324	(0.189)	0.110	0.214
19	1.58	2.40	0.288	(0.189)	0.098	0.190
20	1.67	2.70	0.324	(0.189)	0.110	0.214
21	1.75	3.30	0.396	(0.189)	0.135	0.261
22	1.83	3.10	0.372	(0.189)	0.126	0.246
23	1.92	2.90	0.348	(0.189)	0.118	0.230
24	2.00	3.00	0.360	(0.189)	0.122	0.238
25	2.08	3.10	0.372	(0.189)	0.126	0.246
26	2.17	4.20	0.504	(0.189)	0.171	0.333
27	2.25	5.00	0.600	0.189	(0.204)	0.411
28	2.33	3.50	0.420	(0.189)	0.143	0.277
29	2.42	6.80	0.816	0.189	(0.277)	0.627
30	2.50	7.30	0.876	0.189	(0.298)	0.687
31	2.58	8.20	0.984	0.189	(0.335)	0.795
32	2.67	5.90	0.708	0.189	(0.241)	0.519
33	2.75	2.00	0.240	(0.189)	0.082	0.158
34	2.83	1.80	0.216	(0.189)	0.073	0.143
35	2.92	1.80	0.216	(0.189)	0.073	0.143
36	3.00	0.60	0.072	(0.189)	0.024	0.048

(Loss Rate Not Used)

Sum = 100.0 Sum = 8.3

Flood volume = Effective rainfall 0.69(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.31(In)
Total soil loss = 0.253(Ac.Ft)
Total rainfall = 1.00(In)
Flood volume = 25019.4 Cubic Feet
Total soil loss = 11024.9 Cubic Feet

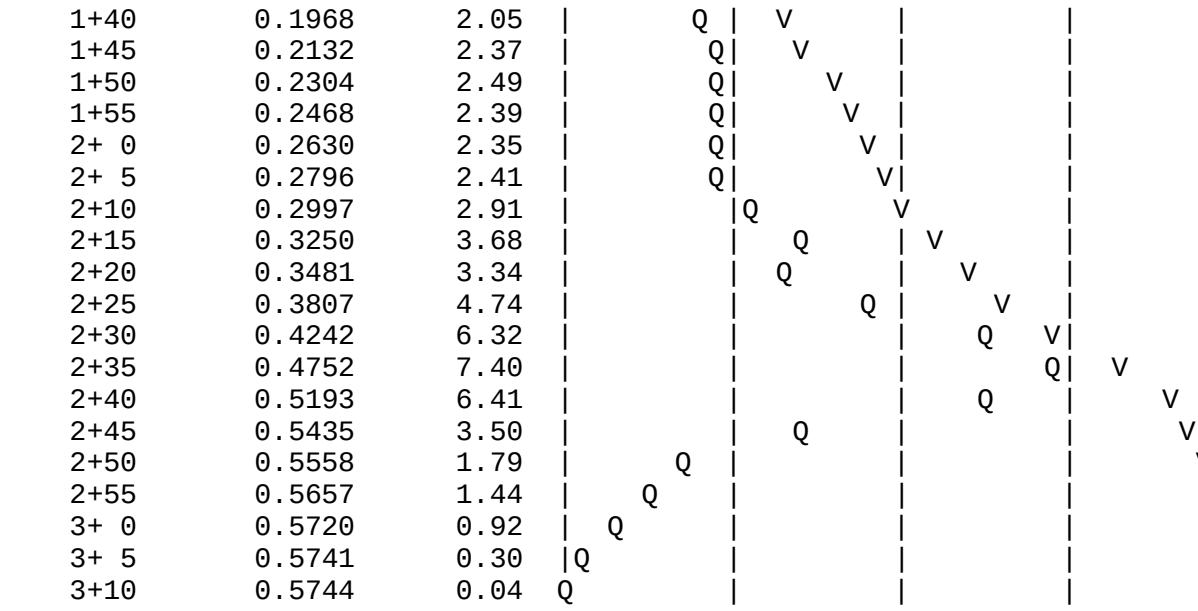
Peak flow rate of this hydrograph = 7.404(CFS)

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3 - 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	0.0038	0.55	V Q | | | |
0+10	0.0103	0.95	V Q | | | |
0+15	0.0168	0.95	|V Q | | | |
0+20	0.0241	1.05	|V Q | | | |
0+25	0.0321	1.16	| V Q | | | |
0+30	0.0412	1.32	| V Q | | | |
0+35	0.0500	1.28	| V Q | | | |
0+40	0.0592	1.33	| VQ | | | |
0+45	0.0689	1.41	| VQ | | | |
0+50	0.0778	1.30	| Q | | | |
0+55	0.0864	1.25	| QV | | | |
1+ 0	0.0957	1.35	| QV | | | |
1+ 5	0.1066	1.58	| QV | | | |
1+10	0.1185	1.72	| Q V | | | |
1+15	0.1305	1.74	| Q V| | | |
1+20	0.1419	1.66	| Q V| | | |
1+25	0.1547	1.85	| Q V | | |
1+30	0.1689	2.07	| Q |V | | |
1+35	0.1827	2.01	| Q | V | | |



1+40	0.1968	2.05	
1+45	0.2132	2.37	
1+50	0.2304	2.49	
1+55	0.2468	2.39	
2+ 0	0.2630	2.35	
2+ 5	0.2796	2.41	
2+10	0.2997	2.91	
2+15	0.3250	3.68	
2+20	0.3481	3.34	
2+25	0.3807	4.74	
2+30	0.4242	6.32	
2+35	0.4752	7.40	
2+40	0.5193	6.41	
2+45	0.5435	3.50	
2+50	0.5558	1.79	
2+55	0.5657	1.44	
3+ 0	0.5720	0.92	
3+ 5	0.5741	0.30	
3+10	0.5744	0.04	

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 10/24/24 File: THECOVE62.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
6-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.40	13.90

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	3.50	34.75

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.50	0.084	(0.189)		0.029	0.055
2	0.17	0.60	0.101	(0.189)		0.034	0.067
3	0.25	0.60	0.101	(0.189)		0.034	0.067
4	0.33	0.60	0.101	(0.189)		0.034	0.067
5	0.42	0.60	0.101	(0.189)		0.034	0.067
6	0.50	0.70	0.118	(0.189)		0.040	0.078
7	0.58	0.70	0.118	(0.189)		0.040	0.078
8	0.67	0.70	0.118	(0.189)		0.040	0.078
9	0.75	0.70	0.118	(0.189)		0.040	0.078
10	0.83	0.70	0.118	(0.189)		0.040	0.078
11	0.92	0.70	0.118	(0.189)		0.040	0.078
12	1.00	0.80	0.134	(0.189)		0.046	0.089
13	1.08	0.80	0.134	(0.189)		0.046	0.089
14	1.17	0.80	0.134	(0.189)		0.046	0.089
15	1.25	0.80	0.134	(0.189)		0.046	0.089
16	1.33	0.80	0.134	(0.189)		0.046	0.089

17	1.42	0.80	0.134	(0.189)	0.046	0.089
18	1.50	0.80	0.134	(0.189)	0.046	0.089
19	1.58	0.80	0.134	(0.189)	0.046	0.089
20	1.67	0.80	0.134	(0.189)	0.046	0.089
21	1.75	0.80	0.134	(0.189)	0.046	0.089
22	1.83	0.80	0.134	(0.189)	0.046	0.089
23	1.92	0.80	0.134	(0.189)	0.046	0.089
24	2.00	0.90	0.151	(0.189)	0.051	0.100
25	2.08	0.80	0.134	(0.189)	0.046	0.089
26	2.17	0.90	0.151	(0.189)	0.051	0.100
27	2.25	0.90	0.151	(0.189)	0.051	0.100
28	2.33	0.90	0.151	(0.189)	0.051	0.100
29	2.42	0.90	0.151	(0.189)	0.051	0.100
30	2.50	0.90	0.151	(0.189)	0.051	0.100
31	2.58	0.90	0.151	(0.189)	0.051	0.100
32	2.67	0.90	0.151	(0.189)	0.051	0.100
33	2.75	1.00	0.168	(0.189)	0.057	0.111
34	2.83	1.00	0.168	(0.189)	0.057	0.111
35	2.92	1.00	0.168	(0.189)	0.057	0.111
36	3.00	1.00	0.168	(0.189)	0.057	0.111
37	3.08	1.00	0.168	(0.189)	0.057	0.111
38	3.17	1.10	0.185	(0.189)	0.063	0.122
39	3.25	1.10	0.185	(0.189)	0.063	0.122
40	3.33	1.10	0.185	(0.189)	0.063	0.122
41	3.42	1.20	0.202	(0.189)	0.069	0.133
42	3.50	1.30	0.218	(0.189)	0.074	0.144
43	3.58	1.40	0.235	(0.189)	0.080	0.155
44	3.67	1.40	0.235	(0.189)	0.080	0.155
45	3.75	1.50	0.252	(0.189)	0.086	0.166
46	3.83	1.50	0.252	(0.189)	0.086	0.166
47	3.92	1.60	0.269	(0.189)	0.091	0.177
48	4.00	1.60	0.269	(0.189)	0.091	0.177
49	4.08	1.70	0.286	(0.189)	0.097	0.188
50	4.17	1.80	0.302	(0.189)	0.103	0.200
51	4.25	1.90	0.319	(0.189)	0.109	0.211
52	4.33	2.00	0.336	(0.189)	0.114	0.222
53	4.42	2.10	0.353	(0.189)	0.120	0.233
54	4.50	2.10	0.353	(0.189)	0.120	0.233
55	4.58	2.20	0.370	(0.189)	0.126	0.244
56	4.67	2.30	0.386	(0.189)	0.131	0.255
57	4.75	2.40	0.403	(0.189)	0.137	0.266
58	4.83	2.40	0.403	(0.189)	0.137	0.266
59	4.92	2.50	0.420	(0.189)	0.143	0.277
60	5.00	2.60	0.437	(0.189)	0.149	0.288
61	5.08	3.10	0.521	(0.189)	0.177	0.344
62	5.17	3.60	0.605	0.189	(0.206)	0.416
63	5.25	3.90	0.655	0.189	(0.223)	0.466
64	5.33	4.20	0.706	0.189	(0.240)	0.517
65	5.42	4.70	0.790	0.189	(0.268)	0.601
66	5.50	5.60	0.941	0.189	(0.320)	0.752
67	5.58	1.90	0.319	(0.189)	0.109	0.211
68	5.67	0.90	0.151	(0.189)	0.051	0.100
69	5.75	0.60	0.101	(0.189)	0.034	0.067
70	5.83	0.50	0.084	(0.189)	0.029	0.055
71	5.92	0.30	0.050	(0.189)	0.017	0.033
72	6.00	0.20	0.034	(0.189)	0.011	0.022

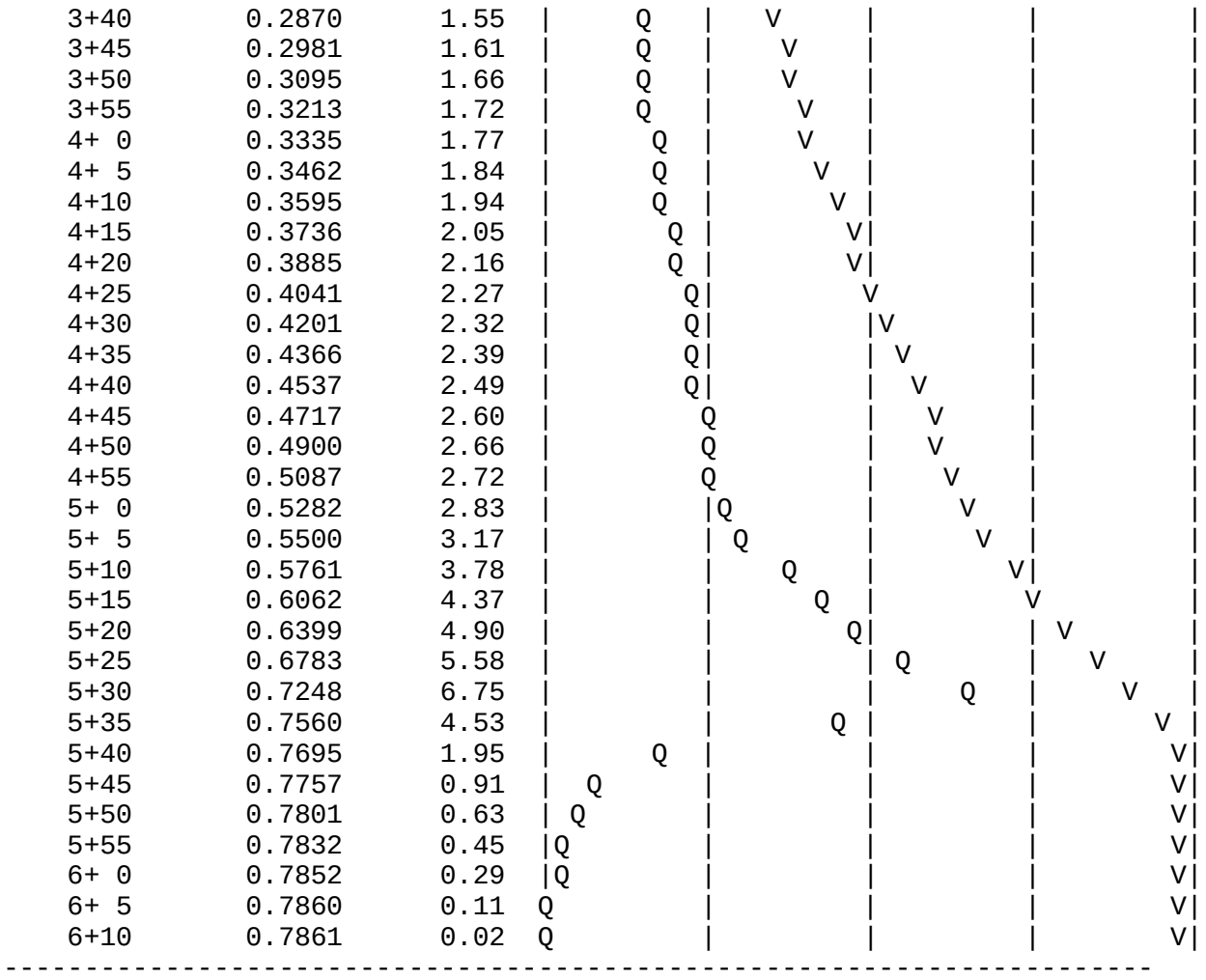
(Loss Rate Not Used)

Sum = 100.0 Sum = 11.4

Flood volume = Effective rainfall 0.95(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)

```
   Total soil loss =      0.45(In)
   Total soil loss =     0.372(Ac.Ft)
   Total rainfall =      1.40(In)
   Flood volume =       34241.3 Cubic Feet
   Total soil loss =       16221.2 Cubic Feet
   ------------------------------------------------------------------------
    Peak flow rate of this hydrograph =      6.749(CFS)
   ------------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0020      0.29  VQ        |         |         |         |
  0+10       0.0060      0.57  V Q       |         |         |         |
  0+15       0.0105      0.66  V Q       |         |         |         |
  0+20       0.0151      0.67  V Q       |         |         |         |
  0+25       0.0197      0.67  |VQ       |         |         |         |
  0+30       0.0246      0.72  |VQ       |         |         |         |
  0+35       0.0299      0.77  |V Q      |         |         |         |
  0+40       0.0353      0.78  |V Q      |         |         |         |
  0+45       0.0406      0.78  | VQ      |         |         |         |
  0+50       0.0460      0.78  | VQ      |         |         |         |
  0+55       0.0513      0.78  | VQ      |         |         |         |
  1+ 0       0.0571      0.84  | VQ      |         |         |         |
  1+ 5       0.0632      0.88  |  Q      |         |         |         |
  1+10       0.0693      0.89  |  Q      |         |         |         |
  1+15       0.0754      0.89  |  Q      |         |         |         |
  1+20       0.0815      0.89  |  QV     |         |         |         |
  1+25       0.0876      0.89  |  QV     |         |         |         |
  1+30       0.0937      0.89  |  QV     |         |         |         |
  1+35       0.0999      0.89  |  Q V    |         |         |         |
  1+40       0.1060      0.89  |  Q V    |         |         |         |
  1+45       0.1121      0.89  |  Q V    |         |         |         |
  1+50       0.1182      0.89  |  Q  V   |         |         |         |
  1+55       0.1243      0.89  |  Q  V   |         |         |         |
  2+ 0       0.1308      0.95  |  Q  V   |         |         |         |
  2+ 5       0.1373      0.93  |  Q  V   |         |         |         |
  2+10       0.1438      0.96  |  Q   V  |         |         |         |
  2+15       0.1507      0.99  |  Q   V  |         |         |         |
  2+20       0.1575      1.00  |  Q    V |         |         |         |
  2+25       0.1644      1.00  |  Q    V |         |         |         |
  2+30       0.1713      1.00  |  Q    V |         |         |         |
  2+35       0.1782      1.00  |  Q     V|         |         |         |
  2+40       0.1851      1.00  |  Q     V|         |         |         |
  2+45       0.1924      1.06  |   Q    V|         |         |         |
  2+50       0.1999      1.10  |   Q     V         |         |         |
  2+55       0.2076      1.11  |   Q     V         |         |         |
  3+ 0       0.2152      1.11  |   Q     V         |         |         |
  3+ 5       0.2229      1.11  |   Q     |V        |         |         |
  3+10       0.2309      1.17  |   Q     |V        |         |         |
  3+15       0.2393      1.21  |   Q     | V       |         |         |
  3+20       0.2477      1.22  |   Q     | V       |         |         |
  3+25       0.2565      1.28  |    Q    |  V      |         |         |
  3+30       0.2660      1.38  |    Q    |  V      |         |         |
  3+35       0.2763      1.49  |    Q    |   V     |         |         |
```


3+40 0.2870 1.55
3+45 0.2981 1.61
3+50 0.3095 1.66
3+55 0.3213 1.72
4+ 0 0.3335 1.77
4+ 5 0.3462 1.84
4+10 0.3595 1.94
4+15 0.3736 2.05
4+20 0.3885 2.16
4+25 0.4041 2.27
4+30 0.4201 2.32
4+35 0.4366 2.39
4+40 0.4537 2.49
4+45 0.4717 2.60
4+50 0.4900 2.66
4+55 0.5087 2.72
5+ 0 0.5282 2.83
5+ 5 0.5500 3.17
5+10 0.5761 3.78
5+15 0.6062 4.37
5+20 0.6399 4.90
5+25 0.6783 5.58
5+30 0.7248 6.75
5+35 0.7560 4.53
5+40 0.7695 1.95
5+45 0.7757 0.91
5+50 0.7801 0.63
5+55 0.7832 0.45
6+ 0 0.7852 0.29
6+ 5 0.7860 0.11
6+10 0.7861 0.02

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 10/24/24 File: THECOVE242.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
2-YR
24-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 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]
9.93	2.50	24.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	6.00	59.58

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.020	(0.335)		0.007	0.013
2	0.17	0.07	0.020	(0.334)		0.007	0.013
3	0.25	0.07	0.020	(0.332)		0.007	0.013
4	0.33	0.10	0.030	(0.331)		0.010	0.020
5	0.42	0.10	0.030	(0.330)		0.010	0.020
6	0.50	0.10	0.030	(0.329)		0.010	0.020
7	0.58	0.10	0.030	(0.327)		0.010	0.020
8	0.67	0.10	0.030	(0.326)		0.010	0.020
9	0.75	0.10	0.030	(0.325)		0.010	0.020
10	0.83	0.13	0.040	(0.323)		0.014	0.026
11	0.92	0.13	0.040	(0.322)		0.014	0.026
12	1.00	0.13	0.040	(0.321)		0.014	0.026
13	1.08	0.10	0.030	(0.320)		0.010	0.020
14	1.17	0.10	0.030	(0.318)		0.010	0.020
15	1.25	0.10	0.030	(0.317)		0.010	0.020
16	1.33	0.10	0.030	(0.316)		0.010	0.020

17	1.42	0.10	0.030	(0.315)	0.010	0.020
18	1.50	0.10	0.030	(0.313)	0.010	0.020
19	1.58	0.10	0.030	(0.312)	0.010	0.020
20	1.67	0.10	0.030	(0.311)	0.010	0.020
21	1.75	0.10	0.030	(0.310)	0.010	0.020
22	1.83	0.13	0.040	(0.308)	0.014	0.026
23	1.92	0.13	0.040	(0.307)	0.014	0.026
24	2.00	0.13	0.040	(0.306)	0.014	0.026
25	2.08	0.13	0.040	(0.305)	0.014	0.026
26	2.17	0.13	0.040	(0.303)	0.014	0.026
27	2.25	0.13	0.040	(0.302)	0.014	0.026
28	2.33	0.13	0.040	(0.301)	0.014	0.026
29	2.42	0.13	0.040	(0.300)	0.014	0.026
30	2.50	0.13	0.040	(0.298)	0.014	0.026
31	2.58	0.17	0.050	(0.297)	0.017	0.033
32	2.67	0.17	0.050	(0.296)	0.017	0.033
33	2.75	0.17	0.050	(0.295)	0.017	0.033
34	2.83	0.17	0.050	(0.294)	0.017	0.033
35	2.92	0.17	0.050	(0.292)	0.017	0.033
36	3.00	0.17	0.050	(0.291)	0.017	0.033
37	3.08	0.17	0.050	(0.290)	0.017	0.033
38	3.17	0.17	0.050	(0.289)	0.017	0.033
39	3.25	0.17	0.050	(0.288)	0.017	0.033
40	3.33	0.17	0.050	(0.286)	0.017	0.033
41	3.42	0.17	0.050	(0.285)	0.017	0.033
42	3.50	0.17	0.050	(0.284)	0.017	0.033
43	3.58	0.17	0.050	(0.283)	0.017	0.033
44	3.67	0.17	0.050	(0.282)	0.017	0.033
45	3.75	0.17	0.050	(0.280)	0.017	0.033
46	3.83	0.20	0.060	(0.279)	0.020	0.040
47	3.92	0.20	0.060	(0.278)	0.020	0.040
48	4.00	0.20	0.060	(0.277)	0.020	0.040
49	4.08	0.20	0.060	(0.276)	0.020	0.040
50	4.17	0.20	0.060	(0.275)	0.020	0.040
51	4.25	0.20	0.060	(0.273)	0.020	0.040
52	4.33	0.23	0.070	(0.272)	0.024	0.046
53	4.42	0.23	0.070	(0.271)	0.024	0.046
54	4.50	0.23	0.070	(0.270)	0.024	0.046
55	4.58	0.23	0.070	(0.269)	0.024	0.046
56	4.67	0.23	0.070	(0.268)	0.024	0.046
57	4.75	0.23	0.070	(0.266)	0.024	0.046
58	4.83	0.27	0.080	(0.265)	0.027	0.053
59	4.92	0.27	0.080	(0.264)	0.027	0.053
60	5.00	0.27	0.080	(0.263)	0.027	0.053
61	5.08	0.20	0.060	(0.262)	0.020	0.040
62	5.17	0.20	0.060	(0.261)	0.020	0.040
63	5.25	0.20	0.060	(0.260)	0.020	0.040
64	5.33	0.23	0.070	(0.258)	0.024	0.046
65	5.42	0.23	0.070	(0.257)	0.024	0.046
66	5.50	0.23	0.070	(0.256)	0.024	0.046
67	5.58	0.27	0.080	(0.255)	0.027	0.053
68	5.67	0.27	0.080	(0.254)	0.027	0.053
69	5.75	0.27	0.080	(0.253)	0.027	0.053
70	5.83	0.27	0.080	(0.252)	0.027	0.053
71	5.92	0.27	0.080	(0.251)	0.027	0.053
72	6.00	0.27	0.080	(0.249)	0.027	0.053
73	6.08	0.30	0.090	(0.248)	0.031	0.059
74	6.17	0.30	0.090	(0.247)	0.031	0.059
75	6.25	0.30	0.090	(0.246)	0.031	0.059
76	6.33	0.30	0.090	(0.245)	0.031	0.059

77	6.42	0.30	0.090	(0.244)	0.031	0.059
78	6.50	0.30	0.090	(0.243)	0.031	0.059
79	6.58	0.33	0.100	(0.242)	0.034	0.066
80	6.67	0.33	0.100	(0.241)	0.034	0.066
81	6.75	0.33	0.100	(0.240)	0.034	0.066
82	6.83	0.33	0.100	(0.239)	0.034	0.066
83	6.92	0.33	0.100	(0.237)	0.034	0.066
84	7.00	0.33	0.100	(0.236)	0.034	0.066
85	7.08	0.33	0.100	(0.235)	0.034	0.066
86	7.17	0.33	0.100	(0.234)	0.034	0.066
87	7.25	0.33	0.100	(0.233)	0.034	0.066
88	7.33	0.37	0.110	(0.232)	0.037	0.073
89	7.42	0.37	0.110	(0.231)	0.037	0.073
90	7.50	0.37	0.110	(0.230)	0.037	0.073
91	7.58	0.40	0.120	(0.229)	0.041	0.079
92	7.67	0.40	0.120	(0.228)	0.041	0.079
93	7.75	0.40	0.120	(0.227)	0.041	0.079
94	7.83	0.43	0.130	(0.226)	0.044	0.086
95	7.92	0.43	0.130	(0.225)	0.044	0.086
96	8.00	0.43	0.130	(0.224)	0.044	0.086
97	8.08	0.50	0.150	(0.223)	0.051	0.099
98	8.17	0.50	0.150	(0.222)	0.051	0.099
99	8.25	0.50	0.150	(0.221)	0.051	0.099
100	8.33	0.50	0.150	(0.220)	0.051	0.099
101	8.42	0.50	0.150	(0.219)	0.051	0.099
102	8.50	0.50	0.150	(0.217)	0.051	0.099
103	8.58	0.53	0.160	(0.216)	0.054	0.106
104	8.67	0.53	0.160	(0.215)	0.054	0.106
105	8.75	0.53	0.160	(0.214)	0.054	0.106
106	8.83	0.57	0.170	(0.213)	0.058	0.112
107	8.92	0.57	0.170	(0.212)	0.058	0.112
108	9.00	0.57	0.170	(0.211)	0.058	0.112
109	9.08	0.63	0.190	(0.210)	0.065	0.125
110	9.17	0.63	0.190	(0.209)	0.065	0.125
111	9.25	0.63	0.190	(0.208)	0.065	0.125
112	9.33	0.67	0.200	(0.207)	0.068	0.132
113	9.42	0.67	0.200	(0.206)	0.068	0.132
114	9.50	0.67	0.200	(0.205)	0.068	0.132
115	9.58	0.70	0.210	(0.204)	0.071	0.139
116	9.67	0.70	0.210	(0.203)	0.071	0.139
117	9.75	0.70	0.210	(0.202)	0.071	0.139
118	9.83	0.73	0.220	(0.202)	0.075	0.145
119	9.92	0.73	0.220	(0.201)	0.075	0.145
120	10.00	0.73	0.220	(0.200)	0.075	0.145
121	10.08	0.50	0.150	(0.199)	0.051	0.099
122	10.17	0.50	0.150	(0.198)	0.051	0.099
123	10.25	0.50	0.150	(0.197)	0.051	0.099
124	10.33	0.50	0.150	(0.196)	0.051	0.099
125	10.42	0.50	0.150	(0.195)	0.051	0.099
126	10.50	0.50	0.150	(0.194)	0.051	0.099
127	10.58	0.67	0.200	(0.193)	0.068	0.132
128	10.67	0.67	0.200	(0.192)	0.068	0.132
129	10.75	0.67	0.200	(0.191)	0.068	0.132
130	10.83	0.67	0.200	(0.190)	0.068	0.132
131	10.92	0.67	0.200	(0.189)	0.068	0.132
132	11.00	0.67	0.200	(0.188)	0.068	0.132
133	11.08	0.63	0.190	(0.187)	0.065	0.125
134	11.17	0.63	0.190	(0.186)	0.065	0.125
135	11.25	0.63	0.190	(0.185)	0.065	0.125
136	11.33	0.63	0.190	(0.185)	0.065	0.125

137	11.42	0.63	0.190	(0.184)	0.065	0.125
138	11.50	0.63	0.190	(0.183)	0.065	0.125
139	11.58	0.57	0.170	(0.182)	0.058	0.112
140	11.67	0.57	0.170	(0.181)	0.058	0.112
141	11.75	0.57	0.170	(0.180)	0.058	0.112
142	11.83	0.60	0.180	(0.179)	0.061	0.119
143	11.92	0.60	0.180	(0.178)	0.061	0.119
144	12.00	0.60	0.180	(0.177)	0.061	0.119
145	12.08	0.83	0.250	(0.176)	0.085	0.165
146	12.17	0.83	0.250	(0.176)	0.085	0.165
147	12.25	0.83	0.250	(0.175)	0.085	0.165
148	12.33	0.87	0.260	(0.174)	0.088	0.172
149	12.42	0.87	0.260	(0.173)	0.088	0.172
150	12.50	0.87	0.260	(0.172)	0.088	0.172
151	12.58	0.93	0.280	(0.171)	0.095	0.185
152	12.67	0.93	0.280	(0.170)	0.095	0.185
153	12.75	0.93	0.280	(0.169)	0.095	0.185
154	12.83	0.97	0.290	(0.169)	0.099	0.191
155	12.92	0.97	0.290	(0.168)	0.099	0.191
156	13.00	0.97	0.290	(0.167)	0.099	0.191
157	13.08	1.13	0.340	(0.166)	0.116	0.224
158	13.17	1.13	0.340	(0.165)	0.116	0.224
159	13.25	1.13	0.340	(0.164)	0.116	0.224
160	13.33	1.13	0.340	(0.164)	0.116	0.224
161	13.42	1.13	0.340	(0.163)	0.116	0.224
162	13.50	1.13	0.340	(0.162)	0.116	0.224
163	13.58	0.77	0.230	(0.161)	0.078	0.152
164	13.67	0.77	0.230	(0.160)	0.078	0.152
165	13.75	0.77	0.230	(0.159)	0.078	0.152
166	13.83	0.77	0.230	(0.159)	0.078	0.152
167	13.92	0.77	0.230	(0.158)	0.078	0.152
168	14.00	0.77	0.230	(0.157)	0.078	0.152
169	14.08	0.90	0.270	(0.156)	0.092	0.178
170	14.17	0.90	0.270	(0.155)	0.092	0.178
171	14.25	0.90	0.270	(0.155)	0.092	0.178
172	14.33	0.87	0.260	(0.154)	0.088	0.172
173	14.42	0.87	0.260	(0.153)	0.088	0.172
174	14.50	0.87	0.260	(0.152)	0.088	0.172
175	14.58	0.87	0.260	(0.151)	0.088	0.172
176	14.67	0.87	0.260	(0.151)	0.088	0.172
177	14.75	0.87	0.260	(0.150)	0.088	0.172
178	14.83	0.83	0.250	(0.149)	0.085	0.165
179	14.92	0.83	0.250	(0.148)	0.085	0.165
180	15.00	0.83	0.250	(0.148)	0.085	0.165
181	15.08	0.80	0.240	(0.147)	0.082	0.158
182	15.17	0.80	0.240	(0.146)	0.082	0.158
183	15.25	0.80	0.240	(0.145)	0.082	0.158
184	15.33	0.77	0.230	(0.145)	0.078	0.152
185	15.42	0.77	0.230	(0.144)	0.078	0.152
186	15.50	0.77	0.230	(0.143)	0.078	0.152
187	15.58	0.63	0.190	(0.142)	0.065	0.125
188	15.67	0.63	0.190	(0.142)	0.065	0.125
189	15.75	0.63	0.190	(0.141)	0.065	0.125
190	15.83	0.63	0.190	(0.140)	0.065	0.125
191	15.92	0.63	0.190	(0.140)	0.065	0.125
192	16.00	0.63	0.190	(0.139)	0.065	0.125
193	16.08	0.13	0.040	(0.138)	0.014	0.026
194	16.17	0.13	0.040	(0.137)	0.014	0.026
195	16.25	0.13	0.040	(0.137)	0.014	0.026
196	16.33	0.13	0.040	(0.136)	0.014	0.026

197	16.42	0.13	0.040	(0.135)	0.014	0.026
198	16.50	0.13	0.040	(0.135)	0.014	0.026
199	16.58	0.10	0.030	(0.134)	0.010	0.020
200	16.67	0.10	0.030	(0.133)	0.010	0.020
201	16.75	0.10	0.030	(0.133)	0.010	0.020
202	16.83	0.10	0.030	(0.132)	0.010	0.020
203	16.92	0.10	0.030	(0.131)	0.010	0.020
204	17.00	0.10	0.030	(0.131)	0.010	0.020
205	17.08	0.17	0.050	(0.130)	0.017	0.033
206	17.17	0.17	0.050	(0.129)	0.017	0.033
207	17.25	0.17	0.050	(0.129)	0.017	0.033
208	17.33	0.17	0.050	(0.128)	0.017	0.033
209	17.42	0.17	0.050	(0.127)	0.017	0.033
210	17.50	0.17	0.050	(0.127)	0.017	0.033
211	17.58	0.17	0.050	(0.126)	0.017	0.033
212	17.67	0.17	0.050	(0.125)	0.017	0.033
213	17.75	0.17	0.050	(0.125)	0.017	0.033
214	17.83	0.13	0.040	(0.124)	0.014	0.026
215	17.92	0.13	0.040	(0.124)	0.014	0.026
216	18.00	0.13	0.040	(0.123)	0.014	0.026
217	18.08	0.13	0.040	(0.122)	0.014	0.026
218	18.17	0.13	0.040	(0.122)	0.014	0.026
219	18.25	0.13	0.040	(0.121)	0.014	0.026
220	18.33	0.13	0.040	(0.121)	0.014	0.026
221	18.42	0.13	0.040	(0.120)	0.014	0.026
222	18.50	0.13	0.040	(0.119)	0.014	0.026
223	18.58	0.10	0.030	(0.119)	0.010	0.020
224	18.67	0.10	0.030	(0.118)	0.010	0.020
225	18.75	0.10	0.030	(0.118)	0.010	0.020
226	18.83	0.07	0.020	(0.117)	0.007	0.013
227	18.92	0.07	0.020	(0.117)	0.007	0.013
228	19.00	0.07	0.020	(0.116)	0.007	0.013
229	19.08	0.10	0.030	(0.115)	0.010	0.020
230	19.17	0.10	0.030	(0.115)	0.010	0.020
231	19.25	0.10	0.030	(0.114)	0.010	0.020
232	19.33	0.13	0.040	(0.114)	0.014	0.026
233	19.42	0.13	0.040	(0.113)	0.014	0.026
234	19.50	0.13	0.040	(0.113)	0.014	0.026
235	19.58	0.10	0.030	(0.112)	0.010	0.020
236	19.67	0.10	0.030	(0.112)	0.010	0.020
237	19.75	0.10	0.030	(0.111)	0.010	0.020
238	19.83	0.07	0.020	(0.111)	0.007	0.013
239	19.92	0.07	0.020	(0.110)	0.007	0.013
240	20.00	0.07	0.020	(0.110)	0.007	0.013
241	20.08	0.10	0.030	(0.109)	0.010	0.020
242	20.17	0.10	0.030	(0.109)	0.010	0.020
243	20.25	0.10	0.030	(0.108)	0.010	0.020
244	20.33	0.10	0.030	(0.108)	0.010	0.020
245	20.42	0.10	0.030	(0.107)	0.010	0.020
246	20.50	0.10	0.030	(0.107)	0.010	0.020
247	20.58	0.10	0.030	(0.106)	0.010	0.020
248	20.67	0.10	0.030	(0.106)	0.010	0.020
249	20.75	0.10	0.030	(0.106)	0.010	0.020
250	20.83	0.07	0.020	(0.105)	0.007	0.013
251	20.92	0.07	0.020	(0.105)	0.007	0.013
252	21.00	0.07	0.020	(0.104)	0.007	0.013
253	21.08	0.10	0.030	(0.104)	0.010	0.020
254	21.17	0.10	0.030	(0.103)	0.010	0.020
255	21.25	0.10	0.030	(0.103)	0.010	0.020
256	21.33	0.07	0.020	(0.103)	0.007	0.013

257	21.42	0.07	0.020	(0.102)	0.007	0.013
258	21.50	0.07	0.020	(0.102)	0.007	0.013
259	21.58	0.10	0.030	(0.102)	0.010	0.020
260	21.67	0.10	0.030	(0.101)	0.010	0.020
261	21.75	0.10	0.030	(0.101)	0.010	0.020
262	21.83	0.07	0.020	(0.100)	0.007	0.013
263	21.92	0.07	0.020	(0.100)	0.007	0.013
264	22.00	0.07	0.020	(0.100)	0.007	0.013
265	22.08	0.10	0.030	(0.099)	0.010	0.020
266	22.17	0.10	0.030	(0.099)	0.010	0.020
267	22.25	0.10	0.030	(0.099)	0.010	0.020
268	22.33	0.07	0.020	(0.099)	0.007	0.013
269	22.42	0.07	0.020	(0.098)	0.007	0.013
270	22.50	0.07	0.020	(0.098)	0.007	0.013
271	22.58	0.07	0.020	(0.098)	0.007	0.013
272	22.67	0.07	0.020	(0.097)	0.007	0.013
273	22.75	0.07	0.020	(0.097)	0.007	0.013
274	22.83	0.07	0.020	(0.097)	0.007	0.013
275	22.92	0.07	0.020	(0.097)	0.007	0.013
276	23.00	0.07	0.020	(0.096)	0.007	0.013
277	23.08	0.07	0.020	(0.096)	0.007	0.013
278	23.17	0.07	0.020	(0.096)	0.007	0.013
279	23.25	0.07	0.020	(0.096)	0.007	0.013
280	23.33	0.07	0.020	(0.096)	0.007	0.013
281	23.42	0.07	0.020	(0.095)	0.007	0.013
282	23.50	0.07	0.020	(0.095)	0.007	0.013
283	23.58	0.07	0.020	(0.095)	0.007	0.013
284	23.67	0.07	0.020	(0.095)	0.007	0.013
285	23.75	0.07	0.020	(0.095)	0.007	0.013
286	23.83	0.07	0.020	(0.095)	0.007	0.013
287	23.92	0.07	0.020	(0.095)	0.007	0.013
288	24.00	0.07	0.020	(0.095)	0.007	0.013

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.8

Flood volume = Effective rainfall 1.65(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 1.4(Ac.Ft)
Total soil loss = 0.85(In)
Total soil loss = 0.703(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 59474.6 Cubic Feet
Total soil loss = 30638.4 Cubic Feet

Peak flow rate of this hydrograph = 2.247(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0005	0.07	Q	|	|	|	|
0+10	0.0013	0.12	Q	|	|	|	|
0+15	0.0022	0.13	Q	|	|	|	|
0+20	0.0034	0.17	Q	|	|	|	|
0+25	0.0047	0.19	Q	|	|	|	|
0+30	0.0061	0.20	Q	|	|	|	|
0+35	0.0074	0.20	Q	|	|	|	|

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0+40       0.0088      0.20  Q        |          |          |          |
0+45       0.0102      0.20  Q        |          |          |          |
0+50       0.0118      0.23  Q        |          |          |          |
0+55       0.0136      0.26  VQ       |          |          |          |
1+ 0       0.0154      0.26  VQ       |          |          |          |
1+ 5       0.0170      0.23  Q        |          |          |          |
1+10       0.0184      0.20  Q        |          |          |          |
1+15       0.0197      0.20  Q        |          |          |          |
1+20       0.0211      0.20  Q        |          |          |          |
1+25       0.0225      0.20  Q        |          |          |          |
1+30       0.0238      0.20  Q        |          |          |          |
1+35       0.0252      0.20  Q        |          |          |          |
1+40       0.0266      0.20  Q        |          |          |          |
1+45       0.0279      0.20  Q        |          |          |          |
1+50       0.0295      0.23  Q        |          |          |          |
1+55       0.0313      0.26  VQ       |          |          |          |
2+ 0       0.0331      0.26  VQ       |          |          |          |
2+ 5       0.0350      0.26  |Q       |          |          |          |
2+10       0.0368      0.26  |Q       |          |          |          |
2+15       0.0386      0.26  |Q       |          |          |          |
2+20       0.0404      0.26  |Q       |          |          |          |
2+25       0.0422      0.26  |Q       |          |          |          |
2+30       0.0441      0.26  |Q       |          |          |          |
2+35       0.0461      0.30  |Q       |          |          |          |
2+40       0.0484      0.33  |Q       |          |          |          |
2+45       0.0506      0.33  |Q       |          |          |          |
2+50       0.0529      0.33  |Q       |          |          |          |
2+55       0.0552      0.33  |Q       |          |          |          |
3+ 0       0.0575      0.33  |Q       |          |          |          |
3+ 5       0.0597      0.33  |Q       |          |          |          |
3+10       0.0620      0.33  |Q       |          |          |          |
3+15       0.0643      0.33  |Q       |          |          |          |
3+20       0.0666      0.33  |Q       |          |          |          |
3+25       0.0688      0.33  |QV      |          |          |          |
3+30       0.0711      0.33  |QV      |          |          |          |
3+35       0.0734      0.33  |QV      |          |          |          |
3+40       0.0757      0.33  |QV      |          |          |          |
3+45       0.0779      0.33  |QV      |          |          |          |
3+50       0.0805      0.37  |QV      |          |          |          |
3+55       0.0832      0.39  |QV      |          |          |          |
4+ 0       0.0859      0.40  |QV      |          |          |          |
4+ 5       0.0886      0.40  |QV      |          |          |          |
4+10       0.0913      0.40  |QV      |          |          |          |
4+15       0.0941      0.40  |QV      |          |          |          |
4+20       0.0970      0.43  |QV      |          |          |          |
4+25       0.1002      0.46  |QV      |          |          |          |
4+30       0.1034      0.46  |Q V     |          |          |          |
4+35       0.1066      0.46  |Q V     |          |          |          |
4+40       0.1098      0.46  |Q V     |          |          |          |
4+45       0.1129      0.46  |Q V     |          |          |          |
4+50       0.1164      0.50  |Q V     |          |          |          |
4+55       0.1200      0.52  | QV     |          |          |          |
5+ 0       0.1236      0.53  | QV     |          |          |          |
5+ 5       0.1268      0.46  |Q V     |          |          |          |
5+10       0.1296      0.41  |Q V     |          |          |          |
5+15       0.1323      0.40  |Q V     |          |          |          |
5+20       0.1353      0.43  |Q V     |          |          |          |
5+25       0.1384      0.46  |Q  V    |          |          |          |
5+30       0.1416      0.46  |Q  V    |          |          |          |
5+35       0.1450      0.50  |Q  V    |          |          |          |
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5+40	0.1486	0.52	Q V				
5+45	0.1523	0.53	Q V				
5+50	0.1559	0.53	Q V				
5+55	0.1596	0.53	Q V				
6+ 0	0.1632	0.53	Q V				
6+ 5	0.1671	0.56	Q V				
6+10	0.1711	0.59	Q V				
6+15	0.1752	0.59	Q V				
6+20	0.1793	0.59	Q V				
6+25	0.1834	0.59	Q V				
6+30	0.1875	0.59	Q V				
6+35	0.1919	0.63	Q V				
6+40	0.1964	0.66	Q V				
6+45	0.2009	0.66	Q V				
6+50	0.2055	0.66	Q V				
6+55	0.2100	0.66	Q V				
7+ 0	0.2146	0.66	Q V				
7+ 5	0.2191	0.66	Q V				
7+10	0.2237	0.66	Q V				
7+15	0.2282	0.66	Q V				
7+20	0.2330	0.70	Q V				
7+25	0.2380	0.72	Q V				
7+30	0.2430	0.73	Q V				
7+35	0.2483	0.76	Q V				
7+40	0.2537	0.79	Q V				
7+45	0.2591	0.79	Q V				
7+50	0.2649	0.83	Q V				
7+55	0.2707	0.85	Q V				
8+ 0	0.2766	0.86	Q V				
8+ 5	0.2830	0.93	Q V				
8+10	0.2898	0.98	Q V				
8+15	0.2966	0.99	Q V				
8+20	0.3035	0.99	Q V				
8+25	0.3103	0.99	Q V				
8+30	0.3171	0.99	Q V				
8+35	0.3242	1.03	Q V				
8+40	0.3314	1.05	Q V				
8+45	0.3387	1.06	Q V				
8+50	0.3462	1.09	Q V				
8+55	0.3539	1.12	Q V				
9+ 0	0.3617	1.12	Q V				
9+ 5	0.3699	1.19	Q V				
9+10	0.3785	1.25	Q V				
9+15	0.3871	1.26	Q V				
9+20	0.3960	1.29	Q V				
9+25	0.4051	1.32	Q V				
9+30	0.4142	1.32	Q V				
9+35	0.4235	1.36	Q V				
9+40	0.4330	1.38	Q V				
9+45	0.4426	1.39	Q V				
9+50	0.4524	1.42	Q V				
9+55	0.4624	1.45	Q V				
10+ 0	0.4724	1.45	Q V				
10+ 5	0.4807	1.21	Q V				
10+10	0.4878	1.03	Q V				
10+15	0.4946	0.99	Q V				
10+20	0.5014	0.99	Q V				
10+25	0.5083	0.99	Q V				
10+30	0.5151	0.99	Q V				
10+35	0.5231	1.17	Q V				

10+40	0.5320	1.30	Q	V			
10+45	0.5411	1.32	Q	V			
10+50	0.5502	1.32	Q	V			
10+55	0.5593	1.32	Q	V			
11+ 0	0.5684	1.32	Q	V			
11+ 5	0.5773	1.29	Q	V			
11+10	0.5860	1.26	Q	V			
11+15	0.5946	1.26	Q	V			
11+20	0.6033	1.26	Q	V			
11+25	0.6119	1.26	Q	V			
11+30	0.6206	1.26	Q	V			
11+35	0.6287	1.19	Q	V			
11+40	0.6366	1.13	Q	V			
11+45	0.6443	1.12	Q	V			
11+50	0.6523	1.16	Q	V			
11+55	0.6604	1.18	Q	V			
12+ 0	0.6686	1.19	Q	V			
12+ 5	0.6785	1.43	Q	V			
12+10	0.6896	1.62	Q	V			
12+15	0.7010	1.65	Q	V			
12+20	0.7126	1.69	Q	V			
12+25	0.7244	1.71	Q	V			
12+30	0.7363	1.72	Q	V			
12+35	0.7486	1.79	Q	V			
12+40	0.7612	1.84	Q	V			
12+45	0.7740	1.85	Q	V			
12+50	0.7870	1.89	Q	V			
12+55	0.8001	1.91	Q	V			
13+ 0	0.8133	1.92	Q	V			
13+ 5	0.8277	2.09	Q	V			
13+10	0.8430	2.22	Q	V			
13+15	0.8585	2.25	Q	V			
13+20	0.8740	2.25	Q	V			
13+25	0.8894	2.25	Q	V			
13+30	0.9049	2.25	Q	V			
13+35	0.9177	1.86	Q	V			
13+40	0.9286	1.58	Q	V			
13+45	0.9391	1.52	Q	V			
13+50	0.9495	1.52	Q	V			
13+55	0.9600	1.52	Q	V			
14+ 0	0.9705	1.52	Q	V			
14+ 5	0.9819	1.66	Q	V			
14+10	0.9941	1.76	Q	V			
14+15	1.0063	1.78	Q	V			
14+20	1.0184	1.75	Q	V			
14+25	1.0303	1.72	Q	V			
14+30	1.0421	1.72	Q	V			
14+35	1.0539	1.72	Q	V			
14+40	1.0658	1.72	Q	V			
14+45	1.0776	1.72	Q	V			
14+50	1.0892	1.68	Q	V			
14+55	1.1006	1.66	Q	V			
15+ 0	1.1120	1.65	Q	V			
15+ 5	1.1231	1.62	Q	V			
15+10	1.1341	1.59	Q	V			
15+15	1.1450	1.59	Q	V			
15+20	1.1557	1.55	Q	V			
15+25	1.1662	1.53	Q	V			
15+30	1.1766	1.52	Q	V			
15+35	1.1861	1.38	Q	V			

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15+40       1.1949      1.28  |    Q    |         |         |    V    |
15+45       1.2036      1.26  |    Q    |         |         |    V    |
15+50       1.2122      1.26  |    Q    |         |         |    V    |
15+55       1.2209      1.26  |    Q    |         |         |    V    |
16+ 0       1.2295      1.26  |    Q    |         |         |     V   |
16+ 5       1.2346      0.73  | Q       |         |         |     V   |
16+10       1.2369      0.34  |Q        |         |         |     V   |
16+15       1.2387      0.26  |Q        |         |         |     V   |
16+20       1.2406      0.26  |Q        |         |         |     V   |
16+25       1.2424      0.26  |Q        |         |         |     V   |
16+30       1.2442      0.26  |Q        |         |         |     V   |
16+35       1.2458      0.23  Q         |         |         |     V   |
16+40       1.2472      0.20  Q         |         |         |     V   |
16+45       1.2485      0.20  Q         |         |         |     V   |
16+50       1.2499      0.20  Q         |         |         |     V   |
16+55       1.2513      0.20  Q         |         |         |     V   |
17+ 0       1.2526      0.20  Q         |         |         |     V   |
17+ 5       1.2545      0.27  |Q        |         |         |     V   |
17+10       1.2567      0.32  |Q        |         |         |     V   |
17+15       1.2590      0.33  |Q        |         |         |     V   |
17+20       1.2612      0.33  |Q        |         |         |     V   |
17+25       1.2635      0.33  |Q        |         |         |      V  |
17+30       1.2658      0.33  |Q        |         |         |      V  |
17+35       1.2681      0.33  |Q        |         |         |      V  |
17+40       1.2703      0.33  |Q        |         |         |      V  |
17+45       1.2726      0.33  |Q        |         |         |      V  |
17+50       1.2747      0.30  |Q        |         |         |      V  |
17+55       1.2765      0.27  |Q        |         |         |      V  |
18+ 0       1.2783      0.26  |Q        |         |         |      V  |
18+ 5       1.2802      0.26  |Q        |         |         |      V  |
18+10       1.2820      0.26  |Q        |         |         |      V  |
18+15       1.2838      0.26  |Q        |         |         |      V  |
18+20       1.2856      0.26  |Q        |         |         |      V  |
18+25       1.2874      0.26  |Q        |         |         |      V  |
18+30       1.2893      0.26  |Q        |         |         |      V  |
18+35       1.2908      0.23  Q         |         |         |      V  |
18+40       1.2922      0.20  Q         |         |         |      V  |
18+45       1.2936      0.20  Q         |         |         |      V  |
18+50       1.2947      0.16  Q         |         |         |      V  |
18+55       1.2957      0.14  Q         |         |         |      V  |
19+ 0       1.2966      0.13  Q         |         |         |      V  |
19+ 5       1.2977      0.17  Q         |         |         |       V |
19+10       1.2991      0.19  Q         |         |         |       V |
19+15       1.3004      0.20  Q         |         |         |       V |
19+20       1.3020      0.23  Q         |         |         |       V |
19+25       1.3038      0.26  |Q        |         |         |       V |
19+30       1.3056      0.26  |Q        |         |         |       V |
19+35       1.3072      0.23  Q         |         |         |       V |
19+40       1.3086      0.20  Q         |         |         |       V |
19+45       1.3100      0.20  Q         |         |         |       V |
19+50       1.3111      0.16  Q         |         |         |       V |
19+55       1.3121      0.14  Q         |         |         |       V |
20+ 0       1.3130      0.13  Q         |         |         |       V |
20+ 5       1.3141      0.17  Q         |         |         |       V |
20+10       1.3154      0.19  Q         |         |         |       V |
20+15       1.3168      0.20  Q         |         |         |       V |
20+20       1.3182      0.20  Q         |         |         |       V |
20+25       1.3195      0.20  Q         |         |         |       V |
20+30       1.3209      0.20  Q         |         |         |       V |
20+35       1.3223      0.20  Q         |         |         |       V |
```

20+40	1.3236	0.20	Q	|	|	|	V |
20+45	1.3250	0.20	Q	|	|	|	V |
20+50	1.3261	0.16	Q	|	|	|	V |
20+55	1.3271	0.14	Q	|	|	|	V |
21+ 0	1.3280	0.13	Q	|	|	|	V |
21+ 5	1.3291	0.17	Q	|	|	|	V |
21+10	1.3305	0.19	Q	|	|	|	V |
21+15	1.3318	0.20	Q	|	|	|	V|
21+20	1.3330	0.16	Q	|	|	|	V|
21+25	1.3339	0.14	Q	|	|	|	V|
21+30	1.3348	0.13	Q	|	|	|	V|
21+35	1.3360	0.17	Q	|	|	|	V|
21+40	1.3373	0.19	Q	|	|	|	V|
21+45	1.3387	0.20	Q	|	|	|	V|
21+50	1.3398	0.16	Q	|	|	|	V|
21+55	1.3407	0.14	Q	|	|	|	V|
22+ 0	1.3416	0.13	Q	|	|	|	V|
22+ 5	1.3428	0.17	Q	|	|	|	V|
22+10	1.3441	0.19	Q	|	|	|	V|
22+15	1.3455	0.20	Q	|	|	|	V|
22+20	1.3466	0.16	Q	|	|	|	V|
22+25	1.3476	0.14	Q	|	|	|	V|
22+30	1.3485	0.13	Q	|	|	|	V|
22+35	1.3494	0.13	Q	|	|	|	V|
22+40	1.3503	0.13	Q	|	|	|	V|
22+45	1.3512	0.13	Q	|	|	|	V|
22+50	1.3521	0.13	Q	|	|	|	V|
22+55	1.3530	0.13	Q	|	|	|	V|
23+ 0	1.3539	0.13	Q	|	|	|	V|
23+ 5	1.3548	0.13	Q	|	|	|	V|
23+10	1.3557	0.13	Q	|	|	|	V|
23+15	1.3567	0.13	Q	|	|	|	V|
23+20	1.3576	0.13	Q	|	|	|	V|
23+25	1.3585	0.13	Q	|	|	|	V|
23+30	1.3594	0.13	Q	|	|	|	V|
23+35	1.3603	0.13	Q	|	|	|	V|
23+40	1.3612	0.13	Q	|	|	|	V|
23+45	1.3621	0.13	Q	|	|	|	V|
23+50	1.3630	0.13	Q	|	|	|	V|
23+55	1.3639	0.13	Q	|	|	|	V|
24+ 0	1.3648	0.13	Q	|	|	|	V|
24+ 5	1.3653	0.06	Q	|	|	|	V|
24+10	1.3653	0.01	Q	|	|	|	V|

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

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Study date 10/24/24 File: AREAC12.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
2-YR
1-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	0.59	4.19

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.45	10.31

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.590(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.590(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
		Sum = 100.000	Sum=	7.166

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	4.40	0.311	(0.201)	0.115	0.196
2	0.17	4.50	0.319	(0.201)	0.118	0.201
3	0.25	5.40	0.382	(0.201)	0.141	0.241
4	0.33	5.40	0.382	(0.201)	0.141	0.241
5	0.42	5.70	0.404	(0.201)	0.149	0.254
6	0.50	6.40	0.453	(0.201)	0.168	0.285
7	0.58	7.90	0.559	0.201	(0.207)	0.358
8	0.67	9.10	0.644	0.201	(0.238)	0.443
9	0.75	12.80	0.906	0.201	(0.335)	0.705
10	0.83	25.60	1.812	0.201	(0.671)	1.611
11	0.92	7.90	0.559	0.201	(0.207)	0.358
12	1.00	4.90	0.347	(0.201)	0.128	0.219
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	5.1

```
    Flood volume = Effective rainfall      0.43(In)
     times area       7.1(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
    Total soil loss =      0.16(In)
    Total soil loss =     0.097(Ac.Ft)
    Total rainfall =      0.59(In)
    Flood volume =       10995.5 Cubic Feet
    Total soil loss =        4231.0 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      8.780(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0057      0.83  V  Q      |         |         |         |
    0+10       0.0150      1.35  | V  Q    |         |         |         |
    0+15       0.0261      1.61  |   V Q   |         |         |         |
    0+20       0.0379      1.71  |     Q   |         |         |         |
    0+25       0.0502      1.78  |      Q  |         |         |         |
    0+30       0.0636      1.95  |      Q  V         |         |         |
    0+35       0.0797      2.34  |        Q| V       |         |         |
    0+40       0.0997      2.90  |         |Q   V    |         |         |
    0+45       0.1289      4.25  |         |     Q   V         |         |
    0+50       0.1894      8.78  |         |         |         V    Q    |
    0+55       0.2302      5.93  |         |         |  Q      |     V   |
    1+ 0       0.2471      2.45  |        Q|         |         |        V|
    1+ 5       0.2519      0.70  | Q       |         |         |        V|
    1+10       0.2524      0.08  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 10/24/24 File: AREAC32.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
2-YR
3-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.00	7.11

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	2.50	17.78

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	1.30	0.156	(0.201)		0.058	0.098
2	0.17	1.30	0.156	(0.201)		0.058	0.098
3	0.25	1.10	0.132	(0.201)		0.049	0.083
4	0.33	1.50	0.180	(0.201)		0.067	0.113
5	0.42	1.50	0.180	(0.201)		0.067	0.113
6	0.50	1.80	0.216	(0.201)		0.080	0.136
7	0.58	1.50	0.180	(0.201)		0.067	0.113
8	0.67	1.80	0.216	(0.201)		0.080	0.136
9	0.75	1.80	0.216	(0.201)		0.080	0.136
10	0.83	1.50	0.180	(0.201)		0.067	0.113
11	0.92	1.60	0.192	(0.201)		0.071	0.121
12	1.00	1.80	0.216	(0.201)		0.080	0.136
13	1.08	2.20	0.264	(0.201)		0.098	0.166
14	1.17	2.20	0.264	(0.201)		0.098	0.166
15	1.25	2.20	0.264	(0.201)		0.098	0.166
16	1.33	2.00	0.240	(0.201)		0.089	0.151

17	1.42	2.60	0.312	(0.201)	0.115	0.197
18	1.50	2.70	0.324	(0.201)	0.120	0.204
19	1.58	2.40	0.288	(0.201)	0.107	0.181
20	1.67	2.70	0.324	(0.201)	0.120	0.204
21	1.75	3.30	0.396	(0.201)	0.147	0.249
22	1.83	3.10	0.372	(0.201)	0.138	0.234
23	1.92	2.90	0.348	(0.201)	0.129	0.219
24	2.00	3.00	0.360	(0.201)	0.133	0.227
25	2.08	3.10	0.372	(0.201)	0.138	0.234
26	2.17	4.20	0.504	(0.201)	0.186	0.318
27	2.25	5.00	0.600	0.201	(0.222)	0.399
28	2.33	3.50	0.420	(0.201)	0.155	0.265
29	2.42	6.80	0.816	0.201	(0.302)	0.615
30	2.50	7.30	0.876	0.201	(0.324)	0.675
31	2.58	8.20	0.984	0.201	(0.364)	0.783
32	2.67	5.90	0.708	0.201	(0.262)	0.507
33	2.75	2.00	0.240	(0.201)	0.089	0.151
34	2.83	1.80	0.216	(0.201)	0.080	0.136
35	2.92	1.80	0.216	(0.201)	0.080	0.136
36	3.00	0.60	0.072	(0.201)	0.027	0.045

(Loss Rate Not Used)

Sum = 100.0 Sum = 8.0

Flood volume = Effective rainfall 0.67(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.33(In)
Total soil loss = 0.196(Ac.Ft)
Total rainfall = 1.00(In)
Flood volume = 17266.3 Cubic Feet
Total soil loss = 8542.2 Cubic Feet

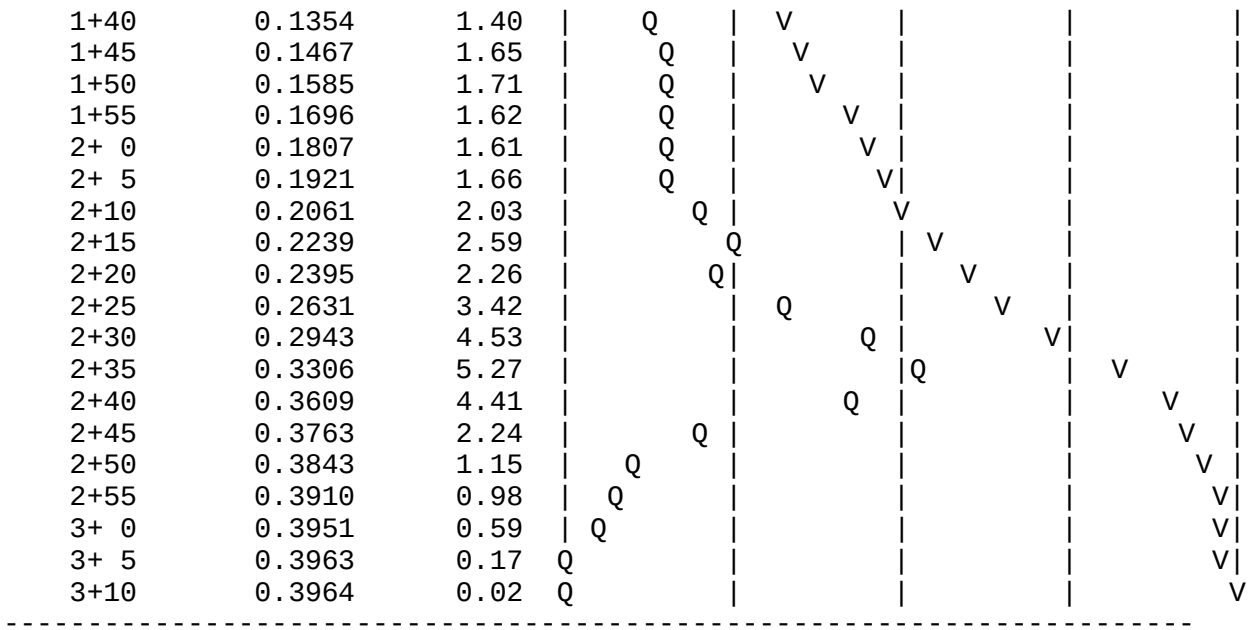
Peak flow rate of this hydrograph = 5.271(CFS)

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3 - 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	0.0029	0.41	VQ | | | |
0+10	0.0075	0.67	V Q | | | |
0+15	0.0119	0.64	|VQ | | | |
0+20	0.0169	0.73	|VQ | | | |
0+25	0.0224	0.80	| VQ | | | |
0+30	0.0287	0.91	| VQ | | | |
0+35	0.0347	0.87	| Q | | | |
0+40	0.0410	0.92	| QV | | | |
0+45	0.0476	0.97	| QV | | | |
0+50	0.0537	0.88	| Q V | | | |
0+55	0.0596	0.85	| Q V | | | |
1+ 0	0.0660	0.93	| Q V | | | |
1+ 5	0.0735	1.10	| Q V | | | |
1+10	0.0817	1.18	| Q V | | | |
1+15	0.0899	1.19	| Q V| | | |
1+20	0.0977	1.13	| Q V| | | |
1+25	0.1065	1.28	| Q V | | |
1+30	0.1163	1.42	| Q |V | | |
1+35	0.1257	1.36	| Q | V | | |


1+40 0.1354 1.40
1+45 0.1467 1.65
1+50 0.1585 1.71
1+55 0.1696 1.62
2+ 0 0.1807 1.61
2+ 5 0.1921 1.66
2+10 0.2061 2.03
2+15 0.2239 2.59
2+20 0.2395 2.26
2+25 0.2631 3.42
2+30 0.2943 4.53
2+35 0.3306 5.27
2+40 0.3609 4.41
2+45 0.3763 2.24
2+50 0.3843 1.15
2+55 0.3910 0.98
3+ 0 0.3951 0.59
3+ 5 0.3963 0.17
3+10 0.3964 0.02

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 10/24/24 File: AREAC62.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
2-YR
6-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.40	9.95

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	3.50	24.89

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.50	0.084	(0.201)		0.031	0.053
2	0.17	0.60	0.101	(0.201)		0.037	0.064
3	0.25	0.60	0.101	(0.201)		0.037	0.064
4	0.33	0.60	0.101	(0.201)		0.037	0.064
5	0.42	0.60	0.101	(0.201)		0.037	0.064
6	0.50	0.70	0.118	(0.201)		0.044	0.074
7	0.58	0.70	0.118	(0.201)		0.044	0.074
8	0.67	0.70	0.118	(0.201)		0.044	0.074
9	0.75	0.70	0.118	(0.201)		0.044	0.074
10	0.83	0.70	0.118	(0.201)		0.044	0.074
11	0.92	0.70	0.118	(0.201)		0.044	0.074
12	1.00	0.80	0.134	(0.201)		0.050	0.085
13	1.08	0.80	0.134	(0.201)		0.050	0.085
14	1.17	0.80	0.134	(0.201)		0.050	0.085
15	1.25	0.80	0.134	(0.201)		0.050	0.085
16	1.33	0.80	0.134	(0.201)		0.050	0.085

17	1.42	0.80	0.134	(0.201)	0.050	0.085
18	1.50	0.80	0.134	(0.201)	0.050	0.085
19	1.58	0.80	0.134	(0.201)	0.050	0.085
20	1.67	0.80	0.134	(0.201)	0.050	0.085
21	1.75	0.80	0.134	(0.201)	0.050	0.085
22	1.83	0.80	0.134	(0.201)	0.050	0.085
23	1.92	0.80	0.134	(0.201)	0.050	0.085
24	2.00	0.90	0.151	(0.201)	0.056	0.095
25	2.08	0.80	0.134	(0.201)	0.050	0.085
26	2.17	0.90	0.151	(0.201)	0.056	0.095
27	2.25	0.90	0.151	(0.201)	0.056	0.095
28	2.33	0.90	0.151	(0.201)	0.056	0.095
29	2.42	0.90	0.151	(0.201)	0.056	0.095
30	2.50	0.90	0.151	(0.201)	0.056	0.095
31	2.58	0.90	0.151	(0.201)	0.056	0.095
32	2.67	0.90	0.151	(0.201)	0.056	0.095
33	2.75	1.00	0.168	(0.201)	0.062	0.106
34	2.83	1.00	0.168	(0.201)	0.062	0.106
35	2.92	1.00	0.168	(0.201)	0.062	0.106
36	3.00	1.00	0.168	(0.201)	0.062	0.106
37	3.08	1.00	0.168	(0.201)	0.062	0.106
38	3.17	1.10	0.185	(0.201)	0.068	0.116
39	3.25	1.10	0.185	(0.201)	0.068	0.116
40	3.33	1.10	0.185	(0.201)	0.068	0.116
41	3.42	1.20	0.202	(0.201)	0.075	0.127
42	3.50	1.30	0.218	(0.201)	0.081	0.138
43	3.58	1.40	0.235	(0.201)	0.087	0.148
44	3.67	1.40	0.235	(0.201)	0.087	0.148
45	3.75	1.50	0.252	(0.201)	0.093	0.159
46	3.83	1.50	0.252	(0.201)	0.093	0.159
47	3.92	1.60	0.269	(0.201)	0.099	0.169
48	4.00	1.60	0.269	(0.201)	0.099	0.169
49	4.08	1.70	0.286	(0.201)	0.106	0.180
50	4.17	1.80	0.302	(0.201)	0.112	0.191
51	4.25	1.90	0.319	(0.201)	0.118	0.201
52	4.33	2.00	0.336	(0.201)	0.124	0.212
53	4.42	2.10	0.353	(0.201)	0.131	0.222
54	4.50	2.10	0.353	(0.201)	0.131	0.222
55	4.58	2.20	0.370	(0.201)	0.137	0.233
56	4.67	2.30	0.386	(0.201)	0.143	0.243
57	4.75	2.40	0.403	(0.201)	0.149	0.254
58	4.83	2.40	0.403	(0.201)	0.149	0.254
59	4.92	2.50	0.420	(0.201)	0.155	0.265
60	5.00	2.60	0.437	(0.201)	0.162	0.275
61	5.08	3.10	0.521	(0.201)	0.193	0.328
62	5.17	3.60	0.605	0.201	(0.224)	0.404
63	5.25	3.90	0.655	0.201	(0.242)	0.454
64	5.33	4.20	0.706	0.201	(0.261)	0.504
65	5.42	4.70	0.790	0.201	(0.292)	0.588
66	5.50	5.60	0.941	0.201	(0.348)	0.740
67	5.58	1.90	0.319	(0.201)	0.118	0.201
68	5.67	0.90	0.151	(0.201)	0.056	0.095
69	5.75	0.60	0.101	(0.201)	0.037	0.064
70	5.83	0.50	0.084	(0.201)	0.031	0.053
71	5.92	0.30	0.050	(0.201)	0.019	0.032
72	6.00	0.20	0.034	(0.201)	0.012	0.021

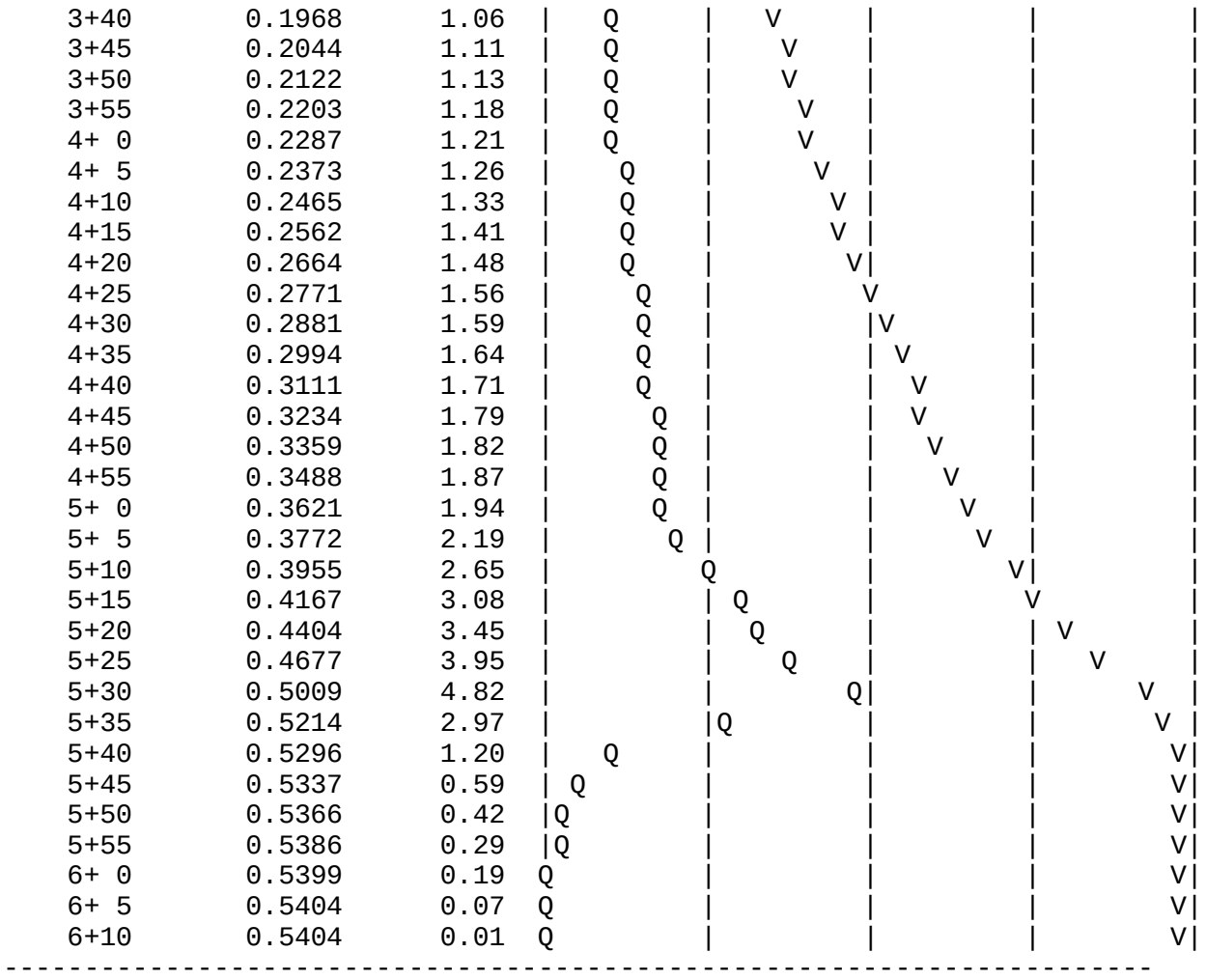
(Loss Rate Not Used)

Sum = 100.0 Sum = 10.9

Flood volume = Effective rainfall 0.91(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)

```
   Total soil loss =      0.49(In)
   Total soil loss =     0.289(Ac.Ft)
   Total rainfall =      1.40(In)
   Flood volume =       23541.0 Cubic Feet
   Total soil loss =       12591.1 Cubic Feet
   ------------------------------------------------------------------------
    Peak flow rate of this hydrograph =      4.825(CFS)
   ------------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0015      0.22  Q         |         |         |         |
  0+10       0.0043      0.40  VQ        |         |         |         |
  0+15       0.0074      0.45  VQ        |         |         |         |
  0+20       0.0106      0.46  VQ        |         |         |         |
  0+25       0.0137      0.46  |Q        |         |         |         |
  0+30       0.0171      0.50  |Q        |         |         |         |
  0+35       0.0208      0.53  |VQ       |         |         |         |
  0+40       0.0244      0.53  |VQ       |         |         |         |
  0+45       0.0281      0.53  | Q       |         |         |         |
  0+50       0.0317      0.53  | Q       |         |         |         |
  0+55       0.0354      0.53  | Q       |         |         |         |
  1+ 0       0.0394      0.58  | Q       |         |         |         |
  1+ 5       0.0435      0.60  | QV      |         |         |         |
  1+10       0.0477      0.61  | QV      |         |         |         |
  1+15       0.0519      0.61  | QV      |         |         |         |
  1+20       0.0561      0.61  | Q V     |         |         |         |
  1+25       0.0602      0.61  | Q V     |         |         |         |
  1+30       0.0644      0.61  | Q V     |         |         |         |
  1+35       0.0686      0.61  | Q  V    |         |         |         |
  1+40       0.0728      0.61  | Q  V    |         |         |         |
  1+45       0.0770      0.61  | Q  V    |         |         |         |
  1+50       0.0812      0.61  | Q   V   |         |         |         |
  1+55       0.0853      0.61  | Q   V   |         |         |         |
  2+ 0       0.0898      0.65  | Q   V   |         |         |         |
  2+ 5       0.0942      0.63  | Q   V   |         |         |         |
  2+10       0.0987      0.66  | Q    V  |         |         |         |
  2+15       0.1034      0.68  | Q    V  |         |         |         |
  2+20       0.1081      0.68  | Q    V  |         |         |         |
  2+25       0.1128      0.68  | Q     V |         |         |         |
  2+30       0.1175      0.68  | Q     V |         |         |         |
  2+35       0.1222      0.68  | Q      V|         |         |         |
  2+40       0.1269      0.68  | Q      V|         |         |         |
  2+45       0.1319      0.73  | Q      V|         |         |         |
  2+50       0.1371      0.75  |  Q      V         |         |         |
  2+55       0.1423      0.76  |  Q      V         |         |         |
  3+ 0       0.1476      0.76  |  Q      V         |         |         |
  3+ 5       0.1528      0.76  |  Q      |V        |         |         |
  3+10       0.1583      0.80  |  Q      |V        |         |         |
  3+15       0.1640      0.83  |  Q      | V       |         |         |
  3+20       0.1698      0.83  |  Q      | V       |         |         |
  3+25       0.1758      0.88  |  Q      |  V      |         |         |
  3+30       0.1824      0.95  |  Q      |  V      |         |         |
  3+35       0.1895      1.03  |   Q     |   V     |         |         |
```


3+40 0.1968 1.06
3+45 0.2044 1.11
3+50 0.2122 1.13
3+55 0.2203 1.18
4+ 0 0.2287 1.21
4+ 5 0.2373 1.26
4+10 0.2465 1.33
4+15 0.2562 1.41
4+20 0.2664 1.48
4+25 0.2771 1.56
4+30 0.2881 1.59
4+35 0.2994 1.64
4+40 0.3111 1.71
4+45 0.3234 1.79
4+50 0.3359 1.82
4+55 0.3488 1.87
5+ 0 0.3621 1.94
5+ 5 0.3772 2.19
5+10 0.3955 2.65
5+15 0.4167 3.08
5+20 0.4404 3.45
5+25 0.4677 3.95
5+30 0.5009 4.82
5+35 0.5214 2.97
5+40 0.5296 1.20
5+45 0.5337 0.59
5+50 0.5366 0.42
5+55 0.5386 0.29
6+ 0 0.5399 0.19
6+ 5 0.5404 0.07
6+10 0.5404 0.01

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 10/24/24 File: AREAC242.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
2-YR
24-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 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]
7.11	2.50	17.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	6.00	42.66

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.020	(0.357)		0.007	0.013
2	0.17	0.07	0.020	(0.355)		0.007	0.013
3	0.25	0.07	0.020	(0.354)		0.007	0.013
4	0.33	0.10	0.030	(0.352)		0.011	0.019
5	0.42	0.10	0.030	(0.351)		0.011	0.019
6	0.50	0.10	0.030	(0.350)		0.011	0.019
7	0.58	0.10	0.030	(0.348)		0.011	0.019
8	0.67	0.10	0.030	(0.347)		0.011	0.019
9	0.75	0.10	0.030	(0.346)		0.011	0.019
10	0.83	0.13	0.040	(0.344)		0.015	0.025
11	0.92	0.13	0.040	(0.343)		0.015	0.025
12	1.00	0.13	0.040	(0.342)		0.015	0.025
13	1.08	0.10	0.030	(0.340)		0.011	0.019
14	1.17	0.10	0.030	(0.339)		0.011	0.019
15	1.25	0.10	0.030	(0.338)		0.011	0.019
16	1.33	0.10	0.030	(0.336)		0.011	0.019

17	1.42	0.10	0.030	(0.335)	0.011	0.019
18	1.50	0.10	0.030	(0.334)	0.011	0.019
19	1.58	0.10	0.030	(0.332)	0.011	0.019
20	1.67	0.10	0.030	(0.331)	0.011	0.019
21	1.75	0.10	0.030	(0.330)	0.011	0.019
22	1.83	0.13	0.040	(0.328)	0.015	0.025
23	1.92	0.13	0.040	(0.327)	0.015	0.025
24	2.00	0.13	0.040	(0.326)	0.015	0.025
25	2.08	0.13	0.040	(0.324)	0.015	0.025
26	2.17	0.13	0.040	(0.323)	0.015	0.025
27	2.25	0.13	0.040	(0.322)	0.015	0.025
28	2.33	0.13	0.040	(0.320)	0.015	0.025
29	2.42	0.13	0.040	(0.319)	0.015	0.025
30	2.50	0.13	0.040	(0.318)	0.015	0.025
31	2.58	0.17	0.050	(0.316)	0.018	0.031
32	2.67	0.17	0.050	(0.315)	0.018	0.031
33	2.75	0.17	0.050	(0.314)	0.018	0.031
34	2.83	0.17	0.050	(0.313)	0.018	0.031
35	2.92	0.17	0.050	(0.311)	0.018	0.031
36	3.00	0.17	0.050	(0.310)	0.018	0.031
37	3.08	0.17	0.050	(0.309)	0.018	0.031
38	3.17	0.17	0.050	(0.307)	0.018	0.031
39	3.25	0.17	0.050	(0.306)	0.018	0.031
40	3.33	0.17	0.050	(0.305)	0.018	0.031
41	3.42	0.17	0.050	(0.304)	0.018	0.031
42	3.50	0.17	0.050	(0.302)	0.018	0.031
43	3.58	0.17	0.050	(0.301)	0.018	0.031
44	3.67	0.17	0.050	(0.300)	0.018	0.031
45	3.75	0.17	0.050	(0.299)	0.018	0.031
46	3.83	0.20	0.060	(0.297)	0.022	0.038
47	3.92	0.20	0.060	(0.296)	0.022	0.038
48	4.00	0.20	0.060	(0.295)	0.022	0.038
49	4.08	0.20	0.060	(0.293)	0.022	0.038
50	4.17	0.20	0.060	(0.292)	0.022	0.038
51	4.25	0.20	0.060	(0.291)	0.022	0.038
52	4.33	0.23	0.070	(0.290)	0.026	0.044
53	4.42	0.23	0.070	(0.289)	0.026	0.044
54	4.50	0.23	0.070	(0.287)	0.026	0.044
55	4.58	0.23	0.070	(0.286)	0.026	0.044
56	4.67	0.23	0.070	(0.285)	0.026	0.044
57	4.75	0.23	0.070	(0.284)	0.026	0.044
58	4.83	0.27	0.080	(0.282)	0.030	0.050
59	4.92	0.27	0.080	(0.281)	0.030	0.050
60	5.00	0.27	0.080	(0.280)	0.030	0.050
61	5.08	0.20	0.060	(0.279)	0.022	0.038
62	5.17	0.20	0.060	(0.278)	0.022	0.038
63	5.25	0.20	0.060	(0.276)	0.022	0.038
64	5.33	0.23	0.070	(0.275)	0.026	0.044
65	5.42	0.23	0.070	(0.274)	0.026	0.044
66	5.50	0.23	0.070	(0.273)	0.026	0.044
67	5.58	0.27	0.080	(0.271)	0.030	0.050
68	5.67	0.27	0.080	(0.270)	0.030	0.050
69	5.75	0.27	0.080	(0.269)	0.030	0.050
70	5.83	0.27	0.080	(0.268)	0.030	0.050
71	5.92	0.27	0.080	(0.267)	0.030	0.050
72	6.00	0.27	0.080	(0.266)	0.030	0.050
73	6.08	0.30	0.090	(0.264)	0.033	0.057
74	6.17	0.30	0.090	(0.263)	0.033	0.057
75	6.25	0.30	0.090	(0.262)	0.033	0.057
76	6.33	0.30	0.090	(0.261)	0.033	0.057

77	6.42	0.30	0.090	(0.260)	0.033	0.057
78	6.50	0.30	0.090	(0.259)	0.033	0.057
79	6.58	0.33	0.100	(0.257)	0.037	0.063
80	6.67	0.33	0.100	(0.256)	0.037	0.063
81	6.75	0.33	0.100	(0.255)	0.037	0.063
82	6.83	0.33	0.100	(0.254)	0.037	0.063
83	6.92	0.33	0.100	(0.253)	0.037	0.063
84	7.00	0.33	0.100	(0.252)	0.037	0.063
85	7.08	0.33	0.100	(0.250)	0.037	0.063
86	7.17	0.33	0.100	(0.249)	0.037	0.063
87	7.25	0.33	0.100	(0.248)	0.037	0.063
88	7.33	0.37	0.110	(0.247)	0.041	0.069
89	7.42	0.37	0.110	(0.246)	0.041	0.069
90	7.50	0.37	0.110	(0.245)	0.041	0.069
91	7.58	0.40	0.120	(0.244)	0.044	0.076
92	7.67	0.40	0.120	(0.243)	0.044	0.076
93	7.75	0.40	0.120	(0.241)	0.044	0.076
94	7.83	0.43	0.130	(0.240)	0.048	0.082
95	7.92	0.43	0.130	(0.239)	0.048	0.082
96	8.00	0.43	0.130	(0.238)	0.048	0.082
97	8.08	0.50	0.150	(0.237)	0.055	0.094
98	8.17	0.50	0.150	(0.236)	0.055	0.094
99	8.25	0.50	0.150	(0.235)	0.055	0.094
100	8.33	0.50	0.150	(0.234)	0.055	0.094
101	8.42	0.50	0.150	(0.233)	0.055	0.094
102	8.50	0.50	0.150	(0.231)	0.055	0.094
103	8.58	0.53	0.160	(0.230)	0.059	0.101
104	8.67	0.53	0.160	(0.229)	0.059	0.101
105	8.75	0.53	0.160	(0.228)	0.059	0.101
106	8.83	0.57	0.170	(0.227)	0.063	0.107
107	8.92	0.57	0.170	(0.226)	0.063	0.107
108	9.00	0.57	0.170	(0.225)	0.063	0.107
109	9.08	0.63	0.190	(0.224)	0.070	0.120
110	9.17	0.63	0.190	(0.223)	0.070	0.120
111	9.25	0.63	0.190	(0.222)	0.070	0.120
112	9.33	0.67	0.200	(0.221)	0.074	0.126
113	9.42	0.67	0.200	(0.220)	0.074	0.126
114	9.50	0.67	0.200	(0.219)	0.074	0.126
115	9.58	0.70	0.210	(0.218)	0.078	0.132
116	9.67	0.70	0.210	(0.217)	0.078	0.132
117	9.75	0.70	0.210	(0.216)	0.078	0.132
118	9.83	0.73	0.220	(0.215)	0.081	0.139
119	9.92	0.73	0.220	(0.213)	0.081	0.139
120	10.00	0.73	0.220	(0.212)	0.081	0.139
121	10.08	0.50	0.150	(0.211)	0.055	0.094
122	10.17	0.50	0.150	(0.210)	0.055	0.094
123	10.25	0.50	0.150	(0.209)	0.055	0.094
124	10.33	0.50	0.150	(0.208)	0.055	0.094
125	10.42	0.50	0.150	(0.207)	0.055	0.094
126	10.50	0.50	0.150	(0.206)	0.055	0.094
127	10.58	0.67	0.200	(0.205)	0.074	0.126
128	10.67	0.67	0.200	(0.204)	0.074	0.126
129	10.75	0.67	0.200	(0.203)	0.074	0.126
130	10.83	0.67	0.200	(0.202)	0.074	0.126
131	10.92	0.67	0.200	(0.201)	0.074	0.126
132	11.00	0.67	0.200	(0.200)	0.074	0.126
133	11.08	0.63	0.190	(0.199)	0.070	0.120
134	11.17	0.63	0.190	(0.198)	0.070	0.120
135	11.25	0.63	0.190	(0.197)	0.070	0.120
136	11.33	0.63	0.190	(0.196)	0.070	0.120

137	11.42	0.63	0.190	(0.195)	0.070	0.120
138	11.50	0.63	0.190	(0.194)	0.070	0.120
139	11.58	0.57	0.170	(0.194)	0.063	0.107
140	11.67	0.57	0.170	(0.193)	0.063	0.107
141	11.75	0.57	0.170	(0.192)	0.063	0.107
142	11.83	0.60	0.180	(0.191)	0.067	0.113
143	11.92	0.60	0.180	(0.190)	0.067	0.113
144	12.00	0.60	0.180	(0.189)	0.067	0.113
145	12.08	0.83	0.250	(0.188)	0.092	0.157
146	12.17	0.83	0.250	(0.187)	0.092	0.157
147	12.25	0.83	0.250	(0.186)	0.092	0.157
148	12.33	0.87	0.260	(0.185)	0.096	0.164
149	12.42	0.87	0.260	(0.184)	0.096	0.164
150	12.50	0.87	0.260	(0.183)	0.096	0.164
151	12.58	0.93	0.280	(0.182)	0.104	0.176
152	12.67	0.93	0.280	(0.181)	0.104	0.176
153	12.75	0.93	0.280	(0.180)	0.104	0.176
154	12.83	0.97	0.290	(0.179)	0.107	0.183
155	12.92	0.97	0.290	(0.179)	0.107	0.183
156	13.00	0.97	0.290	(0.178)	0.107	0.183
157	13.08	1.13	0.340	(0.177)	0.126	0.214
158	13.17	1.13	0.340	(0.176)	0.126	0.214
159	13.25	1.13	0.340	(0.175)	0.126	0.214
160	13.33	1.13	0.340	(0.174)	0.126	0.214
161	13.42	1.13	0.340	(0.173)	0.126	0.214
162	13.50	1.13	0.340	(0.172)	0.126	0.214
163	13.58	0.77	0.230	(0.171)	0.085	0.145
164	13.67	0.77	0.230	(0.171)	0.085	0.145
165	13.75	0.77	0.230	(0.170)	0.085	0.145
166	13.83	0.77	0.230	(0.169)	0.085	0.145
167	13.92	0.77	0.230	(0.168)	0.085	0.145
168	14.00	0.77	0.230	(0.167)	0.085	0.145
169	14.08	0.90	0.270	(0.166)	0.100	0.170
170	14.17	0.90	0.270	(0.165)	0.100	0.170
171	14.25	0.90	0.270	(0.165)	0.100	0.170
172	14.33	0.87	0.260	(0.164)	0.096	0.164
173	14.42	0.87	0.260	(0.163)	0.096	0.164
174	14.50	0.87	0.260	(0.162)	0.096	0.164
175	14.58	0.87	0.260	(0.161)	0.096	0.164
176	14.67	0.87	0.260	(0.160)	0.096	0.164
177	14.75	0.87	0.260	(0.160)	0.096	0.164
178	14.83	0.83	0.250	(0.159)	0.092	0.157
179	14.92	0.83	0.250	(0.158)	0.092	0.157
180	15.00	0.83	0.250	(0.157)	0.092	0.157
181	15.08	0.80	0.240	(0.156)	0.089	0.151
182	15.17	0.80	0.240	(0.156)	0.089	0.151
183	15.25	0.80	0.240	(0.155)	0.089	0.151
184	15.33	0.77	0.230	(0.154)	0.085	0.145
185	15.42	0.77	0.230	(0.153)	0.085	0.145
186	15.50	0.77	0.230	(0.152)	0.085	0.145
187	15.58	0.63	0.190	(0.152)	0.070	0.120
188	15.67	0.63	0.190	(0.151)	0.070	0.120
189	15.75	0.63	0.190	(0.150)	0.070	0.120
190	15.83	0.63	0.190	(0.149)	0.070	0.120
191	15.92	0.63	0.190	(0.148)	0.070	0.120
192	16.00	0.63	0.190	(0.148)	0.070	0.120
193	16.08	0.13	0.040	(0.147)	0.015	0.025
194	16.17	0.13	0.040	(0.146)	0.015	0.025
195	16.25	0.13	0.040	(0.145)	0.015	0.025
196	16.33	0.13	0.040	(0.145)	0.015	0.025

197	16.42	0.13	0.040	(0.144)	0.015	0.025
198	16.50	0.13	0.040	(0.143)	0.015	0.025
199	16.58	0.10	0.030	(0.143)	0.011	0.019
200	16.67	0.10	0.030	(0.142)	0.011	0.019
201	16.75	0.10	0.030	(0.141)	0.011	0.019
202	16.83	0.10	0.030	(0.140)	0.011	0.019
203	16.92	0.10	0.030	(0.140)	0.011	0.019
204	17.00	0.10	0.030	(0.139)	0.011	0.019
205	17.08	0.17	0.050	(0.138)	0.018	0.031
206	17.17	0.17	0.050	(0.138)	0.018	0.031
207	17.25	0.17	0.050	(0.137)	0.018	0.031
208	17.33	0.17	0.050	(0.136)	0.018	0.031
209	17.42	0.17	0.050	(0.135)	0.018	0.031
210	17.50	0.17	0.050	(0.135)	0.018	0.031
211	17.58	0.17	0.050	(0.134)	0.018	0.031
212	17.67	0.17	0.050	(0.133)	0.018	0.031
213	17.75	0.17	0.050	(0.133)	0.018	0.031
214	17.83	0.13	0.040	(0.132)	0.015	0.025
215	17.92	0.13	0.040	(0.132)	0.015	0.025
216	18.00	0.13	0.040	(0.131)	0.015	0.025
217	18.08	0.13	0.040	(0.130)	0.015	0.025
218	18.17	0.13	0.040	(0.130)	0.015	0.025
219	18.25	0.13	0.040	(0.129)	0.015	0.025
220	18.33	0.13	0.040	(0.128)	0.015	0.025
221	18.42	0.13	0.040	(0.128)	0.015	0.025
222	18.50	0.13	0.040	(0.127)	0.015	0.025
223	18.58	0.10	0.030	(0.126)	0.011	0.019
224	18.67	0.10	0.030	(0.126)	0.011	0.019
225	18.75	0.10	0.030	(0.125)	0.011	0.019
226	18.83	0.07	0.020	(0.125)	0.007	0.013
227	18.92	0.07	0.020	(0.124)	0.007	0.013
228	19.00	0.07	0.020	(0.123)	0.007	0.013
229	19.08	0.10	0.030	(0.123)	0.011	0.019
230	19.17	0.10	0.030	(0.122)	0.011	0.019
231	19.25	0.10	0.030	(0.122)	0.011	0.019
232	19.33	0.13	0.040	(0.121)	0.015	0.025
233	19.42	0.13	0.040	(0.121)	0.015	0.025
234	19.50	0.13	0.040	(0.120)	0.015	0.025
235	19.58	0.10	0.030	(0.119)	0.011	0.019
236	19.67	0.10	0.030	(0.119)	0.011	0.019
237	19.75	0.10	0.030	(0.118)	0.011	0.019
238	19.83	0.07	0.020	(0.118)	0.007	0.013
239	19.92	0.07	0.020	(0.117)	0.007	0.013
240	20.00	0.07	0.020	(0.117)	0.007	0.013
241	20.08	0.10	0.030	(0.116)	0.011	0.019
242	20.17	0.10	0.030	(0.116)	0.011	0.019
243	20.25	0.10	0.030	(0.115)	0.011	0.019
244	20.33	0.10	0.030	(0.115)	0.011	0.019
245	20.42	0.10	0.030	(0.114)	0.011	0.019
246	20.50	0.10	0.030	(0.114)	0.011	0.019
247	20.58	0.10	0.030	(0.113)	0.011	0.019
248	20.67	0.10	0.030	(0.113)	0.011	0.019
249	20.75	0.10	0.030	(0.112)	0.011	0.019
250	20.83	0.07	0.020	(0.112)	0.007	0.013
251	20.92	0.07	0.020	(0.111)	0.007	0.013
252	21.00	0.07	0.020	(0.111)	0.007	0.013
253	21.08	0.10	0.030	(0.111)	0.011	0.019
254	21.17	0.10	0.030	(0.110)	0.011	0.019
255	21.25	0.10	0.030	(0.110)	0.011	0.019
256	21.33	0.07	0.020	(0.109)	0.007	0.013

257	21.42	0.07	0.020	(0.109)	0.007	0.013
258	21.50	0.07	0.020	(0.108)	0.007	0.013
259	21.58	0.10	0.030	(0.108)	0.011	0.019
260	21.67	0.10	0.030	(0.108)	0.011	0.019
261	21.75	0.10	0.030	(0.107)	0.011	0.019
262	21.83	0.07	0.020	(0.107)	0.007	0.013
263	21.92	0.07	0.020	(0.107)	0.007	0.013
264	22.00	0.07	0.020	(0.106)	0.007	0.013
265	22.08	0.10	0.030	(0.106)	0.011	0.019
266	22.17	0.10	0.030	(0.106)	0.011	0.019
267	22.25	0.10	0.030	(0.105)	0.011	0.019
268	22.33	0.07	0.020	(0.105)	0.007	0.013
269	22.42	0.07	0.020	(0.105)	0.007	0.013
270	22.50	0.07	0.020	(0.104)	0.007	0.013
271	22.58	0.07	0.020	(0.104)	0.007	0.013
272	22.67	0.07	0.020	(0.104)	0.007	0.013
273	22.75	0.07	0.020	(0.103)	0.007	0.013
274	22.83	0.07	0.020	(0.103)	0.007	0.013
275	22.92	0.07	0.020	(0.103)	0.007	0.013
276	23.00	0.07	0.020	(0.103)	0.007	0.013
277	23.08	0.07	0.020	(0.102)	0.007	0.013
278	23.17	0.07	0.020	(0.102)	0.007	0.013
279	23.25	0.07	0.020	(0.102)	0.007	0.013
280	23.33	0.07	0.020	(0.102)	0.007	0.013
281	23.42	0.07	0.020	(0.101)	0.007	0.013
282	23.50	0.07	0.020	(0.101)	0.007	0.013
283	23.58	0.07	0.020	(0.101)	0.007	0.013
284	23.67	0.07	0.020	(0.101)	0.007	0.013
285	23.75	0.07	0.020	(0.101)	0.007	0.013
286	23.83	0.07	0.020	(0.101)	0.007	0.013
287	23.92	0.07	0.020	(0.101)	0.007	0.013
288	24.00	0.07	0.020	(0.101)	0.007	0.013

(Loss Rate Not Used)

Sum = 100.0 Sum = 18.9

Flood volume = Effective rainfall 1.57(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.9(Ac.Ft)
Total soil loss = 0.92(In)
Total soil loss = 0.548(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 40649.1 Cubic Feet
Total soil loss = 23873.3 Cubic Feet

Peak flow rate of this hydrograph = 1.536(CFS)

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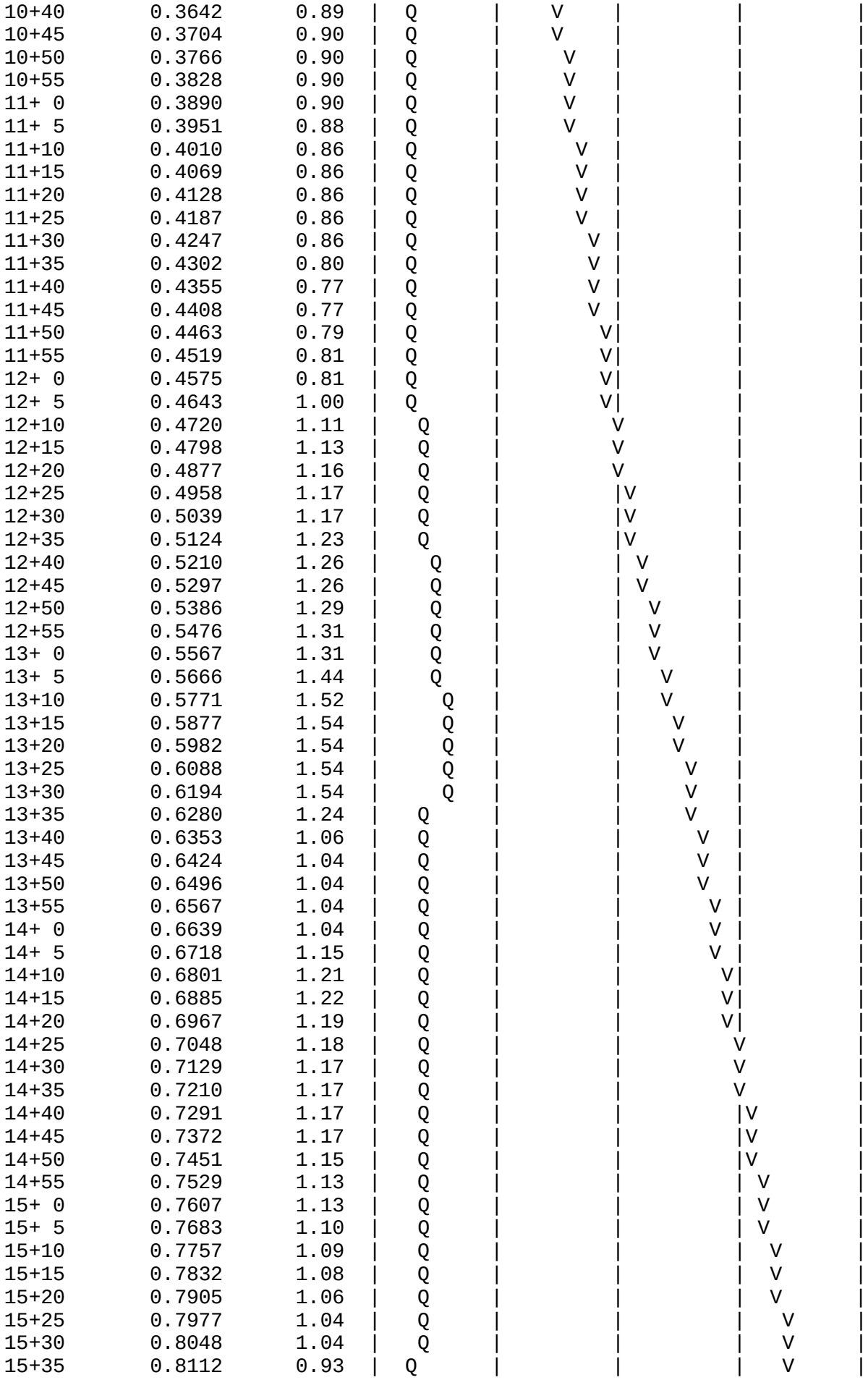
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0004	0.05	Q	|	|	|	|
0+10	0.0010	0.09	Q	|	|	|	|
0+15	0.0016	0.09	Q	|	|	|	|
0+20	0.0024	0.12	Q	|	|	|	|
0+25	0.0033	0.13	Q	|	|	|	|
0+30	0.0042	0.14	Q	|	|	|	|
0+35	0.0052	0.14	Q	|	|	|	|

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0+40       0.0061      0.14  Q        |          |          |          |
0+45       0.0070      0.14  Q        |          |          |          |
0+50       0.0081      0.16  Q        |          |          |          |
0+55       0.0094      0.18  Q        |          |          |          |
1+ 0       0.0106      0.18  Q        |          |          |          |
1+ 5       0.0117      0.15  Q        |          |          |          |
1+10       0.0126      0.14  Q        |          |          |          |
1+15       0.0136      0.14  Q        |          |          |          |
1+20       0.0145      0.14  Q        |          |          |          |
1+25       0.0154      0.14  Q        |          |          |          |
1+30       0.0164      0.14  Q        |          |          |          |
1+35       0.0173      0.14  Q        |          |          |          |
1+40       0.0182      0.14  Q        |          |          |          |
1+45       0.0192      0.14  Q        |          |          |          |
1+50       0.0203      0.16  Q        |          |          |          |
1+55       0.0215      0.18  Q        |          |          |          |
2+ 0       0.0228      0.18  Q        |          |          |          |
2+ 5       0.0240      0.18  QV       |          |          |          |
2+10       0.0252      0.18  QV       |          |          |          |
2+15       0.0265      0.18  QV       |          |          |          |
2+20       0.0277      0.18  QV       |          |          |          |
2+25       0.0290      0.18  QV       |          |          |          |
2+30       0.0302      0.18  QV       |          |          |          |
2+35       0.0316      0.21  QV       |          |          |          |
2+40       0.0332      0.22  QV       |          |          |          |
2+45       0.0347      0.23  QV       |          |          |          |
2+50       0.0363      0.23  QV       |          |          |          |
2+55       0.0379      0.23  QV       |          |          |          |
3+ 0       0.0394      0.23  QV       |          |          |          |
3+ 5       0.0410      0.23  QV       |          |          |          |
3+10       0.0425      0.23  QV       |          |          |          |
3+15       0.0441      0.23  QV       |          |          |          |
3+20       0.0456      0.23  QV       |          |          |          |
3+25       0.0472      0.23  Q V      |          |          |          |
3+30       0.0487      0.23  Q V      |          |          |          |
3+35       0.0503      0.23  Q V      |          |          |          |
3+40       0.0518      0.23  Q V      |          |          |          |
3+45       0.0534      0.23  Q V      |          |          |          |
3+50       0.0551      0.25  |QV      |          |          |          |
3+55       0.0570      0.27  |QV      |          |          |          |
4+ 0       0.0589      0.27  |QV      |          |          |          |
4+ 5       0.0607      0.27  |QV      |          |          |          |
4+10       0.0626      0.27  |QV      |          |          |          |
4+15       0.0645      0.27  |QV      |          |          |          |
4+20       0.0665      0.30  |QV      |          |          |          |
4+25       0.0687      0.31  |QV      |          |          |          |
4+30       0.0708      0.32  |Q V     |          |          |          |
4+35       0.0730      0.32  |Q V     |          |          |          |
4+40       0.0752      0.32  |Q V     |          |          |          |
4+45       0.0774      0.32  |Q V     |          |          |          |
4+50       0.0797      0.34  |Q V     |          |          |          |
4+55       0.0822      0.36  |Q V     |          |          |          |
5+ 0       0.0847      0.36  |Q V     |          |          |          |
5+ 5       0.0868      0.31  |Q V     |          |          |          |
5+10       0.0887      0.28  |Q V     |          |          |          |
5+15       0.0906      0.27  |Q V     |          |          |          |
5+20       0.0926      0.30  |Q V     |          |          |          |
5+25       0.0948      0.31  |Q  V    |          |          |          |
5+30       0.0970      0.32  |Q  V    |          |          |          |
5+35       0.0993      0.34  |Q  V    |          |          |          |
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5+40	0.1018	0.36	|Q V	|	|	|	|
5+45	0.1043	0.36	|Q V	|	|	|	|
5+50	0.1068	0.36	|Q V	|	|	|	|
5+55	0.1093	0.36	|Q V	|	|	|	|
6+ 0	0.1118	0.36	|Q V	|	|	|	|
6+ 5	0.1144	0.39	|Q V	|	|	|	|
6+10	0.1172	0.40	|Q V	|	|	|	|
6+15	0.1200	0.41	|Q V	|	|	|	|
6+20	0.1228	0.41	|Q V	|	|	|	|
6+25	0.1256	0.41	|Q V	|	|	|	|
6+30	0.1284	0.41	|Q V	|	|	|	|
6+35	0.1314	0.43	|Q V	|	|	|	|
6+40	0.1345	0.45	|Q V	|	|	|	|
6+45	0.1376	0.45	|Q V	|	|	|	|
6+50	0.1407	0.45	|Q V	|	|	|	|
6+55	0.1438	0.45	|Q V	|	|	|	|
7+ 0	0.1469	0.45	|Q V	|	|	|	|
7+ 5	0.1500	0.45	|Q V	|	|	|	|
7+10	0.1532	0.45	|Q V	|	|	|	|
7+15	0.1563	0.45	|Q V	|	|	|	|
7+20	0.1596	0.48	|Q V	|	|	|	|
7+25	0.1630	0.49	|Q V	|	|	|	|
7+30	0.1664	0.50	|Q V	|	|	|	|
7+35	0.1700	0.52	| Q V	|	|	|	|
7+40	0.1737	0.54	| Q V	|	|	|	|
7+45	0.1774	0.54	| Q V	|	|	|	|
7+50	0.1814	0.57	| Q V	|	|	|	|
7+55	0.1854	0.58	| Q V	|	|	|	|
8+ 0	0.1894	0.59	| Q V |	|	|	|	|
8+ 5	0.1938	0.64	| Q V |	|	|	|	|
8+10	0.1985	0.67	| Q V |	|	|	|	|
8+15	0.2031	0.68	| Q V |	|	|	|	|
8+20	0.2078	0.68	| Q V |	|	|	|	|
8+25	0.2125	0.68	| Q V|	|	|	|	|
8+30	0.2171	0.68	| Q V|	|	|	|	|
8+35	0.2220	0.70	| Q V|	|	|	|	|
8+40	0.2269	0.72	| Q V|	|	|	|	|
8+45	0.2319	0.72	| Q V|	|	|	|	|
8+50	0.2371	0.75	| Q V	|	|	|	|
8+55	0.2424	0.77	| Q V	|	|	|	|
9+ 0	0.2476	0.77	| Q V	|	|	|	|
9+ 5	0.2533	0.82	| Q V	|	|	|	|
9+10	0.2592	0.85	| Q |V	|	|	|	|
9+15	0.2651	0.86	| Q |V	|	|	|	|
9+20	0.2712	0.88	| Q |V	|	|	|	|
9+25	0.2774	0.90	| Q |V	|	|	|	|
9+30	0.2836	0.90	| Q | V	|	|	|	|
9+35	0.2900	0.93	| Q | V	|	|	|	|
9+40	0.2965	0.95	| Q | V	|	|	|	|
9+45	0.3031	0.95	| Q | V	|	|	|	|
9+50	0.3098	0.98	| Q | V	|	|	|	|
9+55	0.3166	0.99	| Q | V	|	|	|	|
10+ 0	0.3234	0.99	| Q | V	|	|	|	|
10+ 5	0.3290	0.81	| Q | V	|	|	|	|
10+10	0.3338	0.69	| Q | V	|	|	|	|
10+15	0.3384	0.68	| Q | V	|	|	|	|
10+20	0.3431	0.68	| Q | V	|	|	|	|
10+25	0.3478	0.68	| Q | V	|	|	|	|
10+30	0.3524	0.68	| Q | V	|	|	|	|
10+35	0.3580	0.81	| Q | V	|	|	|	|



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15+40       0.8172      0.87  |  Q       |          |          |    V     |
15+45       0.8231      0.86  |  Q       |          |          |    V     |
15+50       0.8290      0.86  |  Q       |          |          |    V     |
15+55       0.8349      0.86  |  Q       |          |          |    V     |
16+ 0       0.8408      0.86  |  Q       |          |          |     V    |
16+ 5       0.8440      0.46  |Q         |          |          |     V    |
16+10       0.8455      0.22  Q          |          |          |     V    |
16+15       0.8467      0.18  Q          |          |          |     V    |
16+20       0.8480      0.18  Q          |          |          |     V    |
16+25       0.8492      0.18  Q          |          |          |     V    |
16+30       0.8505      0.18  Q          |          |          |     V    |
16+35       0.8515      0.15  Q          |          |          |     V    |
16+40       0.8525      0.14  Q          |          |          |     V    |
16+45       0.8534      0.14  Q          |          |          |     V    |
16+50       0.8544      0.14  Q          |          |          |     V    |
16+55       0.8553      0.14  Q          |          |          |     V    |
17+ 0       0.8562      0.14  Q          |          |          |     V    |
17+ 5       0.8575      0.19  Q          |          |          |     V    |
17+10       0.8590      0.22  Q          |          |          |     V    |
17+15       0.8606      0.23  Q          |          |          |     V    |
17+20       0.8622      0.23  Q          |          |          |     V    |
17+25       0.8637      0.23  Q          |          |          |      V   |
17+30       0.8653      0.23  Q          |          |          |      V   |
17+35       0.8668      0.23  Q          |          |          |      V   |
17+40       0.8684      0.23  Q          |          |          |      V   |
17+45       0.8699      0.23  Q          |          |          |      V   |
17+50       0.8713      0.20  Q          |          |          |      V   |
17+55       0.8726      0.18  Q          |          |          |      V   |
18+ 0       0.8738      0.18  Q          |          |          |      V   |
18+ 5       0.8751      0.18  Q          |          |          |      V   |
18+10       0.8763      0.18  Q          |          |          |      V   |
18+15       0.8775      0.18  Q          |          |          |      V   |
18+20       0.8788      0.18  Q          |          |          |      V   |
18+25       0.8800      0.18  Q          |          |          |      V   |
18+30       0.8813      0.18  Q          |          |          |      V   |
18+35       0.8823      0.15  Q          |          |          |      V   |
18+40       0.8833      0.14  Q          |          |          |      V   |
18+45       0.8842      0.14  Q          |          |          |      V   |
18+50       0.8850      0.11  Q          |          |          |      V   |
18+55       0.8856      0.09  Q          |          |          |      V   |
19+ 0       0.8862      0.09  Q          |          |          |      V   |
19+ 5       0.8870      0.12  Q          |          |          |       V  |
19+10       0.8879      0.13  Q          |          |          |       V  |
19+15       0.8889      0.14  Q          |          |          |       V  |
19+20       0.8900      0.16  Q          |          |          |       V  |
19+25       0.8912      0.18  Q          |          |          |       V  |
19+30       0.8925      0.18  Q          |          |          |       V  |
19+35       0.8935      0.15  Q          |          |          |       V  |
19+40       0.8945      0.14  Q          |          |          |       V  |
19+45       0.8954      0.14  Q          |          |          |       V  |
19+50       0.8962      0.11  Q          |          |          |       V  |
19+55       0.8968      0.09  Q          |          |          |       V  |
20+ 0       0.8974      0.09  Q          |          |          |       V  |
20+ 5       0.8982      0.12  Q          |          |          |       V  |
20+10       0.8991      0.13  Q          |          |          |       V  |
20+15       0.9001      0.14  Q          |          |          |       V  |
20+20       0.9010      0.14  Q          |          |          |       V  |
20+25       0.9019      0.14  Q          |          |          |       V  |
20+30       0.9029      0.14  Q          |          |          |       V  |
20+35       0.9038      0.14  Q          |          |          |       V  |
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  20+40       0.9047      0.14  Q         |          |          |        V |
  20+45       0.9057      0.14  Q         |          |          |        V |
  20+50       0.9064      0.11  Q         |          |          |        V |
  20+55       0.9071      0.09  Q         |          |          |        V |
  21+ 0       0.9077      0.09  Q         |          |          |        V |
  21+ 5       0.9085      0.12  Q         |          |          |        V |
  21+10       0.9094      0.13  Q         |          |          |        V |
  21+15       0.9103      0.14  Q         |          |          |         V|
  21+20       0.9111      0.11  Q         |          |          |         V|
  21+25       0.9117      0.09  Q         |          |          |         V|
  21+30       0.9124      0.09  Q         |          |          |         V|
  21+35       0.9132      0.12  Q         |          |          |         V|
  21+40       0.9141      0.13  Q         |          |          |         V|
  21+45       0.9150      0.14  Q         |          |          |         V|
  21+50       0.9158      0.11  Q         |          |          |         V|
  21+55       0.9164      0.09  Q         |          |          |         V|
  22+ 0       0.9170      0.09  Q         |          |          |         V|
  22+ 5       0.9178      0.12  Q         |          |          |         V|
  22+10       0.9187      0.13  Q         |          |          |         V|
  22+15       0.9197      0.14  Q         |          |          |         V|
  22+20       0.9204      0.11  Q         |          |          |         V|
  22+25       0.9211      0.09  Q         |          |          |         V|
  22+30       0.9217      0.09  Q         |          |          |         V|
  22+35       0.9223      0.09  Q         |          |          |         V|
  22+40       0.9229      0.09  Q         |          |          |         V|
  22+45       0.9236      0.09  Q         |          |          |         V|
  22+50       0.9242      0.09  Q         |          |          |         V|
  22+55       0.9248      0.09  Q         |          |          |         V|
  23+ 0       0.9254      0.09  Q         |          |          |         V|
  23+ 5       0.9260      0.09  Q         |          |          |         V|
  23+10       0.9267      0.09  Q         |          |          |         V|
  23+15       0.9273      0.09  Q         |          |          |         V|
  23+20       0.9279      0.09  Q         |          |          |         V|
  23+25       0.9285      0.09  Q         |          |          |         V|
  23+30       0.9292      0.09  Q         |          |          |         V|
  23+35       0.9298      0.09  Q         |          |          |         V|
  23+40       0.9304      0.09  Q         |          |          |         V|
  23+45       0.9310      0.09  Q         |          |          |         V|
  23+50       0.9316      0.09  Q         |          |          |         V|
  23+55       0.9323      0.09  Q         |          |          |         V|
  24+ 0       0.9329      0.09  Q         |          |          |         V|
  24+ 5       0.9331      0.04  Q         |          |          |         V|
  24+10       0.9332      0.00  Q         |          |          |          V
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5-YEAR STORM

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 10/24/24 File: THECOVE15.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
1-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	0.57	3.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.45	9.71

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.776(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.776(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum = 100.000	Sum=	6.752

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	4.40	0.410	(0.143)	0.107	0.303
2	0.17	4.50	0.419	(0.143)	0.109	0.310
3	0.25	5.40	0.503	(0.143)	0.131	0.372
4	0.33	5.40	0.503	(0.143)	0.131	0.372
5	0.42	5.70	0.531	(0.143)	0.138	0.393
6	0.50	6.40	0.596	0.143	(0.155)	0.453
7	0.58	7.90	0.736	0.143	(0.191)	0.593
8	0.67	9.10	0.847	0.143	(0.220)	0.704
9	0.75	12.80	1.192	0.143	(0.310)	1.049
10	0.83	25.60	2.384	0.143	(0.620)	2.241
11	0.92	7.90	0.736	0.143	(0.191)	0.593
12	1.00	4.90	0.456	(0.143)	0.119	0.338

(Loss Rate Not Used)
Sum = 100.0 Sum = 7.7
Flood volume = Effective rainfall 0.64(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.13(In)
Total soil loss = 0.074(Ac.Ft)
Total rainfall = 0.78(In)
Flood volume = 15648.6 Cubic Feet
Total soil loss = 3226.2 Cubic Feet

Peak flow rate of this hydrograph = 9.956(CFS)

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1 - 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	0.0057	0.83	V Q				
0+10	0.0179	1.76	V Q				
0+15	0.0327	2.15	V Q				
0+20	0.0493	2.42	V Q				
0+25	0.0668	2.55	V Q				
0+30	0.0861	2.79	V Q				
0+35	0.1093	3.38	VQ				
0+40	0.1379	4.15	VQ				
0+45	0.1760	5.53	V Q				
0+50	0.2445	9.96	V				Q
0+55	0.3084	9.27				V Q	
1+ 0	0.3393	4.49	Q			V	
1+ 5	0.3537	2.09	Q				V
1+10	0.3579	0.62	Q				V
1+15	0.3590	0.15	Q				V
1+20	0.3592	0.04	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 10/24/24 File: THECOVE35.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
3-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.00	6.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	2.50	16.75

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

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	1.30	0.211	(0.143)		0.055	0.156
2	0.17	1.30	0.211	(0.143)		0.055	0.156
3	0.25	1.10	0.178	(0.143)		0.046	0.132
4	0.33	1.50	0.243	(0.143)		0.063	0.180
5	0.42	1.50	0.243	(0.143)		0.063	0.180
6	0.50	1.80	0.292	(0.143)		0.076	0.216
7	0.58	1.50	0.243	(0.143)		0.063	0.180
8	0.67	1.80	0.292	(0.143)		0.076	0.216
9	0.75	1.80	0.292	(0.143)		0.076	0.216
10	0.83	1.50	0.243	(0.143)		0.063	0.180
11	0.92	1.60	0.259	(0.143)		0.067	0.192
12	1.00	1.80	0.292	(0.143)		0.076	0.216
13	1.08	2.20	0.357	(0.143)		0.093	0.264
14	1.17	2.20	0.357	(0.143)		0.093	0.264

15	1.25	2.20	0.357	(	0.143)	0.093	0.264
16	1.33	2.00	0.324	(	0.143)	0.084	0.240
17	1.42	2.60	0.422	(	0.143)	0.110	0.312
18	1.50	2.70	0.438	(	0.143)	0.114	0.324
19	1.58	2.40	0.389	(	0.143)	0.101	0.288
20	1.67	2.70	0.438	(	0.143)	0.114	0.324
21	1.75	3.30	0.535	(	0.143)	0.139	0.396
22	1.83	3.10	0.503	(	0.143)	0.131	0.372
23	1.92	2.90	0.470	(	0.143)	0.122	0.348
24	2.00	3.00	0.486	(	0.143)	0.126	0.360
25	2.08	3.10	0.503	(	0.143)	0.131	0.372
26	2.17	4.20	0.681		0.143	(0.177)	0.538
27	2.25	5.00	0.811		0.143	(0.211)	0.668
28	2.33	3.50	0.568		0.143	(0.148)	0.425
29	2.42	6.80	1.103		0.143	(0.287)	0.960
30	2.50	7.30	1.184		0.143	(0.308)	1.041
31	2.58	8.20	1.330		0.143	(0.346)	1.187
32	2.67	5.90	0.957		0.143	(0.249)	0.814
33	2.75	2.00	0.324	(	0.143)	0.084	0.240
34	2.83	1.80	0.292	(	0.143)	0.076	0.216
35	2.92	1.80	0.292	(	0.143)	0.076	0.216
36	3.00	0.60	0.097	(	0.143)	0.025	0.072

(Loss Rate Not Used)

Sum = 100.0 Sum = 12.7

Flood volume = Effective rainfall 1.06(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.29(In)
Total soil loss = 0.163(Ac.Ft)
Total rainfall = 1.35(In)
Flood volume = 25785.8 Cubic Feet
Total soil loss = 7079.1 Cubic Feet

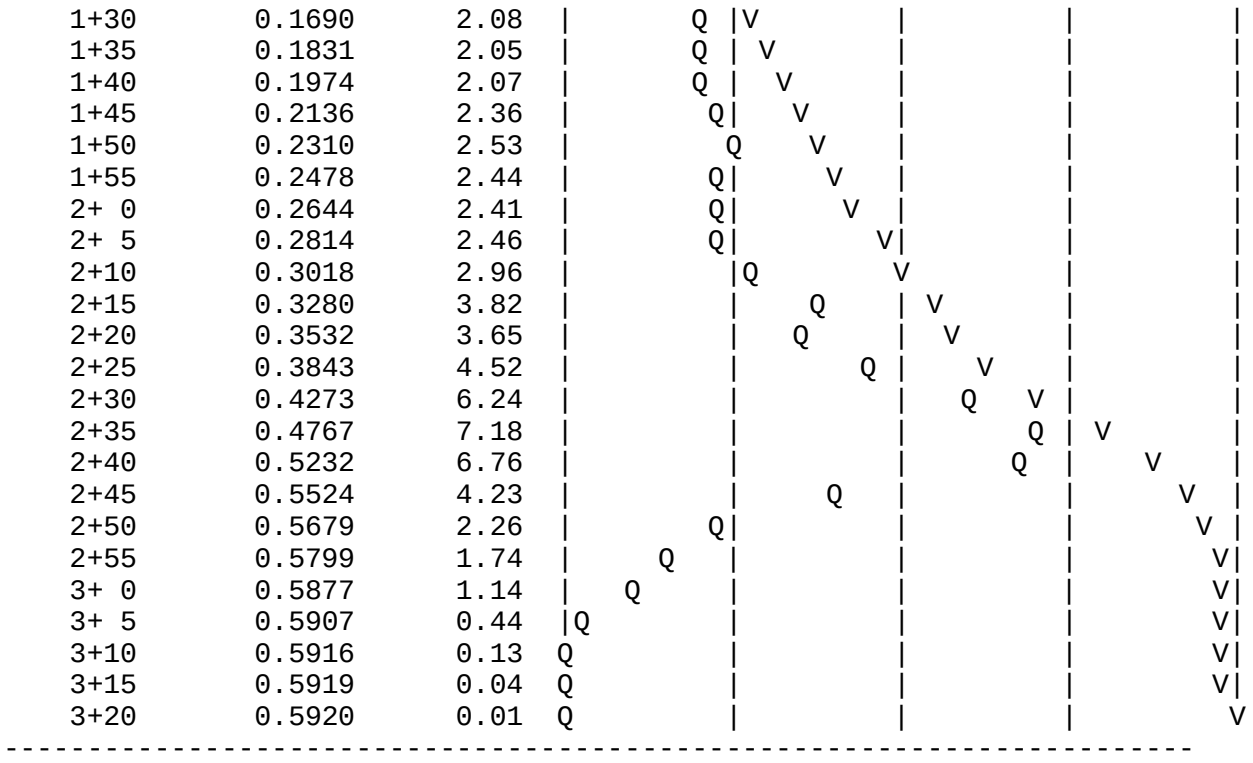
Peak flow rate of this hydrograph = 7.179(CFS)

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3 - 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	0.0029	0.43	VQ				
0+10	0.0091	0.90	V Q				
0+15	0.0155	0.93	|V Q				
0+20	0.0226	1.03	|V Q				
0+25	0.0307	1.18	| V Q				
0+30	0.0397	1.30	| V Q				
0+35	0.0488	1.32	| V Q				
0+40	0.0580	1.34	| V Q				
0+45	0.0678	1.43	| VQ				
0+50	0.0771	1.35	| Q				
0+55	0.0860	1.28	| Q				
1+ 0	0.0954	1.36	| QV				
1+ 5	0.1062	1.57	| QV				
1+10	0.1180	1.72	| QV				
1+15	0.1302	1.76	| QV				
1+20	0.1420	1.71	| Q V|				
1+25	0.1547	1.84	| Q V				


1+30 0.1690 2.08
1+35 0.1831 2.05
1+40 0.1974 2.07
1+45 0.2136 2.36
1+50 0.2310 2.53
1+55 0.2478 2.44
2+ 0 0.2644 2.41
2+ 5 0.2814 2.46
2+10 0.3018 2.96
2+15 0.3280 3.82
2+20 0.3532 3.65
2+25 0.3843 4.52
2+30 0.4273 6.24
2+35 0.4767 7.18
2+40 0.5232 6.76
2+45 0.5524 4.23
2+50 0.5679 2.26
2+55 0.5799 1.74
3+ 0 0.5877 1.14
3+ 5 0.5907 0.44
3+10 0.5916 0.13
3+15 0.5919 0.04
3+20 0.5920 0.01

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 10/24/24 File: THECOVE65.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
6-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.40	9.38

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	3.50	23.45

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.892(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.892(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

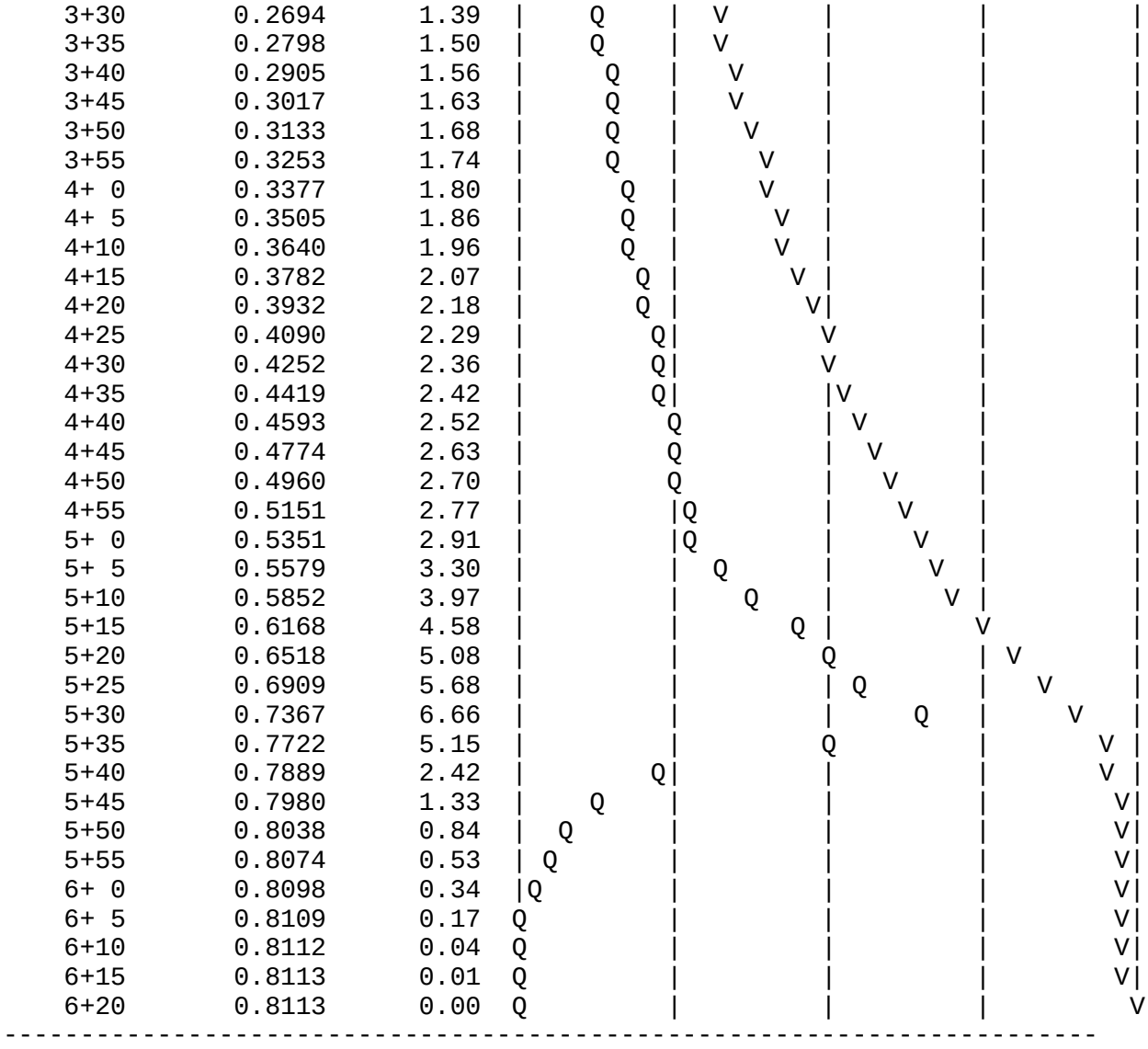
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.114	(0.143)		0.030	0.084
2	0.17	0.60	0.136	(0.143)		0.035	0.101
3	0.25	0.60	0.136	(0.143)		0.035	0.101
4	0.33	0.60	0.136	(0.143)		0.035	0.101
5	0.42	0.60	0.136	(0.143)		0.035	0.101
6	0.50	0.70	0.159	(0.143)		0.041	0.118
7	0.58	0.70	0.159	(0.143)		0.041	0.118
8	0.67	0.70	0.159	(0.143)		0.041	0.118
9	0.75	0.70	0.159	(0.143)		0.041	0.118
10	0.83	0.70	0.159	(0.143)		0.041	0.118
11	0.92	0.70	0.159	(0.143)		0.041	0.118
12	1.00	0.80	0.182	(0.143)		0.047	0.134
13	1.08	0.80	0.182	(0.143)		0.047	0.134
14	1.17	0.80	0.182	(0.143)		0.047	0.134

15	1.25	0.80	0.182	(0.143)	0.047	0.134
16	1.33	0.80	0.182	(0.143)	0.047	0.134
17	1.42	0.80	0.182	(0.143)	0.047	0.134
18	1.50	0.80	0.182	(0.143)	0.047	0.134
19	1.58	0.80	0.182	(0.143)	0.047	0.134
20	1.67	0.80	0.182	(0.143)	0.047	0.134
21	1.75	0.80	0.182	(0.143)	0.047	0.134
22	1.83	0.80	0.182	(0.143)	0.047	0.134
23	1.92	0.80	0.182	(0.143)	0.047	0.134
24	2.00	0.90	0.204	(0.143)	0.053	0.151
25	2.08	0.80	0.182	(0.143)	0.047	0.134
26	2.17	0.90	0.204	(0.143)	0.053	0.151
27	2.25	0.90	0.204	(0.143)	0.053	0.151
28	2.33	0.90	0.204	(0.143)	0.053	0.151
29	2.42	0.90	0.204	(0.143)	0.053	0.151
30	2.50	0.90	0.204	(0.143)	0.053	0.151
31	2.58	0.90	0.204	(0.143)	0.053	0.151
32	2.67	0.90	0.204	(0.143)	0.053	0.151
33	2.75	1.00	0.227	(0.143)	0.059	0.168
34	2.83	1.00	0.227	(0.143)	0.059	0.168
35	2.92	1.00	0.227	(0.143)	0.059	0.168
36	3.00	1.00	0.227	(0.143)	0.059	0.168
37	3.08	1.00	0.227	(0.143)	0.059	0.168
38	3.17	1.10	0.250	(0.143)	0.065	0.185
39	3.25	1.10	0.250	(0.143)	0.065	0.185
40	3.33	1.10	0.250	(0.143)	0.065	0.185
41	3.42	1.20	0.272	(0.143)	0.071	0.202
42	3.50	1.30	0.295	(0.143)	0.077	0.218
43	3.58	1.40	0.318	(0.143)	0.083	0.235
44	3.67	1.40	0.318	(0.143)	0.083	0.235
45	3.75	1.50	0.341	(0.143)	0.089	0.252
46	3.83	1.50	0.341	(0.143)	0.089	0.252
47	3.92	1.60	0.363	(0.143)	0.094	0.269
48	4.00	1.60	0.363	(0.143)	0.094	0.269
49	4.08	1.70	0.386	(0.143)	0.100	0.286
50	4.17	1.80	0.409	(0.143)	0.106	0.302
51	4.25	1.90	0.431	(0.143)	0.112	0.319
52	4.33	2.00	0.454	(0.143)	0.118	0.336
53	4.42	2.10	0.477	(0.143)	0.124	0.353
54	4.50	2.10	0.477	(0.143)	0.124	0.353
55	4.58	2.20	0.499	(0.143)	0.130	0.370
56	4.67	2.30	0.522	(0.143)	0.136	0.386
57	4.75	2.40	0.545	(0.143)	0.142	0.403
58	4.83	2.40	0.545	(0.143)	0.142	0.403
59	4.92	2.50	0.568	0.143	(0.148)	0.425
60	5.00	2.60	0.590	0.143	(0.153)	0.447
61	5.08	3.10	0.704	0.143	(0.183)	0.561
62	5.17	3.60	0.817	0.143	(0.212)	0.674
63	5.25	3.90	0.885	0.143	(0.230)	0.742
64	5.33	4.20	0.953	0.143	(0.248)	0.810
65	5.42	4.70	1.067	0.143	(0.277)	0.924
66	5.50	5.60	1.271	0.143	(0.331)	1.128
67	5.58	1.90	0.431	(0.143)	0.112	0.319
68	5.67	0.90	0.204	(0.143)	0.053	0.151
69	5.75	0.60	0.136	(0.143)	0.035	0.101
70	5.83	0.50	0.114	(0.143)	0.030	0.084
71	5.92	0.30	0.068	(0.143)	0.018	0.050
72	6.00	0.20	0.045	(0.143)	0.012	0.034
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	17.4

```
   Flood volume = Effective rainfall      1.45(In)
    times area       6.7(Ac.)/[(In)/(Ft.)] =       0.8(Ac.Ft)
   Total soil loss =      0.44(In)
   Total soil loss =     0.245(Ac.Ft)
   Total rainfall =      1.89(In)
   Flood volume =       35342.0 Cubic Feet
   Total soil loss =       10669.1 Cubic Feet
   ----------------------------------------------------------------------
    Peak flow rate of this hydrograph =      6.656(CFS)
   ----------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0016      0.23  Q         |         |         |         |
  0+10       0.0052      0.53  V Q       |         |         |         |
  0+15       0.0096      0.63  V Q       |         |         |         |
  0+20       0.0142      0.67  V Q       |         |         |         |
  0+25       0.0189      0.68  V Q       |         |         |         |
  0+30       0.0239      0.73  |VQ       |         |         |         |
  0+35       0.0292      0.78  |V Q      |         |         |         |
  0+40       0.0346      0.79  |V Q      |         |         |         |
  0+45       0.0401      0.79  |V Q      |         |         |         |
  0+50       0.0456      0.79  | VQ      |         |         |         |
  0+55       0.0510      0.79  | VQ      |         |         |         |
  1+ 0       0.0568      0.84  | VQ      |         |         |         |
  1+ 5       0.0630      0.89  |  Q      |         |         |         |
  1+10       0.0692      0.90  |  Q      |         |         |         |
  1+15       0.0754      0.91  |  Q      |         |         |         |
  1+20       0.0817      0.91  |  QV     |         |         |         |
  1+25       0.0879      0.91  |  QV     |         |         |         |
  1+30       0.0942      0.91  |  QV     |         |         |         |
  1+35       0.1004      0.91  |  QV     |         |         |         |
  1+40       0.1067      0.91  |  Q V    |         |         |         |
  1+45       0.1129      0.91  |  Q V    |         |         |         |
  1+50       0.1192      0.91  |  Q V    |         |         |         |
  1+55       0.1254      0.91  |  Q  V   |         |         |         |
  2+ 0       0.1320      0.95  |  Q  V   |         |         |         |
  2+ 5       0.1386      0.96  |  Q  V   |         |         |         |
  2+10       0.1453      0.96  |  Q   V  |         |         |         |
  2+15       0.1522      1.01  |   Q  V  |         |         |         |
  2+20       0.1592      1.02  |   Q  V  |         |         |         |
  2+25       0.1662      1.02  |   Q   V |         |         |         |
  2+30       0.1733      1.02  |   Q   V |         |         |         |
  2+35       0.1803      1.02  |   Q   V |         |         |         |
  2+40       0.1873      1.02  |   Q    V|         |         |         |
  2+45       0.1947      1.07  |   Q    V|         |         |         |
  2+50       0.2024      1.12  |   Q    V|         |         |         |
  2+55       0.2102      1.13  |   Q     V         |         |         |
  3+ 0       0.2180      1.13  |   Q     V         |         |         |
  3+ 5       0.2258      1.13  |   Q     |V        |         |         |
  3+10       0.2339      1.18  |   Q     |V        |         |         |
  3+15       0.2424      1.23  |   Q     |V        |         |         |
  3+20       0.2510      1.24  |   Q     | V       |         |         |
  3+25       0.2599      1.29  |    Q    | V       |         |         |
```


3+30 0.2694 1.39
3+35 0.2798 1.50
3+40 0.2905 1.56
3+45 0.3017 1.63
3+50 0.3133 1.68
3+55 0.3253 1.74
4+ 0 0.3377 1.80
4+ 5 0.3505 1.86
4+10 0.3640 1.96
4+15 0.3782 2.07
4+20 0.3932 2.18
4+25 0.4090 2.29
4+30 0.4252 2.36
4+35 0.4419 2.42
4+40 0.4593 2.52
4+45 0.4774 2.63
4+50 0.4960 2.70
4+55 0.5151 2.77
5+ 0 0.5351 2.91
5+ 5 0.5579 3.30
5+10 0.5852 3.97
5+15 0.6168 4.58
5+20 0.6518 5.08
5+25 0.6909 5.68
5+30 0.7367 6.66
5+35 0.7722 5.15
5+40 0.7889 2.42
5+45 0.7980 1.33
5+50 0.8038 0.84
5+55 0.8074 0.53
6+ 0 0.8098 0.34
6+ 5 0.8109 0.17
6+10 0.8112 0.04
6+15 0.8113 0.01
6+20 0.8113 0.00

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 10/24/24 File: THECOVE245.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
24-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 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]
6.70	2.50	16.75

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	6.00	40.20

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.320(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.320(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

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	0.027	(0.254)		0.007	0.020
2	0.17	0.07	0.027	(0.253)		0.007	0.020
3	0.25	0.07	0.027	(0.252)		0.007	0.020
4	0.33	0.10	0.040	(0.251)		0.010	0.029
5	0.42	0.10	0.040	(0.250)		0.010	0.029
6	0.50	0.10	0.040	(0.249)		0.010	0.029
7	0.58	0.10	0.040	(0.248)		0.010	0.029
8	0.67	0.10	0.040	(0.247)		0.010	0.029
9	0.75	0.10	0.040	(0.246)		0.010	0.029
10	0.83	0.13	0.053	(0.245)		0.014	0.039
11	0.92	0.13	0.053	(0.244)		0.014	0.039
12	1.00	0.13	0.053	(0.243)		0.014	0.039
13	1.08	0.10	0.040	(0.242)		0.010	0.029
14	1.17	0.10	0.040	(0.241)		0.010	0.029

15	1.25	0.10	0.040	(0.240)	0.010	0.029
16	1.33	0.10	0.040	(0.239)	0.010	0.029
17	1.42	0.10	0.040	(0.238)	0.010	0.029
18	1.50	0.10	0.040	(0.237)	0.010	0.029
19	1.58	0.10	0.040	(0.236)	0.010	0.029
20	1.67	0.10	0.040	(0.235)	0.010	0.029
21	1.75	0.10	0.040	(0.234)	0.010	0.029
22	1.83	0.13	0.053	(0.233)	0.014	0.039
23	1.92	0.13	0.053	(0.232)	0.014	0.039
24	2.00	0.13	0.053	(0.231)	0.014	0.039
25	2.08	0.13	0.053	(0.231)	0.014	0.039
26	2.17	0.13	0.053	(0.230)	0.014	0.039
27	2.25	0.13	0.053	(0.229)	0.014	0.039
28	2.33	0.13	0.053	(0.228)	0.014	0.039
29	2.42	0.13	0.053	(0.227)	0.014	0.039
30	2.50	0.13	0.053	(0.226)	0.014	0.039
31	2.58	0.17	0.066	(0.225)	0.017	0.049
32	2.67	0.17	0.066	(0.224)	0.017	0.049
33	2.75	0.17	0.066	(0.223)	0.017	0.049
34	2.83	0.17	0.066	(0.222)	0.017	0.049
35	2.92	0.17	0.066	(0.221)	0.017	0.049
36	3.00	0.17	0.066	(0.220)	0.017	0.049
37	3.08	0.17	0.066	(0.219)	0.017	0.049
38	3.17	0.17	0.066	(0.219)	0.017	0.049
39	3.25	0.17	0.066	(0.218)	0.017	0.049
40	3.33	0.17	0.066	(0.217)	0.017	0.049
41	3.42	0.17	0.066	(0.216)	0.017	0.049
42	3.50	0.17	0.066	(0.215)	0.017	0.049
43	3.58	0.17	0.066	(0.214)	0.017	0.049
44	3.67	0.17	0.066	(0.213)	0.017	0.049
45	3.75	0.17	0.066	(0.212)	0.017	0.049
46	3.83	0.20	0.080	(0.211)	0.021	0.059
47	3.92	0.20	0.080	(0.210)	0.021	0.059
48	4.00	0.20	0.080	(0.210)	0.021	0.059
49	4.08	0.20	0.080	(0.209)	0.021	0.059
50	4.17	0.20	0.080	(0.208)	0.021	0.059
51	4.25	0.20	0.080	(0.207)	0.021	0.059
52	4.33	0.23	0.093	(0.206)	0.024	0.069
53	4.42	0.23	0.093	(0.205)	0.024	0.069
54	4.50	0.23	0.093	(0.204)	0.024	0.069
55	4.58	0.23	0.093	(0.203)	0.024	0.069
56	4.67	0.23	0.093	(0.202)	0.024	0.069
57	4.75	0.23	0.093	(0.202)	0.024	0.069
58	4.83	0.27	0.106	(0.201)	0.028	0.079
59	4.92	0.27	0.106	(0.200)	0.028	0.079
60	5.00	0.27	0.106	(0.199)	0.028	0.079
61	5.08	0.20	0.080	(0.198)	0.021	0.059
62	5.17	0.20	0.080	(0.197)	0.021	0.059
63	5.25	0.20	0.080	(0.196)	0.021	0.059
64	5.33	0.23	0.093	(0.196)	0.024	0.069
65	5.42	0.23	0.093	(0.195)	0.024	0.069
66	5.50	0.23	0.093	(0.194)	0.024	0.069
67	5.58	0.27	0.106	(0.193)	0.028	0.079
68	5.67	0.27	0.106	(0.192)	0.028	0.079
69	5.75	0.27	0.106	(0.191)	0.028	0.079
70	5.83	0.27	0.106	(0.190)	0.028	0.079
71	5.92	0.27	0.106	(0.190)	0.028	0.079
72	6.00	0.27	0.106	(0.189)	0.028	0.079
73	6.08	0.30	0.120	(0.188)	0.031	0.088
74	6.17	0.30	0.120	(0.187)	0.031	0.088

75	6.25	0.30	0.120	(0.186)	0.031	0.088
76	6.33	0.30	0.120	(0.185)	0.031	0.088
77	6.42	0.30	0.120	(0.185)	0.031	0.088
78	6.50	0.30	0.120	(0.184)	0.031	0.088
79	6.58	0.33	0.133	(0.183)	0.035	0.098
80	6.67	0.33	0.133	(0.182)	0.035	0.098
81	6.75	0.33	0.133	(0.181)	0.035	0.098
82	6.83	0.33	0.133	(0.181)	0.035	0.098
83	6.92	0.33	0.133	(0.180)	0.035	0.098
84	7.00	0.33	0.133	(0.179)	0.035	0.098
85	7.08	0.33	0.133	(0.178)	0.035	0.098
86	7.17	0.33	0.133	(0.177)	0.035	0.098
87	7.25	0.33	0.133	(0.176)	0.035	0.098
88	7.33	0.37	0.146	(0.176)	0.038	0.108
89	7.42	0.37	0.146	(0.175)	0.038	0.108
90	7.50	0.37	0.146	(0.174)	0.038	0.108
91	7.58	0.40	0.159	(0.173)	0.041	0.118
92	7.67	0.40	0.159	(0.172)	0.041	0.118
93	7.75	0.40	0.159	(0.172)	0.041	0.118
94	7.83	0.43	0.173	(0.171)	0.045	0.128
95	7.92	0.43	0.173	(0.170)	0.045	0.128
96	8.00	0.43	0.173	(0.169)	0.045	0.128
97	8.08	0.50	0.199	(0.168)	0.052	0.147
98	8.17	0.50	0.199	(0.168)	0.052	0.147
99	8.25	0.50	0.199	(0.167)	0.052	0.147
100	8.33	0.50	0.199	(0.166)	0.052	0.147
101	8.42	0.50	0.199	(0.165)	0.052	0.147
102	8.50	0.50	0.199	(0.165)	0.052	0.147
103	8.58	0.53	0.212	(0.164)	0.055	0.157
104	8.67	0.53	0.212	(0.163)	0.055	0.157
105	8.75	0.53	0.212	(0.162)	0.055	0.157
106	8.83	0.57	0.226	(0.162)	0.059	0.167
107	8.92	0.57	0.226	(0.161)	0.059	0.167
108	9.00	0.57	0.226	(0.160)	0.059	0.167
109	9.08	0.63	0.252	(0.159)	0.066	0.187
110	9.17	0.63	0.252	(0.158)	0.066	0.187
111	9.25	0.63	0.252	(0.158)	0.066	0.187
112	9.33	0.67	0.266	(0.157)	0.069	0.197
113	9.42	0.67	0.266	(0.156)	0.069	0.197
114	9.50	0.67	0.266	(0.155)	0.069	0.197
115	9.58	0.70	0.279	(0.155)	0.073	0.206
116	9.67	0.70	0.279	(0.154)	0.073	0.206
117	9.75	0.70	0.279	(0.153)	0.073	0.206
118	9.83	0.73	0.292	(0.153)	0.076	0.216
119	9.92	0.73	0.292	(0.152)	0.076	0.216
120	10.00	0.73	0.292	(0.151)	0.076	0.216
121	10.08	0.50	0.199	(0.150)	0.052	0.147
122	10.17	0.50	0.199	(0.150)	0.052	0.147
123	10.25	0.50	0.199	(0.149)	0.052	0.147
124	10.33	0.50	0.199	(0.148)	0.052	0.147
125	10.42	0.50	0.199	(0.147)	0.052	0.147
126	10.50	0.50	0.199	(0.147)	0.052	0.147
127	10.58	0.67	0.266	(0.146)	0.069	0.197
128	10.67	0.67	0.266	(0.145)	0.069	0.197
129	10.75	0.67	0.266	(0.145)	0.069	0.197
130	10.83	0.67	0.266	(0.144)	0.069	0.197
131	10.92	0.67	0.266	(0.143)	0.069	0.197
132	11.00	0.67	0.266	(0.142)	0.069	0.197
133	11.08	0.63	0.252	(0.142)	0.066	0.187
134	11.17	0.63	0.252	(0.141)	0.066	0.187

135	11.25	0.63	0.252	(0.140)	0.066	0.187
136	11.33	0.63	0.252	(0.140)	0.066	0.187
137	11.42	0.63	0.252	(0.139)	0.066	0.187
138	11.50	0.63	0.252	(0.138)	0.066	0.187
139	11.58	0.57	0.226	(0.138)	0.059	0.167
140	11.67	0.57	0.226	(0.137)	0.059	0.167
141	11.75	0.57	0.226	(0.136)	0.059	0.167
142	11.83	0.60	0.239	(0.136)	0.062	0.177
143	11.92	0.60	0.239	(0.135)	0.062	0.177
144	12.00	0.60	0.239	(0.134)	0.062	0.177
145	12.08	0.83	0.332	(0.134)	0.086	0.246
146	12.17	0.83	0.332	(0.133)	0.086	0.246
147	12.25	0.83	0.332	(0.132)	0.086	0.246
148	12.33	0.87	0.345	(0.132)	0.090	0.255
149	12.42	0.87	0.345	(0.131)	0.090	0.255
150	12.50	0.87	0.345	(0.130)	0.090	0.255
151	12.58	0.93	0.372	(0.130)	0.097	0.275
152	12.67	0.93	0.372	(0.129)	0.097	0.275
153	12.75	0.93	0.372	(0.128)	0.097	0.275
154	12.83	0.97	0.385	(0.128)	0.100	0.285
155	12.92	0.97	0.385	(0.127)	0.100	0.285
156	13.00	0.97	0.385	(0.126)	0.100	0.285
157	13.08	1.13	0.451	(0.126)	0.117	0.334
158	13.17	1.13	0.451	(0.125)	0.117	0.334
159	13.25	1.13	0.451	(0.124)	0.117	0.334
160	13.33	1.13	0.451	(0.124)	0.117	0.334
161	13.42	1.13	0.451	(0.123)	0.117	0.334
162	13.50	1.13	0.451	(0.123)	0.117	0.334
163	13.58	0.77	0.305	(0.122)	0.079	0.226
164	13.67	0.77	0.305	(0.121)	0.079	0.226
165	13.75	0.77	0.305	(0.121)	0.079	0.226
166	13.83	0.77	0.305	(0.120)	0.079	0.226
167	13.92	0.77	0.305	(0.119)	0.079	0.226
168	14.00	0.77	0.305	(0.119)	0.079	0.226
169	14.08	0.90	0.359	(0.118)	0.093	0.265
170	14.17	0.90	0.359	(0.118)	0.093	0.265
171	14.25	0.90	0.359	(0.117)	0.093	0.265
172	14.33	0.87	0.345	(0.116)	0.090	0.255
173	14.42	0.87	0.345	(0.116)	0.090	0.255
174	14.50	0.87	0.345	(0.115)	0.090	0.255
175	14.58	0.87	0.345	(0.115)	0.090	0.255
176	14.67	0.87	0.345	(0.114)	0.090	0.255
177	14.75	0.87	0.345	(0.113)	0.090	0.255
178	14.83	0.83	0.332	(0.113)	0.086	0.246
179	14.92	0.83	0.332	(0.112)	0.086	0.246
180	15.00	0.83	0.332	(0.112)	0.086	0.246
181	15.08	0.80	0.319	(0.111)	0.083	0.236
182	15.17	0.80	0.319	(0.111)	0.083	0.236
183	15.25	0.80	0.319	(0.110)	0.083	0.236
184	15.33	0.77	0.305	(0.109)	0.079	0.226
185	15.42	0.77	0.305	(0.109)	0.079	0.226
186	15.50	0.77	0.305	(0.108)	0.079	0.226
187	15.58	0.63	0.252	(0.108)	0.066	0.187
188	15.67	0.63	0.252	(0.107)	0.066	0.187
189	15.75	0.63	0.252	(0.107)	0.066	0.187
190	15.83	0.63	0.252	(0.106)	0.066	0.187
191	15.92	0.63	0.252	(0.106)	0.066	0.187
192	16.00	0.63	0.252	(0.105)	0.066	0.187
193	16.08	0.13	0.053	(0.104)	0.014	0.039
194	16.17	0.13	0.053	(0.104)	0.014	0.039

195	16.25	0.13	0.053	(0.103)	0.014	0.039
196	16.33	0.13	0.053	(0.103)	0.014	0.039
197	16.42	0.13	0.053	(0.102)	0.014	0.039
198	16.50	0.13	0.053	(0.102)	0.014	0.039
199	16.58	0.10	0.040	(0.101)	0.010	0.029
200	16.67	0.10	0.040	(0.101)	0.010	0.029
201	16.75	0.10	0.040	(0.100)	0.010	0.029
202	16.83	0.10	0.040	(0.100)	0.010	0.029
203	16.92	0.10	0.040	(0.099)	0.010	0.029
204	17.00	0.10	0.040	(0.099)	0.010	0.029
205	17.08	0.17	0.066	(0.098)	0.017	0.049
206	17.17	0.17	0.066	(0.098)	0.017	0.049
207	17.25	0.17	0.066	(0.097)	0.017	0.049
208	17.33	0.17	0.066	(0.097)	0.017	0.049
209	17.42	0.17	0.066	(0.096)	0.017	0.049
210	17.50	0.17	0.066	(0.096)	0.017	0.049
211	17.58	0.17	0.066	(0.095)	0.017	0.049
212	17.67	0.17	0.066	(0.095)	0.017	0.049
213	17.75	0.17	0.066	(0.094)	0.017	0.049
214	17.83	0.13	0.053	(0.094)	0.014	0.039
215	17.92	0.13	0.053	(0.093)	0.014	0.039
216	18.00	0.13	0.053	(0.093)	0.014	0.039
217	18.08	0.13	0.053	(0.093)	0.014	0.039
218	18.17	0.13	0.053	(0.092)	0.014	0.039
219	18.25	0.13	0.053	(0.092)	0.014	0.039
220	18.33	0.13	0.053	(0.091)	0.014	0.039
221	18.42	0.13	0.053	(0.091)	0.014	0.039
222	18.50	0.13	0.053	(0.090)	0.014	0.039
223	18.58	0.10	0.040	(0.090)	0.010	0.029
224	18.67	0.10	0.040	(0.089)	0.010	0.029
225	18.75	0.10	0.040	(0.089)	0.010	0.029
226	18.83	0.07	0.027	(0.089)	0.007	0.020
227	18.92	0.07	0.027	(0.088)	0.007	0.020
228	19.00	0.07	0.027	(0.088)	0.007	0.020
229	19.08	0.10	0.040	(0.087)	0.010	0.029
230	19.17	0.10	0.040	(0.087)	0.010	0.029
231	19.25	0.10	0.040	(0.087)	0.010	0.029
232	19.33	0.13	0.053	(0.086)	0.014	0.039
233	19.42	0.13	0.053	(0.086)	0.014	0.039
234	19.50	0.13	0.053	(0.085)	0.014	0.039
235	19.58	0.10	0.040	(0.085)	0.010	0.029
236	19.67	0.10	0.040	(0.085)	0.010	0.029
237	19.75	0.10	0.040	(0.084)	0.010	0.029
238	19.83	0.07	0.027	(0.084)	0.007	0.020
239	19.92	0.07	0.027	(0.083)	0.007	0.020
240	20.00	0.07	0.027	(0.083)	0.007	0.020
241	20.08	0.10	0.040	(0.083)	0.010	0.029
242	20.17	0.10	0.040	(0.082)	0.010	0.029
243	20.25	0.10	0.040	(0.082)	0.010	0.029
244	20.33	0.10	0.040	(0.082)	0.010	0.029
245	20.42	0.10	0.040	(0.081)	0.010	0.029
246	20.50	0.10	0.040	(0.081)	0.010	0.029
247	20.58	0.10	0.040	(0.081)	0.010	0.029
248	20.67	0.10	0.040	(0.080)	0.010	0.029
249	20.75	0.10	0.040	(0.080)	0.010	0.029
250	20.83	0.07	0.027	(0.080)	0.007	0.020
251	20.92	0.07	0.027	(0.079)	0.007	0.020
252	21.00	0.07	0.027	(0.079)	0.007	0.020
253	21.08	0.10	0.040	(0.079)	0.010	0.029
254	21.17	0.10	0.040	(0.078)	0.010	0.029

255	21.25	0.10	0.040	(0.078)	0.010	0.029
256	21.33	0.07	0.027	(0.078)	0.007	0.020
257	21.42	0.07	0.027	(0.077)	0.007	0.020
258	21.50	0.07	0.027	(0.077)	0.007	0.020
259	21.58	0.10	0.040	(0.077)	0.010	0.029
260	21.67	0.10	0.040	(0.077)	0.010	0.029
261	21.75	0.10	0.040	(0.076)	0.010	0.029
262	21.83	0.07	0.027	(0.076)	0.007	0.020
263	21.92	0.07	0.027	(0.076)	0.007	0.020
264	22.00	0.07	0.027	(0.076)	0.007	0.020
265	22.08	0.10	0.040	(0.075)	0.010	0.029
266	22.17	0.10	0.040	(0.075)	0.010	0.029
267	22.25	0.10	0.040	(0.075)	0.010	0.029
268	22.33	0.07	0.027	(0.075)	0.007	0.020
269	22.42	0.07	0.027	(0.074)	0.007	0.020
270	22.50	0.07	0.027	(0.074)	0.007	0.020
271	22.58	0.07	0.027	(0.074)	0.007	0.020
272	22.67	0.07	0.027	(0.074)	0.007	0.020
273	22.75	0.07	0.027	(0.073)	0.007	0.020
274	22.83	0.07	0.027	(0.073)	0.007	0.020
275	22.92	0.07	0.027	(0.073)	0.007	0.020
276	23.00	0.07	0.027	(0.073)	0.007	0.020
277	23.08	0.07	0.027	(0.073)	0.007	0.020
278	23.17	0.07	0.027	(0.073)	0.007	0.020
279	23.25	0.07	0.027	(0.072)	0.007	0.020
280	23.33	0.07	0.027	(0.072)	0.007	0.020
281	23.42	0.07	0.027	(0.072)	0.007	0.020
282	23.50	0.07	0.027	(0.072)	0.007	0.020
283	23.58	0.07	0.027	(0.072)	0.007	0.020
284	23.67	0.07	0.027	(0.072)	0.007	0.020
285	23.75	0.07	0.027	(0.072)	0.007	0.020
286	23.83	0.07	0.027	(0.072)	0.007	0.020
287	23.92	0.07	0.027	(0.072)	0.007	0.020
288	24.00	0.07	0.027	(0.072)	0.007	0.020

(Loss Rate Not Used)

Sum = 100.0 Sum = 29.5

Flood volume = Effective rainfall 2.46(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 1.4(Ac.Ft)
Total soil loss = 0.86(In)
Total soil loss = 0.482(Ac.Ft)
Total rainfall = 3.32(In)
Flood volume = 59747.2 Cubic Feet
Total soil loss = 20992.3 Cubic Feet

Peak flow rate of this hydrograph = 2.257(CFS)

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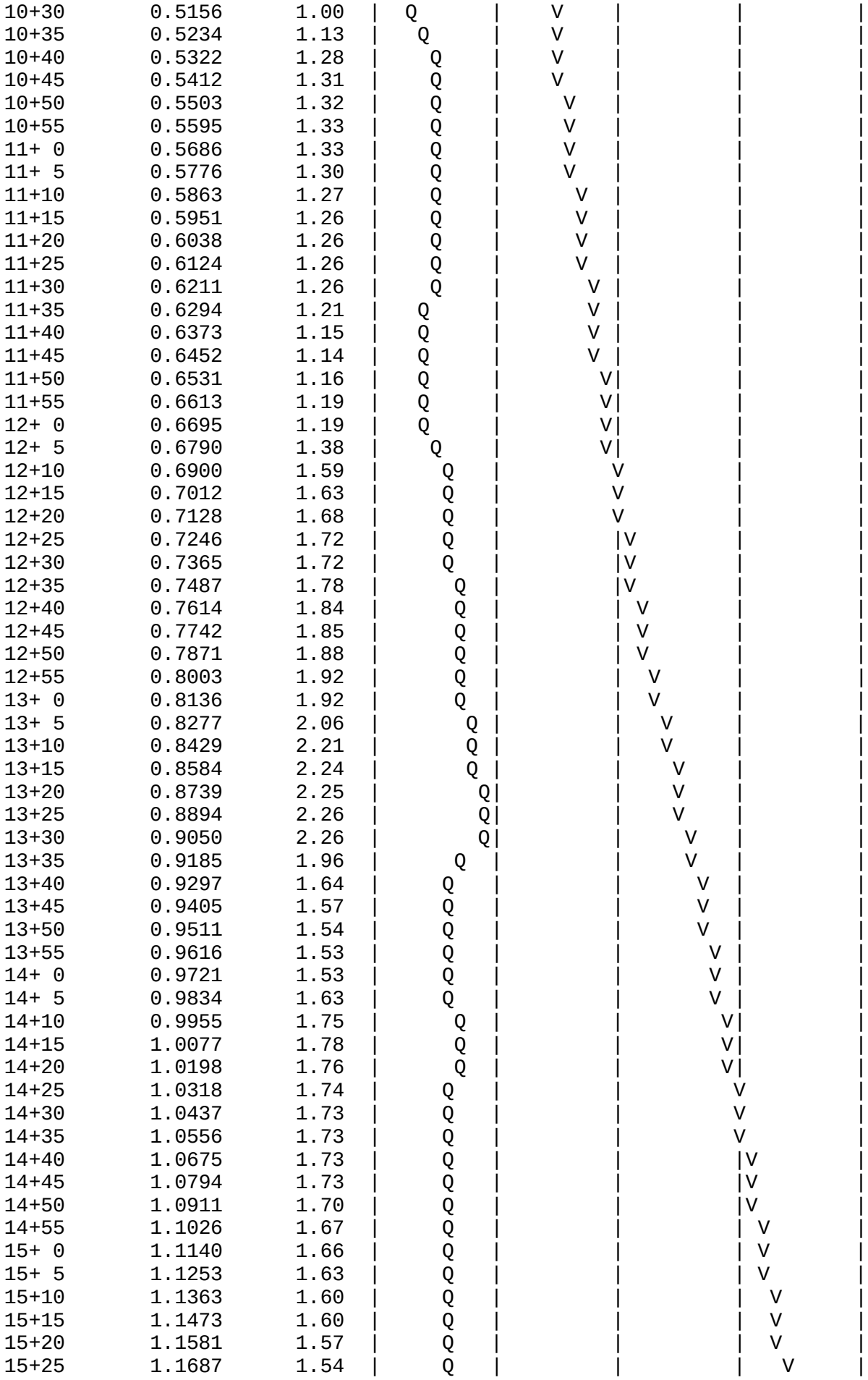
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0004	0.05	Q	|	|	|	|
0+10	0.0011	0.11	Q	|	|	|	|
0+15	0.0020	0.13	Q	|	|	|	|
0+20	0.0031	0.16	Q	|	|	|	|
0+25	0.0044	0.19	Q	|	|	|	|

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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      0.0114      0.23  Q        |          |          |          |
0+55      0.0132      0.26  VQ       |          |          |          |
1+ 0      0.0150      0.26  VQ       |          |          |          |
1+ 5      0.0166      0.24  Q        |          |          |          |
1+10      0.0181      0.21  Q        |          |          |          |
1+15      0.0195      0.20  Q        |          |          |          |
1+20      0.0208      0.20  Q        |          |          |          |
1+25      0.0222      0.20  Q        |          |          |          |
1+30      0.0236      0.20  Q        |          |          |          |
1+35      0.0249      0.20  Q        |          |          |          |
1+40      0.0263      0.20  Q        |          |          |          |
1+45      0.0277      0.20  Q        |          |          |          |
1+50      0.0292      0.23  Q        |          |          |          |
1+55      0.0310      0.26  VQ       |          |          |          |
2+ 0      0.0328      0.26  VQ       |          |          |          |
2+ 5      0.0346      0.26  |Q       |          |          |          |
2+10      0.0365      0.27  |Q       |          |          |          |
2+15      0.0383      0.27  |Q       |          |          |          |
2+20      0.0401      0.27  |Q       |          |          |          |
2+25      0.0419      0.27  |Q       |          |          |          |
2+30      0.0438      0.27  |Q       |          |          |          |
2+35      0.0458      0.29  |Q       |          |          |          |
2+40      0.0480      0.32  |Q       |          |          |          |
2+45      0.0503      0.33  |Q       |          |          |          |
2+50      0.0525      0.33  |Q       |          |          |          |
2+55      0.0548      0.33  |Q       |          |          |          |
3+ 0      0.0571      0.33  |Q       |          |          |          |
3+ 5      0.0594      0.33  |Q       |          |          |          |
3+10      0.0617      0.33  |Q       |          |          |          |
3+15      0.0640      0.33  |Q       |          |          |          |
3+20      0.0663      0.33  |Q       |          |          |          |
3+25      0.0685      0.33  |Q       |          |          |          |
3+30      0.0708      0.33  |QV      |          |          |          |
3+35      0.0731      0.33  |QV      |          |          |          |
3+40      0.0754      0.33  |QV      |          |          |          |
3+45      0.0777      0.33  |QV      |          |          |          |
3+50      0.0802      0.36  |QV      |          |          |          |
3+55      0.0828      0.39  |QV      |          |          |          |
4+ 0      0.0856      0.39  |QV      |          |          |          |
4+ 5      0.0883      0.40  |QV      |          |          |          |
4+10      0.0910      0.40  |QV      |          |          |          |
4+15      0.0938      0.40  |QV      |          |          |          |
4+20      0.0967      0.43  |QV      |          |          |          |
4+25      0.0998      0.45  |QV      |          |          |          |
4+30      0.1030      0.46  |Q V     |          |          |          |
4+35      0.1062      0.46  |Q V     |          |          |          |
4+40      0.1094      0.46  |Q V     |          |          |          |
4+45      0.1126      0.46  |Q V     |          |          |          |
4+50      0.1160      0.49  |Q V     |          |          |          |
4+55      0.1196      0.52  | QV     |          |          |          |
5+ 0      0.1232      0.53  | QV     |          |          |          |
5+ 5      0.1265      0.48  |Q V     |          |          |          |
5+10      0.1294      0.42  |Q V     |          |          |          |
5+15      0.1322      0.41  |Q V     |          |          |          |
5+20      0.1351      0.43  |Q V     |          |          |          |
5+25      0.1382      0.45  |Q  V    |          |          |          |
```

5+30	0.1414	0.46	Q V				
5+35	0.1448	0.49	Q V				
5+40	0.1484	0.52	Q V				
5+45	0.1520	0.53	Q V				
5+50	0.1557	0.53	Q V				
5+55	0.1593	0.53	Q V				
6+ 0	0.1630	0.53	Q V				
6+ 5	0.1668	0.56	Q V				
6+10	0.1709	0.59	Q V				
6+15	0.1750	0.59	Q V				
6+20	0.1791	0.60	Q V				
6+25	0.1832	0.60	Q V				
6+30	0.1873	0.60	Q V				
6+35	0.1916	0.62	Q V				
6+40	0.1961	0.65	Q V				
6+45	0.2007	0.66	Q V				
6+50	0.2052	0.66	Q V				
6+55	0.2098	0.66	Q V				
7+ 0	0.2144	0.66	Q V				
7+ 5	0.2189	0.66	Q V				
7+10	0.2235	0.66	Q V				
7+15	0.2281	0.66	Q V				
7+20	0.2328	0.69	Q V				
7+25	0.2378	0.72	Q V				
7+30	0.2428	0.73	Q V				
7+35	0.2480	0.76	Q V				
7+40	0.2534	0.79	Q V				
7+45	0.2589	0.79	Q V				
7+50	0.2646	0.82	Q V				
7+55	0.2704	0.85	Q V				
8+ 0	0.2763	0.86	Q V				
8+ 5	0.2827	0.92	Q V				
8+10	0.2894	0.98	Q V				
8+15	0.2962	0.99	Q V				
8+20	0.3030	0.99	Q V				
8+25	0.3099	1.00	Q V				
8+30	0.3167	1.00	Q V				
8+35	0.3238	1.02	Q V				
8+40	0.3310	1.05	Q V				
8+45	0.3383	1.06	Q V				
8+50	0.3458	1.09	Q V				
8+55	0.3535	1.12	Q V				
9+ 0	0.3613	1.12	Q V				
9+ 5	0.3694	1.18	Q V				
9+10	0.3780	1.24	Q V				
9+15	0.3866	1.25	Q V				
9+20	0.3955	1.29	Q V				
9+25	0.4045	1.32	Q V				
9+30	0.4136	1.32	Q V				
9+35	0.4230	1.35	Q V				
9+40	0.4325	1.38	Q V				
9+45	0.4421	1.39	Q V				
9+50	0.4519	1.42	Q V				
9+55	0.4618	1.45	Q V				
10+ 0	0.4719	1.46	Q V				
10+ 5	0.4806	1.27	Q V				
10+10	0.4880	1.07	Q V				
10+15	0.4950	1.02	Q V				
10+20	0.5019	1.00	Q V				
10+25	0.5088	1.00	Q V				



```
15+30       1.1792      1.53  |     Q   |         |         |   V     |
15+35       1.1890      1.42  |    Q    |         |         |   V     |
15+40       1.1980      1.30  |    Q    |         |         |   V     |
15+45       1.2068      1.28  |    Q    |         |         |    V    |
15+50       1.2155      1.27  |    Q    |         |         |    V    |
15+55       1.2242      1.26  |    Q    |         |         |    V    |
16+ 0       1.2329      1.26  |    Q    |         |         |    V    |
16+ 5       1.2388      0.86  |  Q      |         |         |     V   |
16+10       1.2416      0.41  |Q        |         |         |     V   |
16+15       1.2438      0.32  |Q        |         |         |     V   |
16+20       1.2458      0.28  |Q        |         |         |     V   |
16+25       1.2476      0.27  |Q        |         |         |     V   |
16+30       1.2494      0.27  |Q        |         |         |     V   |
16+35       1.2511      0.24  Q         |         |         |     V   |
16+40       1.2525      0.21  Q         |         |         |     V   |
16+45       1.2539      0.20  Q         |         |         |     V   |
16+50       1.2553      0.20  Q         |         |         |     V   |
16+55       1.2566      0.20  Q         |         |         |     V   |
17+ 0       1.2580      0.20  Q         |         |         |     V   |
17+ 5       1.2598      0.25  |Q        |         |         |     V   |
17+10       1.2619      0.31  |Q        |         |         |     V   |
17+15       1.2641      0.32  |Q        |         |         |     V   |
17+20       1.2664      0.33  |Q        |         |         |     V   |
17+25       1.2687      0.33  |Q        |         |         |     V   |
17+30       1.2710      0.33  |Q        |         |         |      V  |
17+35       1.2733      0.33  |Q        |         |         |      V  |
17+40       1.2756      0.33  |Q        |         |         |      V  |
17+45       1.2778      0.33  |Q        |         |         |      V  |
17+50       1.2799      0.30  |Q        |         |         |      V  |
17+55       1.2818      0.28  |Q        |         |         |      V  |
18+ 0       1.2837      0.27  |Q        |         |         |      V  |
18+ 5       1.2855      0.27  |Q        |         |         |      V  |
18+10       1.2874      0.27  |Q        |         |         |      V  |
18+15       1.2892      0.27  |Q        |         |         |      V  |
18+20       1.2910      0.27  |Q        |         |         |      V  |
18+25       1.2929      0.27  |Q        |         |         |      V  |
18+30       1.2947      0.27  |Q        |         |         |      V  |
18+35       1.2963      0.24  Q         |         |         |      V  |
18+40       1.2978      0.21  Q         |         |         |      V  |
18+45       1.2992      0.20  Q         |         |         |      V  |
18+50       1.3004      0.17  Q         |         |         |      V  |
18+55       1.3013      0.14  Q         |         |         |      V  |
19+ 0       1.3023      0.14  Q         |         |         |      V  |
19+ 5       1.3034      0.16  Q         |         |         |       V |
19+10       1.3047      0.19  Q         |         |         |       V |
19+15       1.3060      0.20  Q         |         |         |       V |
19+20       1.3076      0.23  Q         |         |         |       V |
19+25       1.3093      0.26  |Q        |         |         |       V |
19+30       1.3111      0.26  |Q        |         |         |       V |
19+35       1.3128      0.24  Q         |         |         |       V |
19+40       1.3142      0.21  Q         |         |         |       V |
19+45       1.3156      0.20  Q         |         |         |       V |
19+50       1.3168      0.17  Q         |         |         |       V |
19+55       1.3178      0.14  Q         |         |         |       V |
20+ 0       1.3187      0.14  Q         |         |         |       V |
20+ 5       1.3198      0.16  Q         |         |         |       V |
20+10       1.3211      0.19  Q         |         |         |       V |
20+15       1.3225      0.20  Q         |         |         |       V |
20+20       1.3239      0.20  Q         |         |         |       V |
20+25       1.3252      0.20  Q         |         |         |       V |
```

20+30	1.3266	0.20	Q				V
20+35	1.3280	0.20	Q				V
20+40	1.3293	0.20	Q				V
20+45	1.3307	0.20	Q				V
20+50	1.3319	0.17	Q				V
20+55	1.3329	0.14	Q				V
21+ 0	1.3338	0.14	Q				V
21+ 5	1.3349	0.16	Q				V
21+10	1.3362	0.19	Q				V
21+15	1.3376	0.20	Q				V
21+20	1.3388	0.17	Q				V
21+25	1.3397	0.14	Q				V
21+30	1.3407	0.14	Q				V
21+35	1.3418	0.16	Q				V
21+40	1.3431	0.19	Q				V
21+45	1.3444	0.20	Q				V
21+50	1.3456	0.17	Q				V
21+55	1.3466	0.14	Q				V
22+ 0	1.3475	0.14	Q				V
22+ 5	1.3486	0.16	Q				V
22+10	1.3499	0.19	Q				V
22+15	1.3513	0.20	Q				V
22+20	1.3525	0.17	Q				V
22+25	1.3535	0.14	Q				V
22+30	1.3544	0.14	Q				V
22+35	1.3553	0.13	Q				V
22+40	1.3562	0.13	Q				V
22+45	1.3571	0.13	Q				V
22+50	1.3581	0.13	Q				V
22+55	1.3590	0.13	Q				V
23+ 0	1.3599	0.13	Q				V
23+ 5	1.3608	0.13	Q				V
23+10	1.3617	0.13	Q				V
23+15	1.3626	0.13	Q				V
23+20	1.3635	0.13	Q				V
23+25	1.3645	0.13	Q				V
23+30	1.3654	0.13	Q				V
23+35	1.3663	0.13	Q				V
23+40	1.3672	0.13	Q				V
23+45	1.3681	0.13	Q				V
23+50	1.3690	0.13	Q				V
23+55	1.3699	0.13	Q				V
24+ 0	1.3709	0.13	Q				V
24+ 5	1.3714	0.08	Q				V
24+10	1.3715	0.02	Q				V
24+15	1.3716	0.01	Q				V
24+20	1.3716	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 10/24/24 File: THECOVE15.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
1-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	0.57	5.66

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.45	14.40

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.776(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.776(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
		Sum = 100.000	Sum=	10.008

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	4.40	0.410	(0.189)	0.139	0.270
2	0.17	4.50	0.419	(0.189)	0.142	0.277
3	0.25	5.40	0.503	(0.189)	0.171	0.332
4	0.33	5.40	0.503	(0.189)	0.171	0.332
5	0.42	5.70	0.531	(0.189)	0.180	0.350
6	0.50	6.40	0.596	0.189	(0.203)	0.407
7	0.58	7.90	0.736	0.189	(0.250)	0.547
8	0.67	9.10	0.847	0.189	(0.288)	0.658
9	0.75	12.80	1.192	0.189	(0.405)	1.003
10	0.83	25.60	2.384	0.189	(0.811)	2.195
11	0.92	7.90	0.736	0.189	(0.250)	0.547
12	1.00	4.90	0.456	(0.189)	0.155	0.301
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	7.2

```
    Flood volume = Effective rainfall      0.60(In)
     times area       9.9(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
    Total soil loss =      0.17(In)
    Total soil loss =     0.144(Ac.Ft)
    Total rainfall =      0.78(In)
    Flood volume =       21685.3 Cubic Feet
    Total soil loss =        6288.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     16.098(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0099      1.44  V Q       |         |         |         |
   0+10       0.0273      2.53  | V  Q    |         |         |         |
   0+15       0.0483      3.06  |  V  Q   |         |         |         |
   0+20       0.0709      3.28  |    VQ   |         |         |         |
   0+25       0.0945      3.42  |     QV  |         |         |         |
   0+30       0.1206      3.79  |      Q V|         |         |         |
   0+35       0.1535      4.77  |        Q| V       |         |         |
   0+40       0.1945      5.96  |         |Q   V    |         |         |
   0+45       0.2519      8.33  |         |     Q   V         |         |
   0+50       0.3628     16.10  |         |         |        V| Q       |
   0+55       0.4473     12.28  |         |         |   Q     |    V    |
   1+ 0       0.4851      5.48  |         Q         |         |       V |
   1+ 5       0.4962      1.61  |  Q      |         |         |        V|
   1+10       0.4978      0.24  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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
3-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.00	9.93

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	2.50	24.82

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	1.30	0.211	(0.189)		0.072	0.139
2	0.17	1.30	0.211	(0.189)		0.072	0.139
3	0.25	1.10	0.178	(0.189)		0.061	0.118
4	0.33	1.50	0.243	(0.189)		0.083	0.161
5	0.42	1.50	0.243	(0.189)		0.083	0.161
6	0.50	1.80	0.292	(0.189)		0.099	0.193
7	0.58	1.50	0.243	(0.189)		0.083	0.161
8	0.67	1.80	0.292	(0.189)		0.099	0.193
9	0.75	1.80	0.292	(0.189)		0.099	0.193
10	0.83	1.50	0.243	(0.189)		0.083	0.161
11	0.92	1.60	0.259	(0.189)		0.088	0.171
12	1.00	1.80	0.292	(0.189)		0.099	0.193
13	1.08	2.20	0.357	(0.189)		0.121	0.235
14	1.17	2.20	0.357	(0.189)		0.121	0.235
15	1.25	2.20	0.357	(0.189)		0.121	0.235
16	1.33	2.00	0.324	(0.189)		0.110	0.214

17	1.42	2.60	0.422	(0.189)	0.143	0.278
18	1.50	2.70	0.438	(0.189)	0.149	0.289
19	1.58	2.40	0.389	(0.189)	0.132	0.257
20	1.67	2.70	0.438	(0.189)	0.149	0.289
21	1.75	3.30	0.535	(0.189)	0.182	0.353
22	1.83	3.10	0.503	(0.189)	0.171	0.332
23	1.92	2.90	0.470	(0.189)	0.160	0.310
24	2.00	3.00	0.486	(0.189)	0.165	0.321
25	2.08	3.10	0.503	(0.189)	0.171	0.332
26	2.17	4.20	0.681	0.189	(0.232)	0.492
27	2.25	5.00	0.811	0.189	(0.276)	0.622
28	2.33	3.50	0.568	0.189	(0.193)	0.379
29	2.42	6.80	1.103	0.189	(0.375)	0.914
30	2.50	7.30	1.184	0.189	(0.402)	0.995
31	2.58	8.20	1.330	0.189	(0.452)	1.141
32	2.67	5.90	0.957	0.189	(0.325)	0.768
33	2.75	2.00	0.324	(0.189)	0.110	0.214
34	2.83	1.80	0.292	(0.189)	0.099	0.193
35	2.92	1.80	0.292	(0.189)	0.099	0.193
36	3.00	0.60	0.097	(0.189)	0.033	0.064

(Loss Rate Not Used)

Sum = 100.0 Sum = 11.6

Flood volume = Effective rainfall 0.97(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 0.38(In)
Total soil loss = 0.316(Ac.Ft)
Total rainfall = 1.35(In)
Flood volume = 34946.7 Cubic Feet
Total soil loss = 13761.4 Cubic Feet

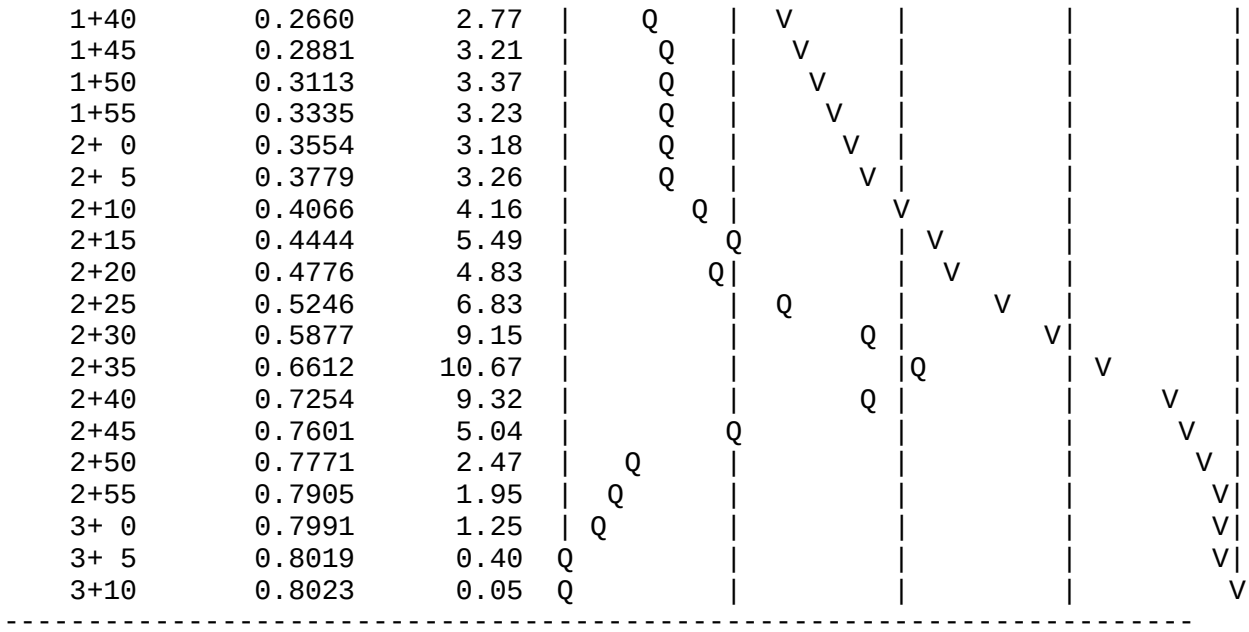
Peak flow rate of this hydrograph = 10.670(CFS)

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3 - 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	0.0051	0.74	VQ | | | |
0+10	0.0139	1.28	V Q | | | |
0+15	0.0227	1.28	|VQ | | | |
0+20	0.0325	1.42	|VQ | | | |
0+25	0.0434	1.57	| VQ | | | |
0+30	0.0556	1.78	| VQ | | | |
0+35	0.0675	1.73	| Q | | | |
0+40	0.0800	1.80	| Q | | | |
0+45	0.0931	1.90	| QV | | | |
0+50	0.1052	1.76	| Q V | | | |
0+55	0.1168	1.69	| Q V | | | |
1+ 0	0.1294	1.82	| Q V | | | |
1+ 5	0.1441	2.14	| Q V | | | |
1+10	0.1601	2.32	| Q V | | | |
1+15	0.1763	2.36	| Q V | | | |
1+20	0.1918	2.24	| Q V| | | |
1+25	0.2090	2.50	| Q V | | |
1+30	0.2282	2.79	| Q |V | | |
1+35	0.2469	2.71	| Q | V | | |


1+40 0.2660 2.77
1+45 0.2881 3.21
1+50 0.3113 3.37
1+55 0.3335 3.23
2+ 0 0.3554 3.18
2+ 5 0.3779 3.26
2+10 0.4066 4.16
2+15 0.4444 5.49
2+20 0.4776 4.83
2+25 0.5246 6.83
2+30 0.5877 9.15
2+35 0.6612 10.67
2+40 0.7254 9.32
2+45 0.7601 5.04
2+50 0.7771 2.47
2+55 0.7905 1.95
3+ 0 0.7991 1.25
3+ 5 0.8019 0.40
3+10 0.8023 0.05

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 10/24/24 File: THECOVE65.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
6-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.40	13.90

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	3.50	34.75

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.892(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.892(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.50	0.114	(0.189)		0.039	0.075
2	0.17	0.60	0.136	(0.189)		0.046	0.090
3	0.25	0.60	0.136	(0.189)		0.046	0.090
4	0.33	0.60	0.136	(0.189)		0.046	0.090
5	0.42	0.60	0.136	(0.189)		0.046	0.090
6	0.50	0.70	0.159	(0.189)		0.054	0.105
7	0.58	0.70	0.159	(0.189)		0.054	0.105
8	0.67	0.70	0.159	(0.189)		0.054	0.105
9	0.75	0.70	0.159	(0.189)		0.054	0.105
10	0.83	0.70	0.159	(0.189)		0.054	0.105
11	0.92	0.70	0.159	(0.189)		0.054	0.105
12	1.00	0.80	0.182	(0.189)		0.062	0.120
13	1.08	0.80	0.182	(0.189)		0.062	0.120
14	1.17	0.80	0.182	(0.189)		0.062	0.120
15	1.25	0.80	0.182	(0.189)		0.062	0.120
16	1.33	0.80	0.182	(0.189)		0.062	0.120

17	1.42	0.80	0.182	(0.189)	0.062	0.120
18	1.50	0.80	0.182	(0.189)	0.062	0.120
19	1.58	0.80	0.182	(0.189)	0.062	0.120
20	1.67	0.80	0.182	(0.189)	0.062	0.120
21	1.75	0.80	0.182	(0.189)	0.062	0.120
22	1.83	0.80	0.182	(0.189)	0.062	0.120
23	1.92	0.80	0.182	(0.189)	0.062	0.120
24	2.00	0.90	0.204	(0.189)	0.069	0.135
25	2.08	0.80	0.182	(0.189)	0.062	0.120
26	2.17	0.90	0.204	(0.189)	0.069	0.135
27	2.25	0.90	0.204	(0.189)	0.069	0.135
28	2.33	0.90	0.204	(0.189)	0.069	0.135
29	2.42	0.90	0.204	(0.189)	0.069	0.135
30	2.50	0.90	0.204	(0.189)	0.069	0.135
31	2.58	0.90	0.204	(0.189)	0.069	0.135
32	2.67	0.90	0.204	(0.189)	0.069	0.135
33	2.75	1.00	0.227	(0.189)	0.077	0.150
34	2.83	1.00	0.227	(0.189)	0.077	0.150
35	2.92	1.00	0.227	(0.189)	0.077	0.150
36	3.00	1.00	0.227	(0.189)	0.077	0.150
37	3.08	1.00	0.227	(0.189)	0.077	0.150
38	3.17	1.10	0.250	(0.189)	0.085	0.165
39	3.25	1.10	0.250	(0.189)	0.085	0.165
40	3.33	1.10	0.250	(0.189)	0.085	0.165
41	3.42	1.20	0.272	(0.189)	0.093	0.180
42	3.50	1.30	0.295	(0.189)	0.100	0.195
43	3.58	1.40	0.318	(0.189)	0.108	0.210
44	3.67	1.40	0.318	(0.189)	0.108	0.210
45	3.75	1.50	0.341	(0.189)	0.116	0.225
46	3.83	1.50	0.341	(0.189)	0.116	0.225
47	3.92	1.60	0.363	(0.189)	0.123	0.240
48	4.00	1.60	0.363	(0.189)	0.123	0.240
49	4.08	1.70	0.386	(0.189)	0.131	0.255
50	4.17	1.80	0.409	(0.189)	0.139	0.270
51	4.25	1.90	0.431	(0.189)	0.147	0.285
52	4.33	2.00	0.454	(0.189)	0.154	0.300
53	4.42	2.10	0.477	(0.189)	0.162	0.315
54	4.50	2.10	0.477	(0.189)	0.162	0.315
55	4.58	2.20	0.499	(0.189)	0.170	0.330
56	4.67	2.30	0.522	(0.189)	0.178	0.345
57	4.75	2.40	0.545	(0.189)	0.185	0.360
58	4.83	2.40	0.545	(0.189)	0.185	0.360
59	4.92	2.50	0.568	0.189	(0.193)	0.379
60	5.00	2.60	0.590	0.189	(0.201)	0.401
61	5.08	3.10	0.704	0.189	(0.239)	0.515
62	5.17	3.60	0.817	0.189	(0.278)	0.628
63	5.25	3.90	0.885	0.189	(0.301)	0.696
64	5.33	4.20	0.953	0.189	(0.324)	0.764
65	5.42	4.70	1.067	0.189	(0.363)	0.878
66	5.50	5.60	1.271	0.189	(0.432)	1.082
67	5.58	1.90	0.431	(0.189)	0.147	0.285
68	5.67	0.90	0.204	(0.189)	0.069	0.135
69	5.75	0.60	0.136	(0.189)	0.046	0.090
70	5.83	0.50	0.114	(0.189)	0.039	0.075
71	5.92	0.30	0.068	(0.189)	0.023	0.045
72	6.00	0.20	0.045	(0.189)	0.015	0.030

(Loss Rate Not Used)

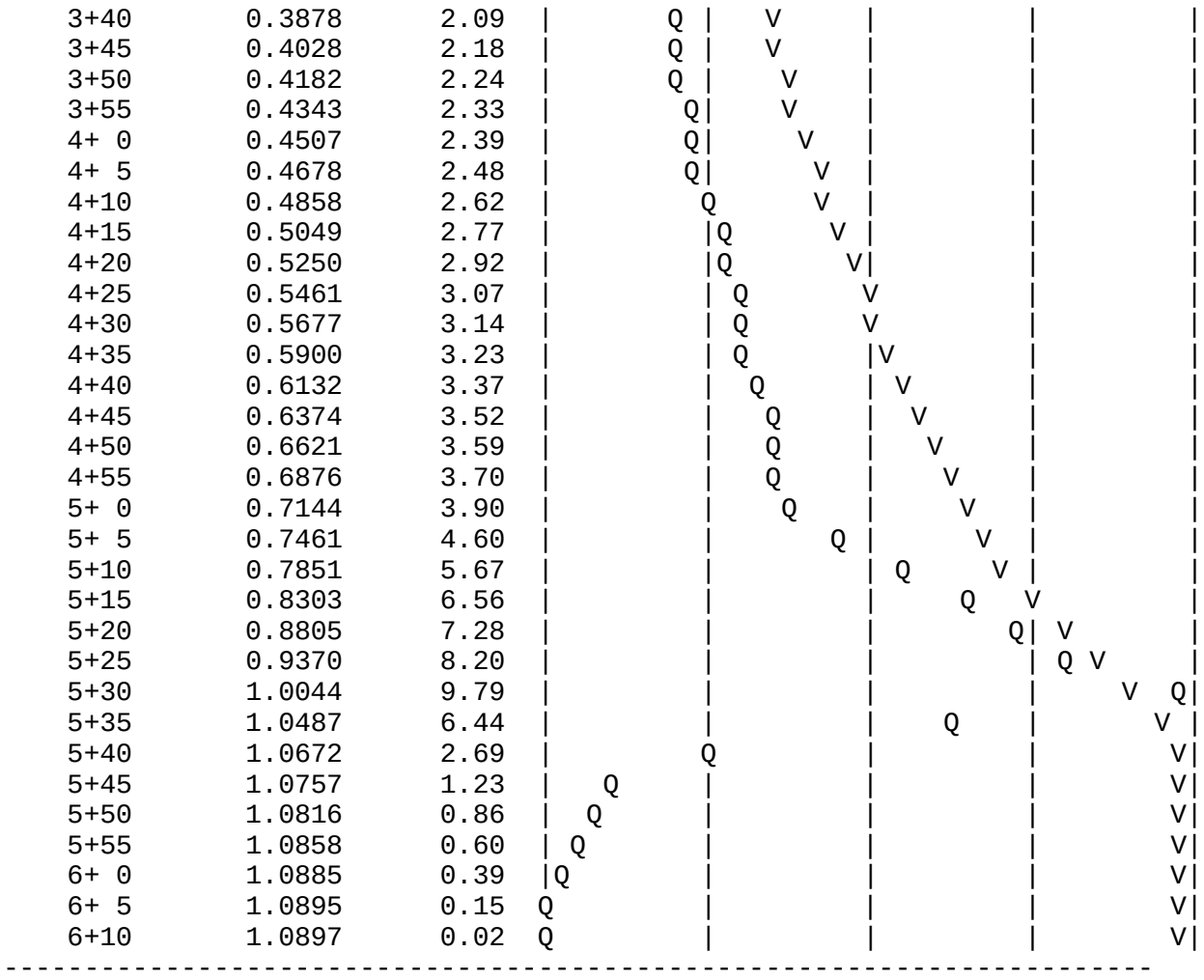
Sum = 100.0 Sum = 15.8

Flood volume = Effective rainfall 1.32(In)

times area 9.9(Ac.)/[(In)/(Ft.)] = 1.1(Ac.Ft)

```
   Total soil loss =      0.57(In)
   Total soil loss =     0.476(Ac.Ft)
   Total rainfall =      1.89(In)
   Flood volume =       47466.9 Cubic Feet
   Total soil loss =       20725.0 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =      9.786(CFS)
   ---------------------------------------------------------------------
   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0027      0.40  VQ        |         |         |         |
  0+10       0.0080      0.77  V  Q      |         |         |         |
  0+15       0.0142      0.89  V  Q      |         |         |         |
  0+20       0.0204      0.90  V  Q      |         |         |         |
  0+25       0.0266      0.90  V  Q      |         |         |         |
  0+30       0.0333      0.98  |V Q      |         |         |         |
  0+35       0.0405      1.04  |V  Q     |         |         |         |
  0+40       0.0477      1.05  |V  Q     |         |         |         |
  0+45       0.0549      1.05  | V Q     |         |         |         |
  0+50       0.0622      1.05  | V Q     |         |         |         |
  0+55       0.0694      1.05  | V Q     |         |         |         |
  1+ 0       0.0772      1.13  | V Q     |         |         |         |
  1+ 5       0.0853      1.19  |  VQ     |         |         |         |
  1+10       0.0936      1.20  |  VQ     |         |         |         |
  1+15       0.1019      1.20  |  VQ     |         |         |         |
  1+20       0.1101      1.20  |   Q     |         |         |         |
  1+25       0.1184      1.20  |   Q     |         |         |         |
  1+30       0.1267      1.20  |   Q     |         |         |         |
  1+35       0.1349      1.20  |   Q     |         |         |         |
  1+40       0.1432      1.20  |   QV    |         |         |         |
  1+45       0.1515      1.20  |   QV    |         |         |         |
  1+50       0.1597      1.20  |   QV    |         |         |         |
  1+55       0.1680      1.20  |   Q V   |         |         |         |
  2+ 0       0.1768      1.28  |    QV   |         |         |         |
  2+ 5       0.1855      1.26  |    QV   |         |         |         |
  2+10       0.1944      1.29  |    Q V  |         |         |         |
  2+15       0.2036      1.34  |    Q V  |         |         |         |
  2+20       0.2129      1.35  |    Q V  |         |         |         |
  2+25       0.2222      1.35  |    Q  V |         |         |         |
  2+30       0.2315      1.35  |    Q  V |         |         |         |
  2+35       0.2408      1.35  |    Q  V |         |         |         |
  2+40       0.2501      1.35  |    Q   V|         |         |         |
  2+45       0.2599      1.43  |    Q   V|         |         |         |
  2+50       0.2702      1.49  |    Q   V|         |         |         |
  2+55       0.2805      1.50  |     Q   V         |         |         |
  3+ 0       0.2909      1.50  |     Q   V         |         |         |
  3+ 5       0.3012      1.50  |     Q   |V        |         |         |
  3+10       0.3121      1.58  |     Q   |V        |         |         |
  3+15       0.3234      1.64  |     Q   |V        |         |         |
  3+20       0.3347      1.65  |     Q   | V       |         |         |
  3+25       0.3466      1.73  |     Q   | V       |         |         |
  3+30       0.3595      1.87  |      Q  |  V      |         |         |
  3+35       0.3734      2.02  |       Q |  V      |         |         |
```


3+40 0.3878 2.09
3+45 0.4028 2.18
3+50 0.4182 2.24
3+55 0.4343 2.33
4+ 0 0.4507 2.39
4+ 5 0.4678 2.48
4+10 0.4858 2.62
4+15 0.5049 2.77
4+20 0.5250 2.92
4+25 0.5461 3.07
4+30 0.5677 3.14
4+35 0.5900 3.23
4+40 0.6132 3.37
4+45 0.6374 3.52
4+50 0.6621 3.59
4+55 0.6876 3.70
5+ 0 0.7144 3.90
5+ 5 0.7461 4.60
5+10 0.7851 5.67
5+15 0.8303 6.56
5+20 0.8805 7.28
5+25 0.9370 8.20
5+30 1.0044 9.79
5+35 1.0487 6.44
5+40 1.0672 2.69
5+45 1.0757 1.23
5+50 1.0816 0.86
5+55 1.0858 0.60
6+ 0 1.0885 0.39
6+ 5 1.0895 0.15
6+10 1.0897 0.02

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 10/24/24 File: THECOVE245.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
5-YR
24-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 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]
9.93	2.50	24.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	6.00	59.58

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.320(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.320(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.027	(0.335)		0.009	0.018
2	0.17	0.07	0.027	(0.334)		0.009	0.018
3	0.25	0.07	0.027	(0.332)		0.009	0.018
4	0.33	0.10	0.040	(0.331)		0.014	0.026
5	0.42	0.10	0.040	(0.330)		0.014	0.026
6	0.50	0.10	0.040	(0.329)		0.014	0.026
7	0.58	0.10	0.040	(0.327)		0.014	0.026
8	0.67	0.10	0.040	(0.326)		0.014	0.026
9	0.75	0.10	0.040	(0.325)		0.014	0.026
10	0.83	0.13	0.053	(0.323)		0.018	0.035
11	0.92	0.13	0.053	(0.322)		0.018	0.035
12	1.00	0.13	0.053	(0.321)		0.018	0.035
13	1.08	0.10	0.040	(0.320)		0.014	0.026
14	1.17	0.10	0.040	(0.318)		0.014	0.026
15	1.25	0.10	0.040	(0.317)		0.014	0.026
16	1.33	0.10	0.040	(0.316)		0.014	0.026

17	1.42	0.10	0.040	(0.315)	0.014	0.026
18	1.50	0.10	0.040	(0.313)	0.014	0.026
19	1.58	0.10	0.040	(0.312)	0.014	0.026
20	1.67	0.10	0.040	(0.311)	0.014	0.026
21	1.75	0.10	0.040	(0.310)	0.014	0.026
22	1.83	0.13	0.053	(0.308)	0.018	0.035
23	1.92	0.13	0.053	(0.307)	0.018	0.035
24	2.00	0.13	0.053	(0.306)	0.018	0.035
25	2.08	0.13	0.053	(0.305)	0.018	0.035
26	2.17	0.13	0.053	(0.303)	0.018	0.035
27	2.25	0.13	0.053	(0.302)	0.018	0.035
28	2.33	0.13	0.053	(0.301)	0.018	0.035
29	2.42	0.13	0.053	(0.300)	0.018	0.035
30	2.50	0.13	0.053	(0.298)	0.018	0.035
31	2.58	0.17	0.066	(0.297)	0.023	0.044
32	2.67	0.17	0.066	(0.296)	0.023	0.044
33	2.75	0.17	0.066	(0.295)	0.023	0.044
34	2.83	0.17	0.066	(0.294)	0.023	0.044
35	2.92	0.17	0.066	(0.292)	0.023	0.044
36	3.00	0.17	0.066	(0.291)	0.023	0.044
37	3.08	0.17	0.066	(0.290)	0.023	0.044
38	3.17	0.17	0.066	(0.289)	0.023	0.044
39	3.25	0.17	0.066	(0.288)	0.023	0.044
40	3.33	0.17	0.066	(0.286)	0.023	0.044
41	3.42	0.17	0.066	(0.285)	0.023	0.044
42	3.50	0.17	0.066	(0.284)	0.023	0.044
43	3.58	0.17	0.066	(0.283)	0.023	0.044
44	3.67	0.17	0.066	(0.282)	0.023	0.044
45	3.75	0.17	0.066	(0.280)	0.023	0.044
46	3.83	0.20	0.080	(0.279)	0.027	0.053
47	3.92	0.20	0.080	(0.278)	0.027	0.053
48	4.00	0.20	0.080	(0.277)	0.027	0.053
49	4.08	0.20	0.080	(0.276)	0.027	0.053
50	4.17	0.20	0.080	(0.275)	0.027	0.053
51	4.25	0.20	0.080	(0.273)	0.027	0.053
52	4.33	0.23	0.093	(0.272)	0.032	0.061
53	4.42	0.23	0.093	(0.271)	0.032	0.061
54	4.50	0.23	0.093	(0.270)	0.032	0.061
55	4.58	0.23	0.093	(0.269)	0.032	0.061
56	4.67	0.23	0.093	(0.268)	0.032	0.061
57	4.75	0.23	0.093	(0.266)	0.032	0.061
58	4.83	0.27	0.106	(0.265)	0.036	0.070
59	4.92	0.27	0.106	(0.264)	0.036	0.070
60	5.00	0.27	0.106	(0.263)	0.036	0.070
61	5.08	0.20	0.080	(0.262)	0.027	0.053
62	5.17	0.20	0.080	(0.261)	0.027	0.053
63	5.25	0.20	0.080	(0.260)	0.027	0.053
64	5.33	0.23	0.093	(0.258)	0.032	0.061
65	5.42	0.23	0.093	(0.257)	0.032	0.061
66	5.50	0.23	0.093	(0.256)	0.032	0.061
67	5.58	0.27	0.106	(0.255)	0.036	0.070
68	5.67	0.27	0.106	(0.254)	0.036	0.070
69	5.75	0.27	0.106	(0.253)	0.036	0.070
70	5.83	0.27	0.106	(0.252)	0.036	0.070
71	5.92	0.27	0.106	(0.251)	0.036	0.070
72	6.00	0.27	0.106	(0.249)	0.036	0.070
73	6.08	0.30	0.120	(0.248)	0.041	0.079
74	6.17	0.30	0.120	(0.247)	0.041	0.079
75	6.25	0.30	0.120	(0.246)	0.041	0.079
76	6.33	0.30	0.120	(0.245)	0.041	0.079

77	6.42	0.30	0.120	(0.244)	0.041	0.079
78	6.50	0.30	0.120	(0.243)	0.041	0.079
79	6.58	0.33	0.133	(0.242)	0.045	0.088
80	6.67	0.33	0.133	(0.241)	0.045	0.088
81	6.75	0.33	0.133	(0.240)	0.045	0.088
82	6.83	0.33	0.133	(0.239)	0.045	0.088
83	6.92	0.33	0.133	(0.237)	0.045	0.088
84	7.00	0.33	0.133	(0.236)	0.045	0.088
85	7.08	0.33	0.133	(0.235)	0.045	0.088
86	7.17	0.33	0.133	(0.234)	0.045	0.088
87	7.25	0.33	0.133	(0.233)	0.045	0.088
88	7.33	0.37	0.146	(0.232)	0.050	0.096
89	7.42	0.37	0.146	(0.231)	0.050	0.096
90	7.50	0.37	0.146	(0.230)	0.050	0.096
91	7.58	0.40	0.159	(0.229)	0.054	0.105
92	7.67	0.40	0.159	(0.228)	0.054	0.105
93	7.75	0.40	0.159	(0.227)	0.054	0.105
94	7.83	0.43	0.173	(0.226)	0.059	0.114
95	7.92	0.43	0.173	(0.225)	0.059	0.114
96	8.00	0.43	0.173	(0.224)	0.059	0.114
97	8.08	0.50	0.199	(0.223)	0.068	0.131
98	8.17	0.50	0.199	(0.222)	0.068	0.131
99	8.25	0.50	0.199	(0.221)	0.068	0.131
100	8.33	0.50	0.199	(0.220)	0.068	0.131
101	8.42	0.50	0.199	(0.219)	0.068	0.131
102	8.50	0.50	0.199	(0.217)	0.068	0.131
103	8.58	0.53	0.212	(0.216)	0.072	0.140
104	8.67	0.53	0.212	(0.215)	0.072	0.140
105	8.75	0.53	0.212	(0.214)	0.072	0.140
106	8.83	0.57	0.226	(0.213)	0.077	0.149
107	8.92	0.57	0.226	(0.212)	0.077	0.149
108	9.00	0.57	0.226	(0.211)	0.077	0.149
109	9.08	0.63	0.252	(0.210)	0.086	0.167
110	9.17	0.63	0.252	(0.209)	0.086	0.167
111	9.25	0.63	0.252	(0.208)	0.086	0.167
112	9.33	0.67	0.266	(0.207)	0.090	0.175
113	9.42	0.67	0.266	(0.206)	0.090	0.175
114	9.50	0.67	0.266	(0.205)	0.090	0.175
115	9.58	0.70	0.279	(0.204)	0.095	0.184
116	9.67	0.70	0.279	(0.203)	0.095	0.184
117	9.75	0.70	0.279	(0.202)	0.095	0.184
118	9.83	0.73	0.292	(0.202)	0.099	0.193
119	9.92	0.73	0.292	(0.201)	0.099	0.193
120	10.00	0.73	0.292	(0.200)	0.099	0.193
121	10.08	0.50	0.199	(0.199)	0.068	0.131
122	10.17	0.50	0.199	(0.198)	0.068	0.131
123	10.25	0.50	0.199	(0.197)	0.068	0.131
124	10.33	0.50	0.199	(0.196)	0.068	0.131
125	10.42	0.50	0.199	(0.195)	0.068	0.131
126	10.50	0.50	0.199	(0.194)	0.068	0.131
127	10.58	0.67	0.266	(0.193)	0.090	0.175
128	10.67	0.67	0.266	(0.192)	0.090	0.175
129	10.75	0.67	0.266	(0.191)	0.090	0.175
130	10.83	0.67	0.266	(0.190)	0.090	0.175
131	10.92	0.67	0.266	(0.189)	0.090	0.175
132	11.00	0.67	0.266	(0.188)	0.090	0.175
133	11.08	0.63	0.252	(0.187)	0.086	0.167
134	11.17	0.63	0.252	(0.186)	0.086	0.167
135	11.25	0.63	0.252	(0.185)	0.086	0.167
136	11.33	0.63	0.252	(0.185)	0.086	0.167

137	11.42	0.63	0.252	(0.184)	0.086	0.167
138	11.50	0.63	0.252	(0.183)	0.086	0.167
139	11.58	0.57	0.226	(0.182)	0.077	0.149
140	11.67	0.57	0.226	(0.181)	0.077	0.149
141	11.75	0.57	0.226	(0.180)	0.077	0.149
142	11.83	0.60	0.239	(0.179)	0.081	0.158
143	11.92	0.60	0.239	(0.178)	0.081	0.158
144	12.00	0.60	0.239	(0.177)	0.081	0.158
145	12.08	0.83	0.332	(0.176)	0.113	0.219
146	12.17	0.83	0.332	(0.176)	0.113	0.219
147	12.25	0.83	0.332	(0.175)	0.113	0.219
148	12.33	0.87	0.345	(0.174)	0.117	0.228
149	12.42	0.87	0.345	(0.173)	0.117	0.228
150	12.50	0.87	0.345	(0.172)	0.117	0.228
151	12.58	0.93	0.372	(0.171)	0.126	0.245
152	12.67	0.93	0.372	(0.170)	0.126	0.245
153	12.75	0.93	0.372	(0.169)	0.126	0.245
154	12.83	0.97	0.385	(0.169)	0.131	0.254
155	12.92	0.97	0.385	(0.168)	0.131	0.254
156	13.00	0.97	0.385	(0.167)	0.131	0.254
157	13.08	1.13	0.451	(0.166)	0.154	0.298
158	13.17	1.13	0.451	(0.165)	0.154	0.298
159	13.25	1.13	0.451	(0.164)	0.154	0.298
160	13.33	1.13	0.451	(0.164)	0.154	0.298
161	13.42	1.13	0.451	(0.163)	0.154	0.298
162	13.50	1.13	0.451	(0.162)	0.154	0.298
163	13.58	0.77	0.305	(0.161)	0.104	0.202
164	13.67	0.77	0.305	(0.160)	0.104	0.202
165	13.75	0.77	0.305	(0.159)	0.104	0.202
166	13.83	0.77	0.305	(0.159)	0.104	0.202
167	13.92	0.77	0.305	(0.158)	0.104	0.202
168	14.00	0.77	0.305	(0.157)	0.104	0.202
169	14.08	0.90	0.359	(0.156)	0.122	0.237
170	14.17	0.90	0.359	(0.155)	0.122	0.237
171	14.25	0.90	0.359	(0.155)	0.122	0.237
172	14.33	0.87	0.345	(0.154)	0.117	0.228
173	14.42	0.87	0.345	(0.153)	0.117	0.228
174	14.50	0.87	0.345	(0.152)	0.117	0.228
175	14.58	0.87	0.345	(0.151)	0.117	0.228
176	14.67	0.87	0.345	(0.151)	0.117	0.228
177	14.75	0.87	0.345	(0.150)	0.117	0.228
178	14.83	0.83	0.332	(0.149)	0.113	0.219
179	14.92	0.83	0.332	(0.148)	0.113	0.219
180	15.00	0.83	0.332	(0.148)	0.113	0.219
181	15.08	0.80	0.319	(0.147)	0.108	0.210
182	15.17	0.80	0.319	(0.146)	0.108	0.210
183	15.25	0.80	0.319	(0.145)	0.108	0.210
184	15.33	0.77	0.305	(0.145)	0.104	0.202
185	15.42	0.77	0.305	(0.144)	0.104	0.202
186	15.50	0.77	0.305	(0.143)	0.104	0.202
187	15.58	0.63	0.252	(0.142)	0.086	0.167
188	15.67	0.63	0.252	(0.142)	0.086	0.167
189	15.75	0.63	0.252	(0.141)	0.086	0.167
190	15.83	0.63	0.252	(0.140)	0.086	0.167
191	15.92	0.63	0.252	(0.140)	0.086	0.167
192	16.00	0.63	0.252	(0.139)	0.086	0.167
193	16.08	0.13	0.053	(0.138)	0.018	0.035
194	16.17	0.13	0.053	(0.137)	0.018	0.035
195	16.25	0.13	0.053	(0.137)	0.018	0.035
196	16.33	0.13	0.053	(0.136)	0.018	0.035

197	16.42	0.13	0.053	(0.135)	0.018	0.035
198	16.50	0.13	0.053	(0.135)	0.018	0.035
199	16.58	0.10	0.040	(0.134)	0.014	0.026
200	16.67	0.10	0.040	(0.133)	0.014	0.026
201	16.75	0.10	0.040	(0.133)	0.014	0.026
202	16.83	0.10	0.040	(0.132)	0.014	0.026
203	16.92	0.10	0.040	(0.131)	0.014	0.026
204	17.00	0.10	0.040	(0.131)	0.014	0.026
205	17.08	0.17	0.066	(0.130)	0.023	0.044
206	17.17	0.17	0.066	(0.129)	0.023	0.044
207	17.25	0.17	0.066	(0.129)	0.023	0.044
208	17.33	0.17	0.066	(0.128)	0.023	0.044
209	17.42	0.17	0.066	(0.127)	0.023	0.044
210	17.50	0.17	0.066	(0.127)	0.023	0.044
211	17.58	0.17	0.066	(0.126)	0.023	0.044
212	17.67	0.17	0.066	(0.125)	0.023	0.044
213	17.75	0.17	0.066	(0.125)	0.023	0.044
214	17.83	0.13	0.053	(0.124)	0.018	0.035
215	17.92	0.13	0.053	(0.124)	0.018	0.035
216	18.00	0.13	0.053	(0.123)	0.018	0.035
217	18.08	0.13	0.053	(0.122)	0.018	0.035
218	18.17	0.13	0.053	(0.122)	0.018	0.035
219	18.25	0.13	0.053	(0.121)	0.018	0.035
220	18.33	0.13	0.053	(0.121)	0.018	0.035
221	18.42	0.13	0.053	(0.120)	0.018	0.035
222	18.50	0.13	0.053	(0.119)	0.018	0.035
223	18.58	0.10	0.040	(0.119)	0.014	0.026
224	18.67	0.10	0.040	(0.118)	0.014	0.026
225	18.75	0.10	0.040	(0.118)	0.014	0.026
226	18.83	0.07	0.027	(0.117)	0.009	0.018
227	18.92	0.07	0.027	(0.117)	0.009	0.018
228	19.00	0.07	0.027	(0.116)	0.009	0.018
229	19.08	0.10	0.040	(0.115)	0.014	0.026
230	19.17	0.10	0.040	(0.115)	0.014	0.026
231	19.25	0.10	0.040	(0.114)	0.014	0.026
232	19.33	0.13	0.053	(0.114)	0.018	0.035
233	19.42	0.13	0.053	(0.113)	0.018	0.035
234	19.50	0.13	0.053	(0.113)	0.018	0.035
235	19.58	0.10	0.040	(0.112)	0.014	0.026
236	19.67	0.10	0.040	(0.112)	0.014	0.026
237	19.75	0.10	0.040	(0.111)	0.014	0.026
238	19.83	0.07	0.027	(0.111)	0.009	0.018
239	19.92	0.07	0.027	(0.110)	0.009	0.018
240	20.00	0.07	0.027	(0.110)	0.009	0.018
241	20.08	0.10	0.040	(0.109)	0.014	0.026
242	20.17	0.10	0.040	(0.109)	0.014	0.026
243	20.25	0.10	0.040	(0.108)	0.014	0.026
244	20.33	0.10	0.040	(0.108)	0.014	0.026
245	20.42	0.10	0.040	(0.107)	0.014	0.026
246	20.50	0.10	0.040	(0.107)	0.014	0.026
247	20.58	0.10	0.040	(0.106)	0.014	0.026
248	20.67	0.10	0.040	(0.106)	0.014	0.026
249	20.75	0.10	0.040	(0.106)	0.014	0.026
250	20.83	0.07	0.027	(0.105)	0.009	0.018
251	20.92	0.07	0.027	(0.105)	0.009	0.018
252	21.00	0.07	0.027	(0.104)	0.009	0.018
253	21.08	0.10	0.040	(0.104)	0.014	0.026
254	21.17	0.10	0.040	(0.103)	0.014	0.026
255	21.25	0.10	0.040	(0.103)	0.014	0.026
256	21.33	0.07	0.027	(0.103)	0.009	0.018

257	21.42	0.07	0.027	(0.102)	0.009	0.018
258	21.50	0.07	0.027	(0.102)	0.009	0.018
259	21.58	0.10	0.040	(0.102)	0.014	0.026
260	21.67	0.10	0.040	(0.101)	0.014	0.026
261	21.75	0.10	0.040	(0.101)	0.014	0.026
262	21.83	0.07	0.027	(0.100)	0.009	0.018
263	21.92	0.07	0.027	(0.100)	0.009	0.018
264	22.00	0.07	0.027	(0.100)	0.009	0.018
265	22.08	0.10	0.040	(0.099)	0.014	0.026
266	22.17	0.10	0.040	(0.099)	0.014	0.026
267	22.25	0.10	0.040	(0.099)	0.014	0.026
268	22.33	0.07	0.027	(0.099)	0.009	0.018
269	22.42	0.07	0.027	(0.098)	0.009	0.018
270	22.50	0.07	0.027	(0.098)	0.009	0.018
271	22.58	0.07	0.027	(0.098)	0.009	0.018
272	22.67	0.07	0.027	(0.097)	0.009	0.018
273	22.75	0.07	0.027	(0.097)	0.009	0.018
274	22.83	0.07	0.027	(0.097)	0.009	0.018
275	22.92	0.07	0.027	(0.097)	0.009	0.018
276	23.00	0.07	0.027	(0.096)	0.009	0.018
277	23.08	0.07	0.027	(0.096)	0.009	0.018
278	23.17	0.07	0.027	(0.096)	0.009	0.018
279	23.25	0.07	0.027	(0.096)	0.009	0.018
280	23.33	0.07	0.027	(0.096)	0.009	0.018
281	23.42	0.07	0.027	(0.095)	0.009	0.018
282	23.50	0.07	0.027	(0.095)	0.009	0.018
283	23.58	0.07	0.027	(0.095)	0.009	0.018
284	23.67	0.07	0.027	(0.095)	0.009	0.018
285	23.75	0.07	0.027	(0.095)	0.009	0.018
286	23.83	0.07	0.027	(0.095)	0.009	0.018
287	23.92	0.07	0.027	(0.095)	0.009	0.018
288	24.00	0.07	0.027	(0.095)	0.009	0.018

(Loss Rate Not Used)

Sum = 100.0 Sum = 26.3

Flood volume = Effective rainfall 2.19(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 1.8(Ac.Ft)
Total soil loss = 1.13(In)
Total soil loss = 0.934(Ac.Ft)
Total rainfall = 3.32(In)
Flood volume = 78977.1 Cubic Feet
Total soil loss = 40685.2 Cubic Feet

Peak flow rate of this hydrograph = 2.984(CFS)

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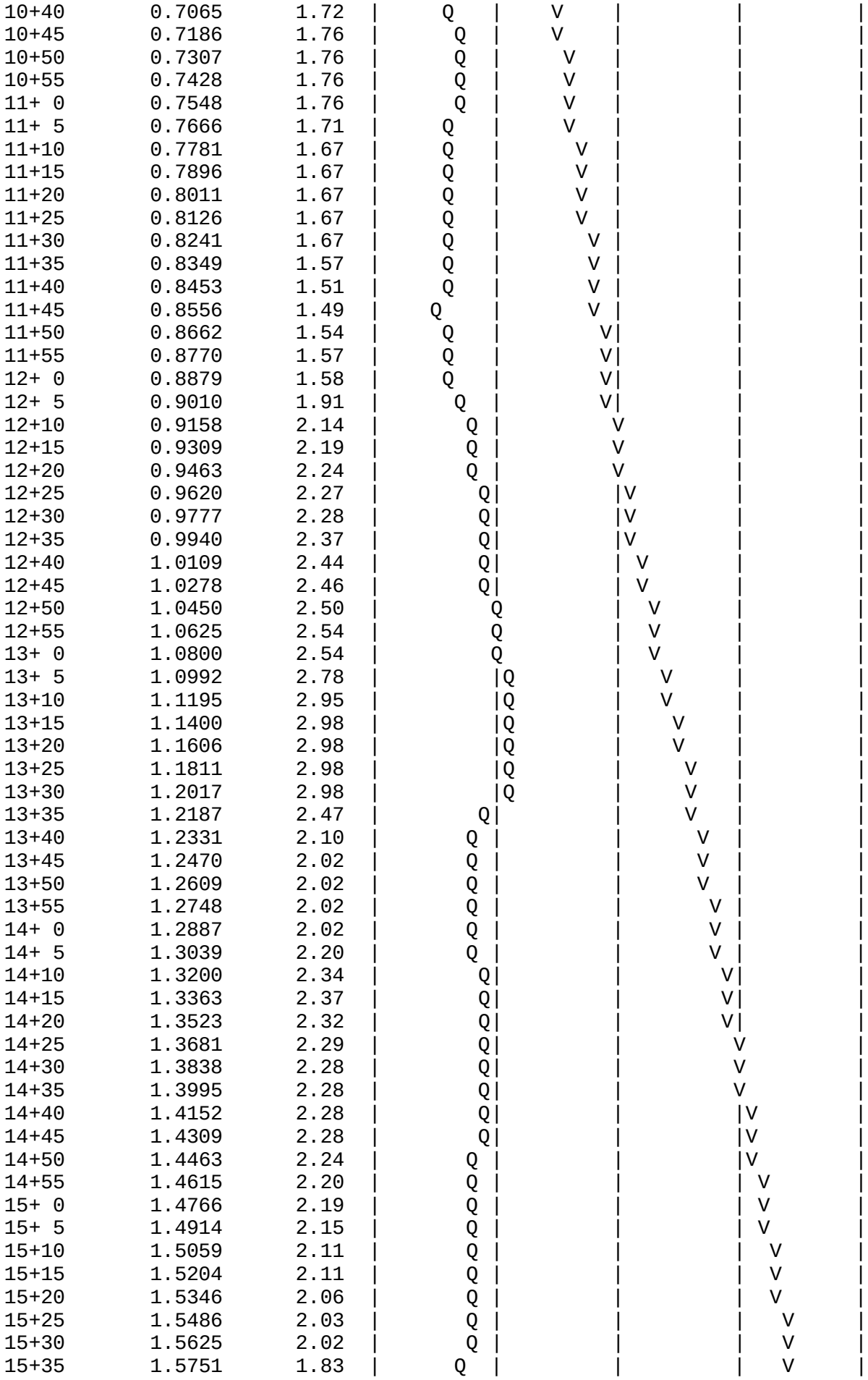
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0006	0.09	Q	|	|	|	|
0+10	0.0018	0.16	Q	|	|	|	|
0+15	0.0030	0.18	Q	|	|	|	|
0+20	0.0045	0.22	Q	|	|	|	|
0+25	0.0063	0.26	VQ	|	|	|	|
0+30	0.0081	0.26	VQ	|	|	|	|
0+35	0.0099	0.26	VQ	|	|	|	|

0+40	0.0117	0.26	VQ	|	|	|	|
0+45	0.0135	0.26	VQ	|	|	|	|
0+50	0.0156	0.31	VQ	|	|	|	|
0+55	0.0180	0.34	VQ	|	|	|	|
1+ 0	0.0204	0.35	VQ	|	|	|	|
1+ 5	0.0225	0.30	VQ	|	|	|	|
1+10	0.0244	0.27	VQ	|	|	|	|
1+15	0.0262	0.26	VQ	|	|	|	|
1+20	0.0280	0.26	VQ	|	|	|	|
1+25	0.0298	0.26	VQ	|	|	|	|
1+30	0.0316	0.26	VQ	|	|	|	|
1+35	0.0335	0.26	VQ	|	|	|	|
1+40	0.0353	0.26	VQ	|	|	|	|
1+45	0.0371	0.26	VQ	|	|	|	|
1+50	0.0392	0.31	VQ	|	|	|	|
1+55	0.0416	0.34	VQ	|	|	|	|
2+ 0	0.0440	0.35	VQ	|	|	|	|
2+ 5	0.0464	0.35	|Q	|	|	|	|
2+10	0.0488	0.35	|Q	|	|	|	|
2+15	0.0513	0.35	|Q	|	|	|	|
2+20	0.0537	0.35	|Q	|	|	|	|
2+25	0.0561	0.35	|Q	|	|	|	|
2+30	0.0585	0.35	|Q	|	|	|	|
2+35	0.0612	0.40	|Q	|	|	|	|
2+40	0.0642	0.43	|Q	|	|	|	|
2+45	0.0672	0.44	|Q	|	|	|	|
2+50	0.0703	0.44	|Q	|	|	|	|
2+55	0.0733	0.44	|Q	|	|	|	|
3+ 0	0.0763	0.44	|Q	|	|	|	|
3+ 5	0.0793	0.44	|Q	|	|	|	|
3+10	0.0823	0.44	|Q	|	|	|	|
3+15	0.0854	0.44	|Q	|	|	|	|
3+20	0.0884	0.44	|Q	|	|	|	|
3+25	0.0914	0.44	|QV	|	|	|	|
3+30	0.0944	0.44	|QV	|	|	|	|
3+35	0.0975	0.44	|QV	|	|	|	|
3+40	0.1005	0.44	|QV	|	|	|	|
3+45	0.1035	0.44	|QV	|	|	|	|
3+50	0.1068	0.49	|QV	|	|	|	|
3+55	0.1104	0.52	| Q	|	|	|	|
4+ 0	0.1140	0.53	| Q	|	|	|	|
4+ 5	0.1177	0.53	| Q	|	|	|	|
4+10	0.1213	0.53	| Q	|	|	|	|
4+15	0.1249	0.53	| Q	|	|	|	|
4+20	0.1289	0.57	| Q	|	|	|	|
4+25	0.1331	0.61	| Q	|	|	|	|
4+30	0.1373	0.61	| QV	|	|	|	|
4+35	0.1415	0.61	| QV	|	|	|	|
4+40	0.1457	0.61	| QV	|	|	|	|
4+45	0.1500	0.61	| QV	|	|	|	|
4+50	0.1545	0.66	| QV	|	|	|	|
4+55	0.1593	0.70	| QV	|	|	|	|
5+ 0	0.1641	0.70	| QV	|	|	|	|
5+ 5	0.1683	0.61	| QV	|	|	|	|
5+10	0.1721	0.54	| QV	|	|	|	|
5+15	0.1757	0.53	| QV	|	|	|	|
5+20	0.1796	0.57	| QV	|	|	|	|
5+25	0.1838	0.61	| Q V	|	|	|	|
5+30	0.1880	0.61	| Q V	|	|	|	|
5+35	0.1926	0.66	| Q V	|	|	|	|

5+40	0.1974	0.70	Q V				
5+45	0.2022	0.70	Q V				
5+50	0.2071	0.70	Q V				
5+55	0.2119	0.70	Q V				
6+ 0	0.2167	0.70	Q V				
6+ 5	0.2219	0.75	Q V				
6+10	0.2273	0.78	Q V				
6+15	0.2327	0.79	Q V				
6+20	0.2382	0.79	Q V				
6+25	0.2436	0.79	Q V				
6+30	0.2490	0.79	Q V				
6+35	0.2548	0.84	Q V				
6+40	0.2608	0.87	Q V				
6+45	0.2668	0.88	Q V				
6+50	0.2729	0.88	Q V				
6+55	0.2789	0.88	Q V				
7+ 0	0.2850	0.88	Q V				
7+ 5	0.2910	0.88	Q V				
7+10	0.2970	0.88	Q V				
7+15	0.3031	0.88	Q V				
7+20	0.3095	0.92	Q V				
7+25	0.3161	0.96	Q V				
7+30	0.3227	0.97	Q V				
7+35	0.3297	1.01	Q V				
7+40	0.3369	1.05	Q V				
7+45	0.3441	1.05	Q V				
7+50	0.3517	1.10	Q V				
7+55	0.3595	1.13	Q V				
8+ 0	0.3674	1.14	Q V				
8+ 5	0.3759	1.23	Q V				
8+10	0.3848	1.30	Q V				
8+15	0.3939	1.32	Q V				
8+20	0.4030	1.32	Q V				
8+25	0.4120	1.32	Q V				
8+30	0.4211	1.32	Q V				
8+35	0.4305	1.36	Q V				
8+40	0.4401	1.40	Q V				
8+45	0.4498	1.40	Q V				
8+50	0.4598	1.45	Q V				
8+55	0.4700	1.48	Q V				
9+ 0	0.4803	1.49	Q V				
9+ 5	0.4912	1.58	Q V				
9+10	0.5026	1.65	Q V				
9+15	0.5140	1.67	Q V				
9+20	0.5258	1.71	Q V				
9+25	0.5379	1.75	Q V				
9+30	0.5500	1.76	Q V				
9+35	0.5624	1.80	Q V				
9+40	0.5750	1.84	Q V				
9+45	0.5877	1.84	Q V				
9+50	0.6007	1.89	Q V				
9+55	0.6140	1.92	Q V				
10+ 0	0.6273	1.93	Q V				
10+ 5	0.6383	1.60	Q V				
10+10	0.6477	1.37	Q V				
10+15	0.6568	1.32	Q V				
10+20	0.6659	1.32	Q V				
10+25	0.6749	1.32	Q V				
10+30	0.6840	1.32	Q V				
10+35	0.6947	1.55	Q V				



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15+40       1.5868      1.70  |     Q   |         |         |    V    |
15+45       1.5983      1.67  |     Q   |         |         |    V    |
15+50       1.6097      1.67  |     Q   |         |         |    V    |
15+55       1.6212      1.67  |     Q   |         |         |    V    |
16+ 0       1.6327      1.67  |     Q   |         |         |     V   |
16+ 5       1.6394      0.97  |  Q      |         |         |     V   |
16+10       1.6425      0.46  |Q        |         |         |     V   |
16+15       1.6449      0.35  |Q        |         |         |     V   |
16+20       1.6474      0.35  |Q        |         |         |     V   |
16+25       1.6498      0.35  |Q        |         |         |     V   |
16+30       1.6522      0.35  |Q        |         |         |     V   |
16+35       1.6543      0.30  |Q        |         |         |     V   |
16+40       1.6561      0.27  |Q        |         |         |     V   |
16+45       1.6580      0.26  |Q        |         |         |     V   |
16+50       1.6598      0.26  |Q        |         |         |     V   |
16+55       1.6616      0.26  |Q        |         |         |     V   |
17+ 0       1.6634      0.26  |Q        |         |         |     V   |
17+ 5       1.6659      0.36  |Q        |         |         |     V   |
17+10       1.6688      0.42  |Q        |         |         |     V   |
17+15       1.6718      0.44  |Q        |         |         |     V   |
17+20       1.6748      0.44  |Q        |         |         |     V   |
17+25       1.6778      0.44  |Q        |         |         |      V  |
17+30       1.6809      0.44  |Q        |         |         |      V  |
17+35       1.6839      0.44  |Q        |         |         |      V  |
17+40       1.6869      0.44  |Q        |         |         |      V  |
17+45       1.6899      0.44  |Q        |         |         |      V  |
17+50       1.6926      0.39  |Q        |         |         |      V  |
17+55       1.6951      0.36  |Q        |         |         |      V  |
18+ 0       1.6975      0.35  |Q        |         |         |      V  |
18+ 5       1.6999      0.35  |Q        |         |         |      V  |
18+10       1.7023      0.35  |Q        |         |         |      V  |
18+15       1.7048      0.35  |Q        |         |         |      V  |
18+20       1.7072      0.35  |Q        |         |         |      V  |
18+25       1.7096      0.35  |Q        |         |         |      V  |
18+30       1.7120      0.35  |Q        |         |         |      V  |
18+35       1.7141      0.30  |Q        |         |         |      V  |
18+40       1.7160      0.27  |Q        |         |         |      V  |
18+45       1.7178      0.26  |Q        |         |         |      V  |
18+50       1.7193      0.22  Q        |         |         |      V  |
18+55       1.7205      0.18  Q        |         |         |      V  |
19+ 0       1.7217      0.18  Q        |         |         |      V  |
19+ 5       1.7233      0.22  Q        |         |         |       V |
19+10       1.7250      0.26  |Q        |         |         |       V |
19+15       1.7269      0.26  |Q        |         |         |       V |
19+20       1.7290      0.31  |Q        |         |         |       V |
19+25       1.7314      0.34  |Q        |         |         |       V |
19+30       1.7338      0.35  |Q        |         |         |       V |
19+35       1.7359      0.30  |Q        |         |         |       V |
19+40       1.7377      0.27  |Q        |         |         |       V |
19+45       1.7395      0.26  |Q        |         |         |       V |
19+50       1.7410      0.22  Q        |         |         |       V |
19+55       1.7423      0.18  Q        |         |         |       V |
20+ 0       1.7435      0.18  Q        |         |         |       V |
20+ 5       1.7450      0.22  Q        |         |         |       V |
20+10       1.7468      0.26  |Q        |         |         |       V |
20+15       1.7486      0.26  |Q        |         |         |       V |
20+20       1.7504      0.26  |Q        |         |         |       V |
20+25       1.7522      0.26  |Q        |         |         |       V |
20+30       1.7541      0.26  |Q        |         |         |       V |
20+35       1.7559      0.26  |Q        |         |         |       V |
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20+40	1.7577	0.26	|Q	|	|	|	V |
20+45	1.7595	0.26	|Q	|	|	|	V |
20+50	1.7610	0.22	Q	|	|	|	V |
20+55	1.7622	0.18	Q	|	|	|	V |
21+ 0	1.7634	0.18	Q	|	|	|	V |
21+ 5	1.7650	0.22	Q	|	|	|	V |
21+10	1.7667	0.26	|Q	|	|	|	V |
21+15	1.7686	0.26	|Q	|	|	|	V|
21+20	1.7700	0.22	Q	|	|	|	V|
21+25	1.7713	0.18	Q	|	|	|	V|
21+30	1.7725	0.18	Q	|	|	|	V|
21+35	1.7740	0.22	Q	|	|	|	V|
21+40	1.7758	0.26	|Q	|	|	|	V|
21+45	1.7776	0.26	|Q	|	|	|	V|
21+50	1.7791	0.22	Q	|	|	|	V|
21+55	1.7804	0.18	Q	|	|	|	V|
22+ 0	1.7816	0.18	Q	|	|	|	V|
22+ 5	1.7831	0.22	Q	|	|	|	V|
22+10	1.7849	0.26	|Q	|	|	|	V|
22+15	1.7867	0.26	|Q	|	|	|	V|
22+20	1.7882	0.22	Q	|	|	|	V|
22+25	1.7894	0.18	Q	|	|	|	V|
22+30	1.7906	0.18	Q	|	|	|	V|
22+35	1.7919	0.18	Q	|	|	|	V|
22+40	1.7931	0.18	Q	|	|	|	V|
22+45	1.7943	0.18	Q	|	|	|	V|
22+50	1.7955	0.18	Q	|	|	|	V|
22+55	1.7967	0.18	Q	|	|	|	V|
23+ 0	1.7979	0.18	Q	|	|	|	V|
23+ 5	1.7991	0.18	Q	|	|	|	V|
23+10	1.8003	0.18	Q	|	|	|	V|
23+15	1.8015	0.18	Q	|	|	|	V|
23+20	1.8027	0.18	Q	|	|	|	V|
23+25	1.8039	0.18	Q	|	|	|	V|
23+30	1.8051	0.18	Q	|	|	|	V|
23+35	1.8064	0.18	Q	|	|	|	V|
23+40	1.8076	0.18	Q	|	|	|	V|
23+45	1.8088	0.18	Q	|	|	|	V|
23+50	1.8100	0.18	Q	|	|	|	V|
23+55	1.8112	0.18	Q	|	|	|	V|
24+ 0	1.8124	0.18	Q	|	|	|	V|
24+ 5	1.8130	0.08	Q	|	|	|	V|
24+10	1.8131	0.01	Q	|	|	|	V

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

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
5-YR
1-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	0.59	4.19

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.45	10.31

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.791(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.791(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
		Sum = 100.000	Sum=	7.166

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	4.40	0.418	(0.201)		0.155	0.263
2	0.17	4.50	0.427	(0.201)		0.158	0.269
3	0.25	5.40	0.513	(0.201)		0.190	0.323
4	0.33	5.40	0.513	(0.201)		0.190	0.323
5	0.42	5.70	0.541	(0.201)		0.200	0.341
6	0.50	6.40	0.608	0.201	(	0.225)	0.407
7	0.58	7.90	0.750	0.201	(	0.278)	0.549
8	0.67	9.10	0.864	0.201	(	0.320)	0.663
9	0.75	12.80	1.216	0.201	(	0.450)	1.014
10	0.83	25.60	2.431	0.201	(	0.900)	2.230
11	0.92	7.90	0.750	0.201	(	0.278)	0.549
12	1.00	4.90	0.465	(0.201)		0.172	0.293
	(Loss Rate Not Used)						
Sum =		100.0				Sum =	7.2

```
    Flood volume = Effective rainfall      0.60(In)
     times area       7.1(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
    Total soil loss =      0.19(In)
    Total soil loss =     0.112(Ac.Ft)
    Total rainfall =      0.79(In)
    Flood volume =       15539.1 Cubic Feet
    Total soil loss =        4885.9 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     12.270(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0076      1.11  V Q       |         |         |         |
    0+10       0.0201      1.81  | VQ      |         |         |         |
    0+15       0.0350      2.16  |  VQ     |         |         |         |
    0+20       0.0508      2.30  |   QV    |         |         |         |
    0+25       0.0673      2.39  |   Q  V  |         |         |         |
    0+30       0.0860      2.71  |    Q   V|         |         |         |
    0+35       0.1100      3.49  |     Q   | V       |         |         |
    0+40       0.1401      4.36  |       Q |    V    |         |         |
    0+45       0.1827      6.19  |         | Q       V         |         |
    0+50       0.2672     12.27  |         |         |   Q    V|         |
    0+55       0.3254      8.44  |         |     Q   |         |     V   |
    1+ 0       0.3494      3.48  |     Q   |         |         |        V|
    1+ 5       0.3560      0.96  |Q        |         |         |        V|
    1+10       0.3567      0.11  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 10/24/24 File: AREAC35.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
5-YR
3-HR

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Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.00	7.11

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	2.50	17.78

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	1.30	0.211	(0.201)		0.078	0.133
2	0.17	1.30	0.211	(0.201)		0.078	0.133
3	0.25	1.10	0.178	(0.201)		0.066	0.112
4	0.33	1.50	0.243	(0.201)		0.090	0.153
5	0.42	1.50	0.243	(0.201)		0.090	0.153
6	0.50	1.80	0.292	(0.201)		0.108	0.184
7	0.58	1.50	0.243	(0.201)		0.090	0.153
8	0.67	1.80	0.292	(0.201)		0.108	0.184
9	0.75	1.80	0.292	(0.201)		0.108	0.184
10	0.83	1.50	0.243	(0.201)		0.090	0.153
11	0.92	1.60	0.259	(0.201)		0.096	0.163
12	1.00	1.80	0.292	(0.201)		0.108	0.184
13	1.08	2.20	0.357	(0.201)		0.132	0.225
14	1.17	2.20	0.357	(0.201)		0.132	0.225
15	1.25	2.20	0.357	(0.201)		0.132	0.225
16	1.33	2.00	0.324	(0.201)		0.120	0.204

17	1.42	2.60	0.422	(0.201)	0.156	0.266
18	1.50	2.70	0.438	(0.201)	0.162	0.276
19	1.58	2.40	0.389	(0.201)	0.144	0.245
20	1.67	2.70	0.438	(0.201)	0.162	0.276
21	1.75	3.30	0.535	(0.201)	0.198	0.337
22	1.83	3.10	0.503	(0.201)	0.186	0.317
23	1.92	2.90	0.470	(0.201)	0.174	0.296
24	2.00	3.00	0.486	(0.201)	0.180	0.306
25	2.08	3.10	0.503	(0.201)	0.186	0.317
26	2.17	4.20	0.681	0.201	(0.252)	0.480
27	2.25	5.00	0.811	0.201	(0.300)	0.610
28	2.33	3.50	0.568	0.201	(0.210)	0.366
29	2.42	6.80	1.103	0.201	(0.408)	0.901
30	2.50	7.30	1.184	0.201	(0.438)	0.983
31	2.58	8.20	1.330	0.201	(0.492)	1.129
32	2.67	5.90	0.957	0.201	(0.354)	0.756
33	2.75	2.00	0.324	(0.201)	0.120	0.204
34	2.83	1.80	0.292	(0.201)	0.108	0.184
35	2.92	1.80	0.292	(0.201)	0.108	0.184
36	3.00	0.60	0.097	(0.201)	0.036	0.061

(Loss Rate Not Used)

Sum = 100.0 Sum = 11.3

Flood volume = Effective rainfall 0.94(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.41(In)
Total soil loss = 0.245(Ac.Ft)
Total rainfall = 1.35(In)
Flood volume = 24220.9 Cubic Feet
Total soil loss = 10655.1 Cubic Feet

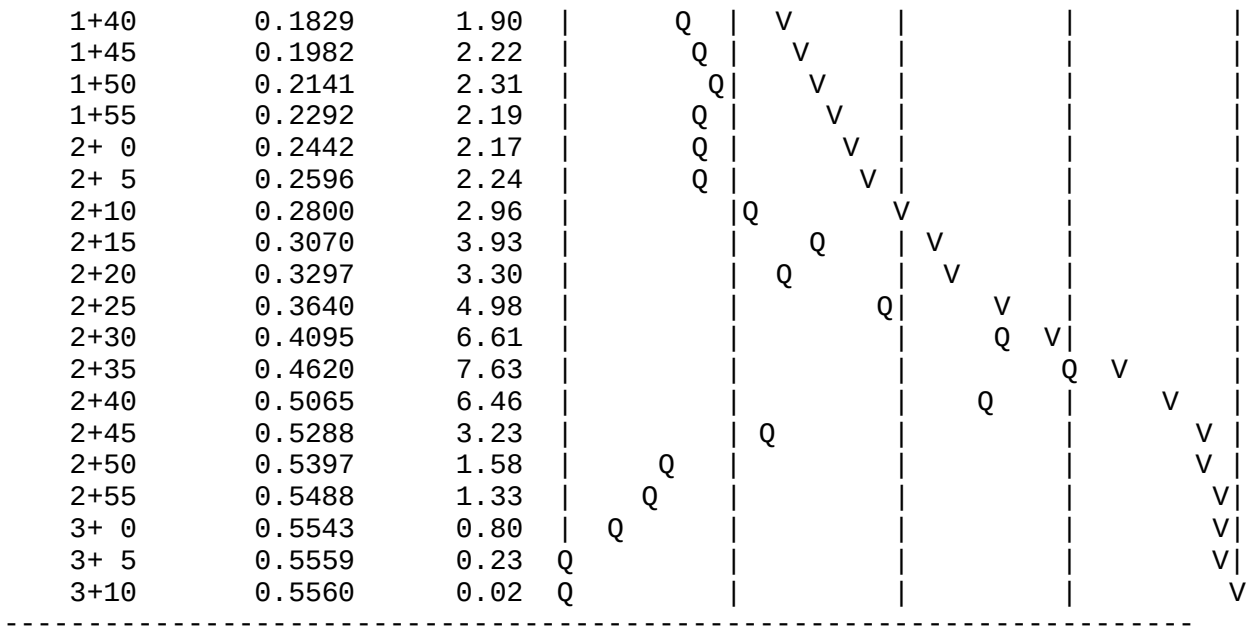
Peak flow rate of this hydrograph = 7.630(CFS)

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3 - 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	0.0039	0.56	V Q | | | |
0+10	0.0101	0.90	V Q | | | |
0+15	0.0160	0.87	|V Q | | | |
0+20	0.0228	0.99	|V Q | | | |
0+25	0.0303	1.08	| V Q | | | |
0+30	0.0387	1.23	| V Q | | | |
0+35	0.0469	1.18	| VQ | | | |
0+40	0.0554	1.24	| VQ | | | |
0+45	0.0644	1.31	| VQ | | | |
0+50	0.0726	1.19	| QV | | | |
0+55	0.0805	1.15	| QV | | | |
1+ 0	0.0892	1.25	| QV | | | |
1+ 5	0.0994	1.48	| Q V | | | |
1+10	0.1104	1.60	| QV | | | |
1+15	0.1215	1.61	| Q V | | | |
1+20	0.1320	1.53	| Q V| | | |
1+25	0.1439	1.73	| Q V | | |
1+30	0.1571	1.92	| Q |V | | |
1+35	0.1698	1.84	| Q | V | | |


1+40 0.1829 1.90
1+45 0.1982 2.22
1+50 0.2141 2.31
1+55 0.2292 2.19
2+ 0 0.2442 2.17
2+ 5 0.2596 2.24
2+10 0.2800 2.96
2+15 0.3070 3.93
2+20 0.3297 3.30
2+25 0.3640 4.98
2+30 0.4095 6.61
2+35 0.4620 7.63
2+40 0.5065 6.46
2+45 0.5288 3.23
2+50 0.5397 1.58
2+55 0.5488 1.33
3+ 0 0.5543 0.80
3+ 5 0.5559 0.23
3+10 0.5560 0.02

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 10/24/24 File: AREAC65.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
5-YR
6-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.40	9.95

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	3.50	24.89

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 1.892(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.892(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.50	0.114	(0.201)	0.042	0.072
2	0.17	0.60	0.136	(0.201)	0.050	0.086
3	0.25	0.60	0.136	(0.201)	0.050	0.086
4	0.33	0.60	0.136	(0.201)	0.050	0.086
5	0.42	0.60	0.136	(0.201)	0.050	0.086
6	0.50	0.70	0.159	(0.201)	0.059	0.100
7	0.58	0.70	0.159	(0.201)	0.059	0.100
8	0.67	0.70	0.159	(0.201)	0.059	0.100
9	0.75	0.70	0.159	(0.201)	0.059	0.100
10	0.83	0.70	0.159	(0.201)	0.059	0.100
11	0.92	0.70	0.159	(0.201)	0.059	0.100
12	1.00	0.80	0.182	(0.201)	0.067	0.114
13	1.08	0.80	0.182	(0.201)	0.067	0.114
14	1.17	0.80	0.182	(0.201)	0.067	0.114
15	1.25	0.80	0.182	(0.201)	0.067	0.114
16	1.33	0.80	0.182	(0.201)	0.067	0.114

17	1.42	0.80	0.182	(	0.201)	0.067	0.114
18	1.50	0.80	0.182	(	0.201)	0.067	0.114
19	1.58	0.80	0.182	(	0.201)	0.067	0.114
20	1.67	0.80	0.182	(	0.201)	0.067	0.114
21	1.75	0.80	0.182	(	0.201)	0.067	0.114
22	1.83	0.80	0.182	(	0.201)	0.067	0.114
23	1.92	0.80	0.182	(	0.201)	0.067	0.114
24	2.00	0.90	0.204	(	0.201)	0.076	0.129
25	2.08	0.80	0.182	(	0.201)	0.067	0.114
26	2.17	0.90	0.204	(	0.201)	0.076	0.129
27	2.25	0.90	0.204	(	0.201)	0.076	0.129
28	2.33	0.90	0.204	(	0.201)	0.076	0.129
29	2.42	0.90	0.204	(	0.201)	0.076	0.129
30	2.50	0.90	0.204	(	0.201)	0.076	0.129
31	2.58	0.90	0.204	(	0.201)	0.076	0.129
32	2.67	0.90	0.204	(	0.201)	0.076	0.129
33	2.75	1.00	0.227	(	0.201)	0.084	0.143
34	2.83	1.00	0.227	(	0.201)	0.084	0.143
35	2.92	1.00	0.227	(	0.201)	0.084	0.143
36	3.00	1.00	0.227	(	0.201)	0.084	0.143
37	3.08	1.00	0.227	(	0.201)	0.084	0.143
38	3.17	1.10	0.250	(	0.201)	0.092	0.157
39	3.25	1.10	0.250	(	0.201)	0.092	0.157
40	3.33	1.10	0.250	(	0.201)	0.092	0.157
41	3.42	1.20	0.272	(	0.201)	0.101	0.172
42	3.50	1.30	0.295	(	0.201)	0.109	0.186
43	3.58	1.40	0.318	(	0.201)	0.118	0.200
44	3.67	1.40	0.318	(	0.201)	0.118	0.200
45	3.75	1.50	0.341	(	0.201)	0.126	0.215
46	3.83	1.50	0.341	(	0.201)	0.126	0.215
47	3.92	1.60	0.363	(	0.201)	0.134	0.229
48	4.00	1.60	0.363	(	0.201)	0.134	0.229
49	4.08	1.70	0.386	(	0.201)	0.143	0.243
50	4.17	1.80	0.409	(	0.201)	0.151	0.257
51	4.25	1.90	0.431	(	0.201)	0.160	0.272
52	4.33	2.00	0.454	(	0.201)	0.168	0.286
53	4.42	2.10	0.477	(	0.201)	0.176	0.300
54	4.50	2.10	0.477	(	0.201)	0.176	0.300
55	4.58	2.20	0.499	(	0.201)	0.185	0.315
56	4.67	2.30	0.522	(	0.201)	0.193	0.329
57	4.75	2.40	0.545		0.201	(0.202)	0.344
58	4.83	2.40	0.545		0.201	(0.202)	0.344
59	4.92	2.50	0.568		0.201	(0.210)	0.366
60	5.00	2.60	0.590		0.201	(0.218)	0.389
61	5.08	3.10	0.704		0.201	(0.260)	0.503
62	5.17	3.60	0.817		0.201	(0.302)	0.616
63	5.25	3.90	0.885		0.201	(0.328)	0.684
64	5.33	4.20	0.953		0.201	(0.353)	0.752
65	5.42	4.70	1.067		0.201	(0.395)	0.866
66	5.50	5.60	1.271		0.201	(0.470)	1.070
67	5.58	1.90	0.431	(	0.201)	0.160	0.272
68	5.67	0.90	0.204	(	0.201)	0.076	0.129
69	5.75	0.60	0.136	(	0.201)	0.050	0.086
70	5.83	0.50	0.114	(	0.201)	0.042	0.072
71	5.92	0.30	0.068	(	0.201)	0.025	0.043
72	6.00	0.20	0.045	(	0.201)	0.017	0.029

(Loss Rate Not Used)

Sum = 100.0 Sum = 15.2

Flood volume = Effective rainfall 1.27(In)

times area 7.1(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)

Total soil loss = 0.62(In)
Total soil loss = 0.369(Ac.Ft)
Total rainfall = 1.89(In)
Flood volume = 32757.1 Cubic Feet
Total soil loss = 16069.6 Cubic Feet

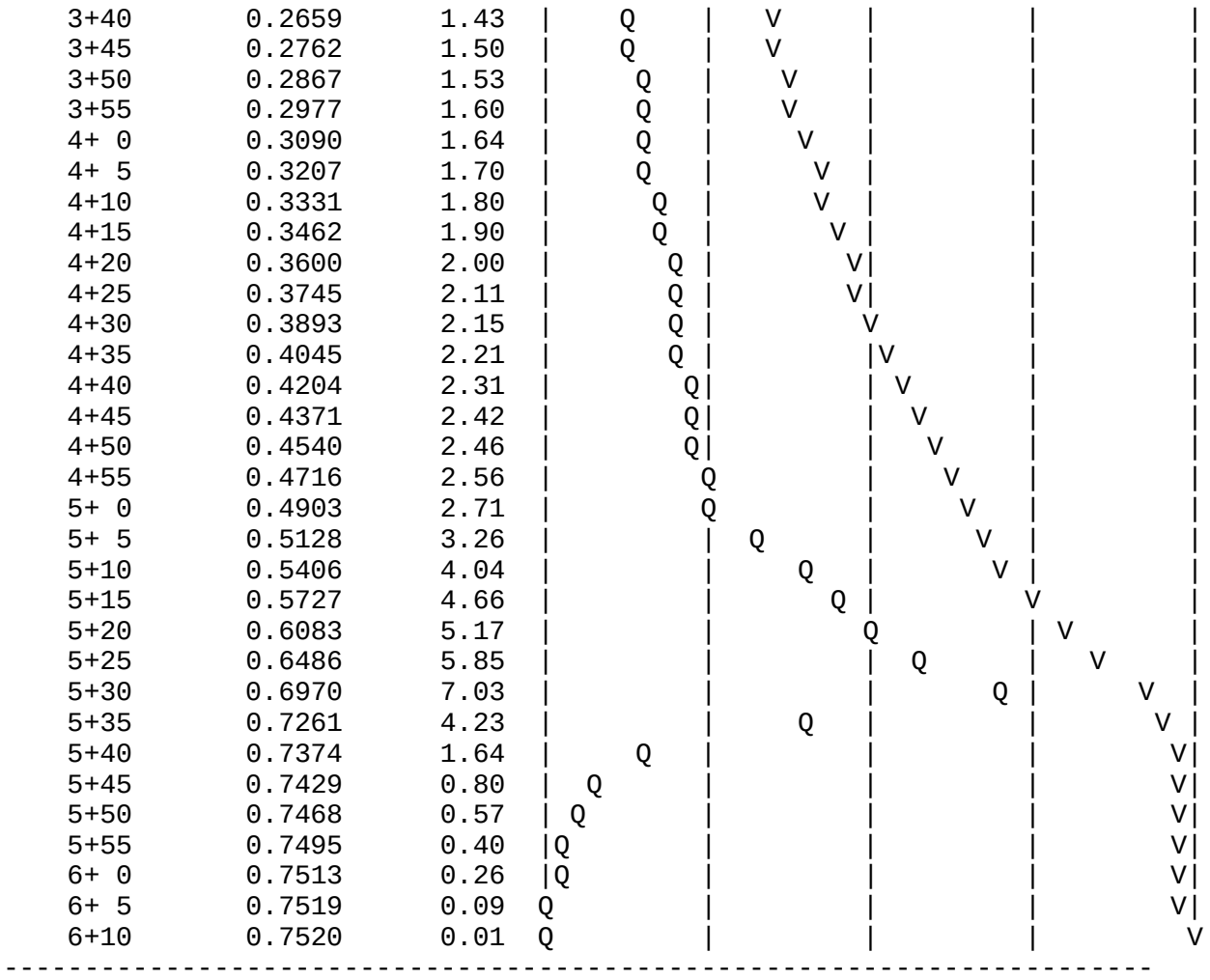
Peak flow rate of this hydrograph = 7.027(CFS)

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6 - 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	0.0021	0.30	VQ				
0+10	0.0058	0.55	V Q				
0+15	0.0100	0.61	V Q				
0+20	0.0143	0.62	V Q				
0+25	0.0185	0.62	V Q				
0+30	0.0232	0.68	|VQ				
0+35	0.0281	0.71	|VQ				
0+40	0.0330	0.72	|VQ				
0+45	0.0380	0.72	| Q				
0+50	0.0429	0.72	| Q				
0+55	0.0478	0.72	| Q				
1+ 0	0.0532	0.78	| VQ				
1+ 5	0.0588	0.81	| Q				
1+10	0.0645	0.82	| Q				
1+15	0.0701	0.82	| Q				
1+20	0.0758	0.82	| QV				
1+25	0.0814	0.82	| QV				
1+30	0.0871	0.82	| QV				
1+35	0.0927	0.82	| QV				
1+40	0.0984	0.82	| Q V				
1+45	0.1040	0.82	| Q V				
1+50	0.1097	0.82	| Q V				
1+55	0.1153	0.82	| Q V				
2+ 0	0.1214	0.88	| Q V				
2+ 5	0.1273	0.86	| Q V				
2+10	0.1334	0.89	| Q V				
2+15	0.1397	0.92	| Q V				
2+20	0.1461	0.92	| Q V				
2+25	0.1524	0.92	| Q V				
2+30	0.1588	0.92	| Q V				
2+35	0.1651	0.92	| Q V				
2+40	0.1715	0.92	| Q V|				
2+45	0.1782	0.98	| Q V|				
2+50	0.1853	1.02	| Q V|				
2+55	0.1923	1.03	| Q V				
3+ 0	0.1994	1.03	| Q V				
3+ 5	0.2065	1.03	| Q V				
3+10	0.2139	1.09	| Q |V				
3+15	0.2217	1.12	| Q |V				
3+20	0.2294	1.13	| Q | V				
3+25	0.2376	1.19	| Q | V				
3+30	0.2465	1.29	| Q | V				
3+35	0.2560	1.39	| Q | V				


3+40 0.2659 1.43
3+45 0.2762 1.50
3+50 0.2867 1.53
3+55 0.2977 1.60
4+ 0 0.3090 1.64
4+ 5 0.3207 1.70
4+10 0.3331 1.80
4+15 0.3462 1.90
4+20 0.3600 2.00
4+25 0.3745 2.11
4+30 0.3893 2.15
4+35 0.4045 2.21
4+40 0.4204 2.31
4+45 0.4371 2.42
4+50 0.4540 2.46
4+55 0.4716 2.56
5+ 0 0.4903 2.71
5+ 5 0.5128 3.26
5+10 0.5406 4.04
5+15 0.5727 4.66
5+20 0.6083 5.17
5+25 0.6486 5.85
5+30 0.6970 7.03
5+35 0.7261 4.23
5+40 0.7374 1.64
5+45 0.7429 0.80
5+50 0.7468 0.57
5+55 0.7495 0.40
6+ 0 0.7513 0.26
6+ 5 0.7519 0.09
6+10 0.7520 0.01

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 10/24/24 File: AREAC245.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
5-YR
24-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 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]
7.11	2.50	17.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	6.00	42.66

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.320(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.320(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.027	(0.357)	0.010	0.017
2	0.17	0.07	0.027	(0.355)	0.010	0.017
3	0.25	0.07	0.027	(0.354)	0.010	0.017
4	0.33	0.10	0.040	(0.352)	0.015	0.025
5	0.42	0.10	0.040	(0.351)	0.015	0.025
6	0.50	0.10	0.040	(0.350)	0.015	0.025
7	0.58	0.10	0.040	(0.348)	0.015	0.025
8	0.67	0.10	0.040	(0.347)	0.015	0.025
9	0.75	0.10	0.040	(0.346)	0.015	0.025
10	0.83	0.13	0.053	(0.344)	0.020	0.033
11	0.92	0.13	0.053	(0.343)	0.020	0.033
12	1.00	0.13	0.053	(0.342)	0.020	0.033
13	1.08	0.10	0.040	(0.340)	0.015	0.025
14	1.17	0.10	0.040	(0.339)	0.015	0.025
15	1.25	0.10	0.040	(0.338)	0.015	0.025
16	1.33	0.10	0.040	(0.336)	0.015	0.025

17	1.42	0.10	0.040	(0.335)	0.015	0.025
18	1.50	0.10	0.040	(0.334)	0.015	0.025
19	1.58	0.10	0.040	(0.332)	0.015	0.025
20	1.67	0.10	0.040	(0.331)	0.015	0.025
21	1.75	0.10	0.040	(0.330)	0.015	0.025
22	1.83	0.13	0.053	(0.328)	0.020	0.033
23	1.92	0.13	0.053	(0.327)	0.020	0.033
24	2.00	0.13	0.053	(0.326)	0.020	0.033
25	2.08	0.13	0.053	(0.324)	0.020	0.033
26	2.17	0.13	0.053	(0.323)	0.020	0.033
27	2.25	0.13	0.053	(0.322)	0.020	0.033
28	2.33	0.13	0.053	(0.320)	0.020	0.033
29	2.42	0.13	0.053	(0.319)	0.020	0.033
30	2.50	0.13	0.053	(0.318)	0.020	0.033
31	2.58	0.17	0.066	(0.316)	0.025	0.042
32	2.67	0.17	0.066	(0.315)	0.025	0.042
33	2.75	0.17	0.066	(0.314)	0.025	0.042
34	2.83	0.17	0.066	(0.313)	0.025	0.042
35	2.92	0.17	0.066	(0.311)	0.025	0.042
36	3.00	0.17	0.066	(0.310)	0.025	0.042
37	3.08	0.17	0.066	(0.309)	0.025	0.042
38	3.17	0.17	0.066	(0.307)	0.025	0.042
39	3.25	0.17	0.066	(0.306)	0.025	0.042
40	3.33	0.17	0.066	(0.305)	0.025	0.042
41	3.42	0.17	0.066	(0.304)	0.025	0.042
42	3.50	0.17	0.066	(0.302)	0.025	0.042
43	3.58	0.17	0.066	(0.301)	0.025	0.042
44	3.67	0.17	0.066	(0.300)	0.025	0.042
45	3.75	0.17	0.066	(0.299)	0.025	0.042
46	3.83	0.20	0.080	(0.297)	0.029	0.050
47	3.92	0.20	0.080	(0.296)	0.029	0.050
48	4.00	0.20	0.080	(0.295)	0.029	0.050
49	4.08	0.20	0.080	(0.293)	0.029	0.050
50	4.17	0.20	0.080	(0.292)	0.029	0.050
51	4.25	0.20	0.080	(0.291)	0.029	0.050
52	4.33	0.23	0.093	(0.290)	0.034	0.059
53	4.42	0.23	0.093	(0.289)	0.034	0.059
54	4.50	0.23	0.093	(0.287)	0.034	0.059
55	4.58	0.23	0.093	(0.286)	0.034	0.059
56	4.67	0.23	0.093	(0.285)	0.034	0.059
57	4.75	0.23	0.093	(0.284)	0.034	0.059
58	4.83	0.27	0.106	(0.282)	0.039	0.067
59	4.92	0.27	0.106	(0.281)	0.039	0.067
60	5.00	0.27	0.106	(0.280)	0.039	0.067
61	5.08	0.20	0.080	(0.279)	0.029	0.050
62	5.17	0.20	0.080	(0.278)	0.029	0.050
63	5.25	0.20	0.080	(0.276)	0.029	0.050
64	5.33	0.23	0.093	(0.275)	0.034	0.059
65	5.42	0.23	0.093	(0.274)	0.034	0.059
66	5.50	0.23	0.093	(0.273)	0.034	0.059
67	5.58	0.27	0.106	(0.271)	0.039	0.067
68	5.67	0.27	0.106	(0.270)	0.039	0.067
69	5.75	0.27	0.106	(0.269)	0.039	0.067
70	5.83	0.27	0.106	(0.268)	0.039	0.067
71	5.92	0.27	0.106	(0.267)	0.039	0.067
72	6.00	0.27	0.106	(0.266)	0.039	0.067
73	6.08	0.30	0.120	(0.264)	0.044	0.075
74	6.17	0.30	0.120	(0.263)	0.044	0.075
75	6.25	0.30	0.120	(0.262)	0.044	0.075
76	6.33	0.30	0.120	(0.261)	0.044	0.075

77	6.42	0.30	0.120	(0.260)	0.044	0.075
78	6.50	0.30	0.120	(0.259)	0.044	0.075
79	6.58	0.33	0.133	(0.257)	0.049	0.084
80	6.67	0.33	0.133	(0.256)	0.049	0.084
81	6.75	0.33	0.133	(0.255)	0.049	0.084
82	6.83	0.33	0.133	(0.254)	0.049	0.084
83	6.92	0.33	0.133	(0.253)	0.049	0.084
84	7.00	0.33	0.133	(0.252)	0.049	0.084
85	7.08	0.33	0.133	(0.250)	0.049	0.084
86	7.17	0.33	0.133	(0.249)	0.049	0.084
87	7.25	0.33	0.133	(0.248)	0.049	0.084
88	7.33	0.37	0.146	(0.247)	0.054	0.092
89	7.42	0.37	0.146	(0.246)	0.054	0.092
90	7.50	0.37	0.146	(0.245)	0.054	0.092
91	7.58	0.40	0.159	(0.244)	0.059	0.100
92	7.67	0.40	0.159	(0.243)	0.059	0.100
93	7.75	0.40	0.159	(0.241)	0.059	0.100
94	7.83	0.43	0.173	(0.240)	0.064	0.109
95	7.92	0.43	0.173	(0.239)	0.064	0.109
96	8.00	0.43	0.173	(0.238)	0.064	0.109
97	8.08	0.50	0.199	(0.237)	0.074	0.125
98	8.17	0.50	0.199	(0.236)	0.074	0.125
99	8.25	0.50	0.199	(0.235)	0.074	0.125
100	8.33	0.50	0.199	(0.234)	0.074	0.125
101	8.42	0.50	0.199	(0.233)	0.074	0.125
102	8.50	0.50	0.199	(0.231)	0.074	0.125
103	8.58	0.53	0.212	(0.230)	0.079	0.134
104	8.67	0.53	0.212	(0.229)	0.079	0.134
105	8.75	0.53	0.212	(0.228)	0.079	0.134
106	8.83	0.57	0.226	(0.227)	0.084	0.142
107	8.92	0.57	0.226	(0.226)	0.084	0.142
108	9.00	0.57	0.226	(0.225)	0.084	0.142
109	9.08	0.63	0.252	(0.224)	0.093	0.159
110	9.17	0.63	0.252	(0.223)	0.093	0.159
111	9.25	0.63	0.252	(0.222)	0.093	0.159
112	9.33	0.67	0.266	(0.221)	0.098	0.167
113	9.42	0.67	0.266	(0.220)	0.098	0.167
114	9.50	0.67	0.266	(0.219)	0.098	0.167
115	9.58	0.70	0.279	(0.218)	0.103	0.176
116	9.67	0.70	0.279	(0.217)	0.103	0.176
117	9.75	0.70	0.279	(0.216)	0.103	0.176
118	9.83	0.73	0.292	(0.215)	0.108	0.184
119	9.92	0.73	0.292	(0.213)	0.108	0.184
120	10.00	0.73	0.292	(0.212)	0.108	0.184
121	10.08	0.50	0.199	(0.211)	0.074	0.125
122	10.17	0.50	0.199	(0.210)	0.074	0.125
123	10.25	0.50	0.199	(0.209)	0.074	0.125
124	10.33	0.50	0.199	(0.208)	0.074	0.125
125	10.42	0.50	0.199	(0.207)	0.074	0.125
126	10.50	0.50	0.199	(0.206)	0.074	0.125
127	10.58	0.67	0.266	(0.205)	0.098	0.167
128	10.67	0.67	0.266	(0.204)	0.098	0.167
129	10.75	0.67	0.266	(0.203)	0.098	0.167
130	10.83	0.67	0.266	(0.202)	0.098	0.167
131	10.92	0.67	0.266	(0.201)	0.098	0.167
132	11.00	0.67	0.266	(0.200)	0.098	0.167
133	11.08	0.63	0.252	(0.199)	0.093	0.159
134	11.17	0.63	0.252	(0.198)	0.093	0.159
135	11.25	0.63	0.252	(0.197)	0.093	0.159
136	11.33	0.63	0.252	(0.196)	0.093	0.159

137	11.42	0.63	0.252	(0.195)	0.093	0.159
138	11.50	0.63	0.252	(0.194)	0.093	0.159
139	11.58	0.57	0.226	(0.194)	0.084	0.142
140	11.67	0.57	0.226	(0.193)	0.084	0.142
141	11.75	0.57	0.226	(0.192)	0.084	0.142
142	11.83	0.60	0.239	(0.191)	0.088	0.151
143	11.92	0.60	0.239	(0.190)	0.088	0.151
144	12.00	0.60	0.239	(0.189)	0.088	0.151
145	12.08	0.83	0.332	(0.188)	0.123	0.209
146	12.17	0.83	0.332	(0.187)	0.123	0.209
147	12.25	0.83	0.332	(0.186)	0.123	0.209
148	12.33	0.87	0.345	(0.185)	0.128	0.218
149	12.42	0.87	0.345	(0.184)	0.128	0.218
150	12.50	0.87	0.345	(0.183)	0.128	0.218
151	12.58	0.93	0.372	(0.182)	0.138	0.234
152	12.67	0.93	0.372	(0.181)	0.138	0.234
153	12.75	0.93	0.372	(0.180)	0.138	0.234
154	12.83	0.97	0.385	(0.179)	0.142	0.243
155	12.92	0.97	0.385	(0.179)	0.142	0.243
156	13.00	0.97	0.385	(0.178)	0.142	0.243
157	13.08	1.13	0.451	(0.177)	0.167	0.284
158	13.17	1.13	0.451	(0.176)	0.167	0.284
159	13.25	1.13	0.451	(0.175)	0.167	0.284
160	13.33	1.13	0.451	(0.174)	0.167	0.284
161	13.42	1.13	0.451	(0.173)	0.167	0.284
162	13.50	1.13	0.451	(0.172)	0.167	0.284
163	13.58	0.77	0.305	(0.171)	0.113	0.192
164	13.67	0.77	0.305	(0.171)	0.113	0.192
165	13.75	0.77	0.305	(0.170)	0.113	0.192
166	13.83	0.77	0.305	(0.169)	0.113	0.192
167	13.92	0.77	0.305	(0.168)	0.113	0.192
168	14.00	0.77	0.305	(0.167)	0.113	0.192
169	14.08	0.90	0.359	(0.166)	0.133	0.226
170	14.17	0.90	0.359	(0.165)	0.133	0.226
171	14.25	0.90	0.359	(0.165)	0.133	0.226
172	14.33	0.87	0.345	(0.164)	0.128	0.218
173	14.42	0.87	0.345	(0.163)	0.128	0.218
174	14.50	0.87	0.345	(0.162)	0.128	0.218
175	14.58	0.87	0.345	(0.161)	0.128	0.218
176	14.67	0.87	0.345	(0.160)	0.128	0.218
177	14.75	0.87	0.345	(0.160)	0.128	0.218
178	14.83	0.83	0.332	(0.159)	0.123	0.209
179	14.92	0.83	0.332	(0.158)	0.123	0.209
180	15.00	0.83	0.332	(0.157)	0.123	0.209
181	15.08	0.80	0.319	(0.156)	0.118	0.201
182	15.17	0.80	0.319	(0.156)	0.118	0.201
183	15.25	0.80	0.319	(0.155)	0.118	0.201
184	15.33	0.77	0.305	(0.154)	0.113	0.192
185	15.42	0.77	0.305	(0.153)	0.113	0.192
186	15.50	0.77	0.305	(0.152)	0.113	0.192
187	15.58	0.63	0.252	(0.152)	0.093	0.159
188	15.67	0.63	0.252	(0.151)	0.093	0.159
189	15.75	0.63	0.252	(0.150)	0.093	0.159
190	15.83	0.63	0.252	(0.149)	0.093	0.159
191	15.92	0.63	0.252	(0.148)	0.093	0.159
192	16.00	0.63	0.252	(0.148)	0.093	0.159
193	16.08	0.13	0.053	(0.147)	0.020	0.033
194	16.17	0.13	0.053	(0.146)	0.020	0.033
195	16.25	0.13	0.053	(0.145)	0.020	0.033
196	16.33	0.13	0.053	(0.145)	0.020	0.033

197	16.42	0.13	0.053	(0.144)	0.020	0.033
198	16.50	0.13	0.053	(0.143)	0.020	0.033
199	16.58	0.10	0.040	(0.143)	0.015	0.025
200	16.67	0.10	0.040	(0.142)	0.015	0.025
201	16.75	0.10	0.040	(0.141)	0.015	0.025
202	16.83	0.10	0.040	(0.140)	0.015	0.025
203	16.92	0.10	0.040	(0.140)	0.015	0.025
204	17.00	0.10	0.040	(0.139)	0.015	0.025
205	17.08	0.17	0.066	(0.138)	0.025	0.042
206	17.17	0.17	0.066	(0.138)	0.025	0.042
207	17.25	0.17	0.066	(0.137)	0.025	0.042
208	17.33	0.17	0.066	(0.136)	0.025	0.042
209	17.42	0.17	0.066	(0.135)	0.025	0.042
210	17.50	0.17	0.066	(0.135)	0.025	0.042
211	17.58	0.17	0.066	(0.134)	0.025	0.042
212	17.67	0.17	0.066	(0.133)	0.025	0.042
213	17.75	0.17	0.066	(0.133)	0.025	0.042
214	17.83	0.13	0.053	(0.132)	0.020	0.033
215	17.92	0.13	0.053	(0.132)	0.020	0.033
216	18.00	0.13	0.053	(0.131)	0.020	0.033
217	18.08	0.13	0.053	(0.130)	0.020	0.033
218	18.17	0.13	0.053	(0.130)	0.020	0.033
219	18.25	0.13	0.053	(0.129)	0.020	0.033
220	18.33	0.13	0.053	(0.128)	0.020	0.033
221	18.42	0.13	0.053	(0.128)	0.020	0.033
222	18.50	0.13	0.053	(0.127)	0.020	0.033
223	18.58	0.10	0.040	(0.126)	0.015	0.025
224	18.67	0.10	0.040	(0.126)	0.015	0.025
225	18.75	0.10	0.040	(0.125)	0.015	0.025
226	18.83	0.07	0.027	(0.125)	0.010	0.017
227	18.92	0.07	0.027	(0.124)	0.010	0.017
228	19.00	0.07	0.027	(0.123)	0.010	0.017
229	19.08	0.10	0.040	(0.123)	0.015	0.025
230	19.17	0.10	0.040	(0.122)	0.015	0.025
231	19.25	0.10	0.040	(0.122)	0.015	0.025
232	19.33	0.13	0.053	(0.121)	0.020	0.033
233	19.42	0.13	0.053	(0.121)	0.020	0.033
234	19.50	0.13	0.053	(0.120)	0.020	0.033
235	19.58	0.10	0.040	(0.119)	0.015	0.025
236	19.67	0.10	0.040	(0.119)	0.015	0.025
237	19.75	0.10	0.040	(0.118)	0.015	0.025
238	19.83	0.07	0.027	(0.118)	0.010	0.017
239	19.92	0.07	0.027	(0.117)	0.010	0.017
240	20.00	0.07	0.027	(0.117)	0.010	0.017
241	20.08	0.10	0.040	(0.116)	0.015	0.025
242	20.17	0.10	0.040	(0.116)	0.015	0.025
243	20.25	0.10	0.040	(0.115)	0.015	0.025
244	20.33	0.10	0.040	(0.115)	0.015	0.025
245	20.42	0.10	0.040	(0.114)	0.015	0.025
246	20.50	0.10	0.040	(0.114)	0.015	0.025
247	20.58	0.10	0.040	(0.113)	0.015	0.025
248	20.67	0.10	0.040	(0.113)	0.015	0.025
249	20.75	0.10	0.040	(0.112)	0.015	0.025
250	20.83	0.07	0.027	(0.112)	0.010	0.017
251	20.92	0.07	0.027	(0.111)	0.010	0.017
252	21.00	0.07	0.027	(0.111)	0.010	0.017
253	21.08	0.10	0.040	(0.111)	0.015	0.025
254	21.17	0.10	0.040	(0.110)	0.015	0.025
255	21.25	0.10	0.040	(0.110)	0.015	0.025
256	21.33	0.07	0.027	(0.109)	0.010	0.017

257	21.42	0.07	0.027	(0.109)	0.010	0.017
258	21.50	0.07	0.027	(0.108)	0.010	0.017
259	21.58	0.10	0.040	(0.108)	0.015	0.025
260	21.67	0.10	0.040	(0.108)	0.015	0.025
261	21.75	0.10	0.040	(0.107)	0.015	0.025
262	21.83	0.07	0.027	(0.107)	0.010	0.017
263	21.92	0.07	0.027	(0.107)	0.010	0.017
264	22.00	0.07	0.027	(0.106)	0.010	0.017
265	22.08	0.10	0.040	(0.106)	0.015	0.025
266	22.17	0.10	0.040	(0.106)	0.015	0.025
267	22.25	0.10	0.040	(0.105)	0.015	0.025
268	22.33	0.07	0.027	(0.105)	0.010	0.017
269	22.42	0.07	0.027	(0.105)	0.010	0.017
270	22.50	0.07	0.027	(0.104)	0.010	0.017
271	22.58	0.07	0.027	(0.104)	0.010	0.017
272	22.67	0.07	0.027	(0.104)	0.010	0.017
273	22.75	0.07	0.027	(0.103)	0.010	0.017
274	22.83	0.07	0.027	(0.103)	0.010	0.017
275	22.92	0.07	0.027	(0.103)	0.010	0.017
276	23.00	0.07	0.027	(0.103)	0.010	0.017
277	23.08	0.07	0.027	(0.102)	0.010	0.017
278	23.17	0.07	0.027	(0.102)	0.010	0.017
279	23.25	0.07	0.027	(0.102)	0.010	0.017
280	23.33	0.07	0.027	(0.102)	0.010	0.017
281	23.42	0.07	0.027	(0.101)	0.010	0.017
282	23.50	0.07	0.027	(0.101)	0.010	0.017
283	23.58	0.07	0.027	(0.101)	0.010	0.017
284	23.67	0.07	0.027	(0.101)	0.010	0.017
285	23.75	0.07	0.027	(0.101)	0.010	0.017
286	23.83	0.07	0.027	(0.101)	0.010	0.017
287	23.92	0.07	0.027	(0.101)	0.010	0.017
288	24.00	0.07	0.027	(0.101)	0.010	0.017

(Loss Rate Not Used)

Sum = 100.0 Sum = 25.1

Flood volume = Effective rainfall 2.09(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 1.23(In)
Total soil loss = 0.728(Ac.Ft)
Total rainfall = 3.32(In)
Flood volume = 53978.5 Cubic Feet
Total soil loss = 31701.7 Cubic Feet

Peak flow rate of this hydrograph = 2.039(CFS)

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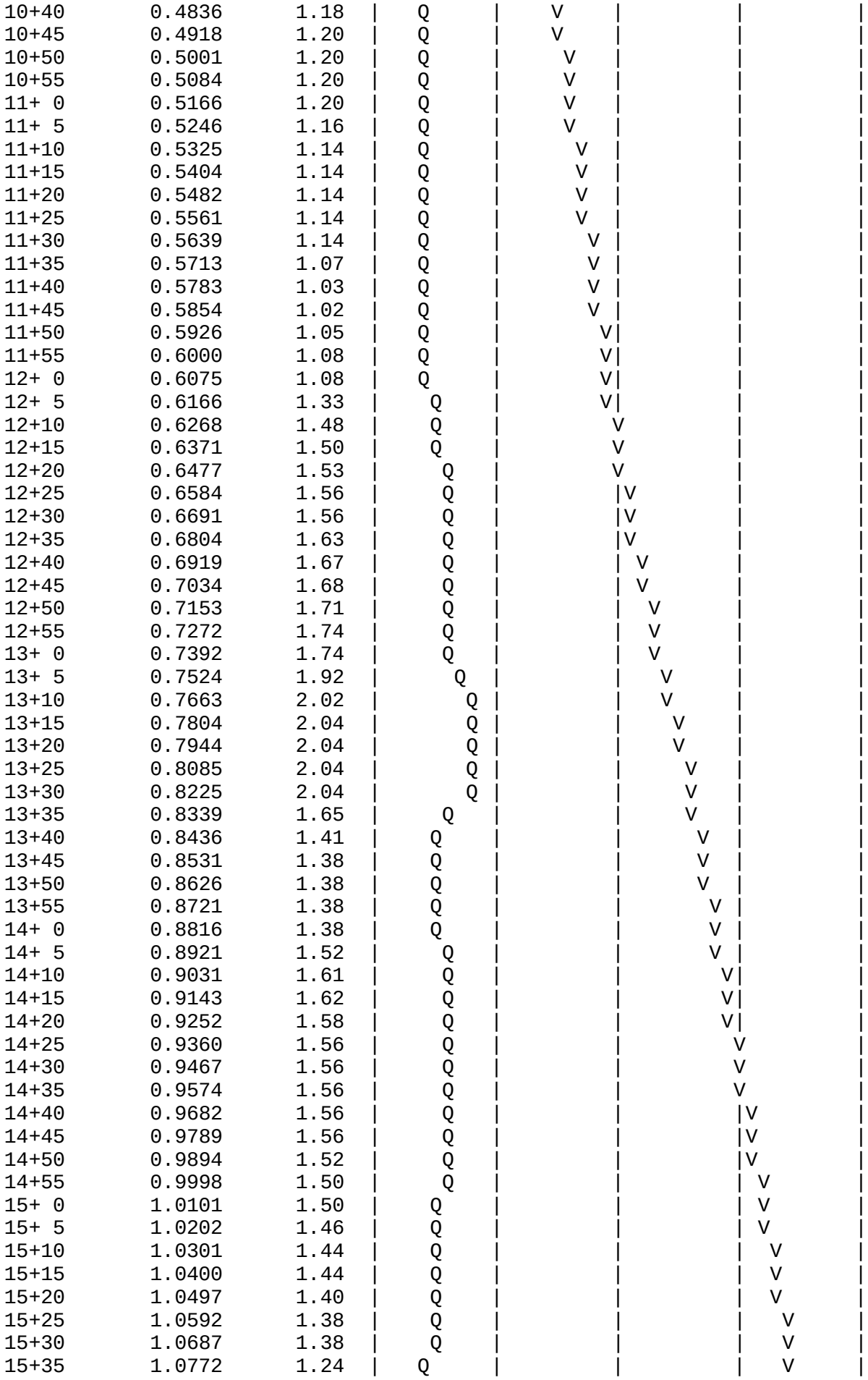
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0005	0.07	Q	|	|	|	|
0+10	0.0013	0.11	Q	|	|	|	|
0+15	0.0021	0.12	Q	|	|	|	|
0+20	0.0032	0.16	Q	|	|	|	|
0+25	0.0044	0.18	Q	|	|	|	|
0+30	0.0056	0.18	Q	|	|	|	|
0+35	0.0069	0.18	Q	|	|	|	|

```
0+40       0.0081      0.18  Q        |          |          |          |
0+45       0.0093      0.18  Q        |          |          |          |
0+50       0.0108      0.22  Q        |          |          |          |
0+55       0.0125      0.24  Q        |          |          |          |
1+ 0       0.0141      0.24  Q        |          |          |          |
1+ 5       0.0155      0.20  Q        |          |          |          |
1+10       0.0168      0.18  Q        |          |          |          |
1+15       0.0180      0.18  Q        |          |          |          |
1+20       0.0193      0.18  Q        |          |          |          |
1+25       0.0205      0.18  Q        |          |          |          |
1+30       0.0217      0.18  Q        |          |          |          |
1+35       0.0230      0.18  Q        |          |          |          |
1+40       0.0242      0.18  Q        |          |          |          |
1+45       0.0254      0.18  Q        |          |          |          |
1+50       0.0269      0.22  Q        |          |          |          |
1+55       0.0286      0.24  Q        |          |          |          |
2+ 0       0.0302      0.24  Q        |          |          |          |
2+ 5       0.0319      0.24  QV       |          |          |          |
2+10       0.0335      0.24  QV       |          |          |          |
2+15       0.0352      0.24  QV       |          |          |          |
2+20       0.0368      0.24  QV       |          |          |          |
2+25       0.0385      0.24  QV       |          |          |          |
2+30       0.0401      0.24  QV       |          |          |          |
2+35       0.0420      0.28  |Q       |          |          |          |
2+40       0.0441      0.30  |Q       |          |          |          |
2+45       0.0461      0.30  |Q       |          |          |          |
2+50       0.0482      0.30  |Q       |          |          |          |
2+55       0.0503      0.30  |Q       |          |          |          |
3+ 0       0.0523      0.30  |Q       |          |          |          |
3+ 5       0.0544      0.30  |Q       |          |          |          |
3+10       0.0565      0.30  |Q       |          |          |          |
3+15       0.0585      0.30  |Q       |          |          |          |
3+20       0.0606      0.30  |Q       |          |          |          |
3+25       0.0627      0.30  |QV      |          |          |          |
3+30       0.0647      0.30  |QV      |          |          |          |
3+35       0.0668      0.30  |QV      |          |          |          |
3+40       0.0688      0.30  |QV      |          |          |          |
3+45       0.0709      0.30  |QV      |          |          |          |
3+50       0.0732      0.34  |QV      |          |          |          |
3+55       0.0757      0.36  |QV      |          |          |          |
4+ 0       0.0782      0.36  |QV      |          |          |          |
4+ 5       0.0806      0.36  |QV      |          |          |          |
4+10       0.0831      0.36  |QV      |          |          |          |
4+15       0.0856      0.36  |QV      |          |          |          |
4+20       0.0883      0.40  |QV      |          |          |          |
4+25       0.0912      0.42  |QV      |          |          |          |
4+30       0.0941      0.42  |Q V     |          |          |          |
4+35       0.0970      0.42  |Q V     |          |          |          |
4+40       0.0999      0.42  |Q V     |          |          |          |
4+45       0.1028      0.42  |Q V     |          |          |          |
4+50       0.1059      0.46  |Q V     |          |          |          |
4+55       0.1092      0.48  |Q V     |          |          |          |
5+ 0       0.1125      0.48  |Q V     |          |          |          |
5+ 5       0.1153      0.41  |Q V     |          |          |          |
5+10       0.1178      0.37  |Q V     |          |          |          |
5+15       0.1203      0.36  |Q V     |          |          |          |
5+20       0.1230      0.40  |Q V     |          |          |          |
5+25       0.1259      0.42  |Q  V    |          |          |          |
5+30       0.1288      0.42  |Q  V    |          |          |          |
5+35       0.1319      0.46  |Q  V    |          |          |          |
```

5+40	0.1352	0.48	Q V				
5+45	0.1385	0.48	Q V				
5+50	0.1418	0.48	Q V				
5+55	0.1451	0.48	Q V				
6+ 0	0.1484	0.48	Q V				
6+ 5	0.1520	0.52	Q V				
6+10	0.1557	0.54	Q V				
6+15	0.1594	0.54	Q V				
6+20	0.1631	0.54	Q V				
6+25	0.1668	0.54	Q V				
6+30	0.1705	0.54	Q V				
6+35	0.1745	0.58	Q V				
6+40	0.1786	0.60	Q V				
6+45	0.1827	0.60	Q V				
6+50	0.1869	0.60	Q V				
6+55	0.1910	0.60	Q V				
7+ 0	0.1951	0.60	Q V				
7+ 5	0.1992	0.60	Q V				
7+10	0.2034	0.60	Q V				
7+15	0.2075	0.60	Q V				
7+20	0.2119	0.64	Q V				
7+25	0.2164	0.66	Q V				
7+30	0.2209	0.66	Q V				
7+35	0.2257	0.70	Q V				
7+40	0.2307	0.72	Q V				
7+45	0.2356	0.72	Q V				
7+50	0.2408	0.76	Q V				
7+55	0.2462	0.78	Q V				
8+ 0	0.2515	0.78	Q V				
8+ 5	0.2574	0.85	Q V				
8+10	0.2636	0.89	Q V				
8+15	0.2697	0.90	Q V				
8+20	0.2759	0.90	Q V				
8+25	0.2821	0.90	Q V				
8+30	0.2883	0.90	Q V				
8+35	0.2948	0.93	Q V				
8+40	0.3014	0.96	Q V				
8+45	0.3080	0.96	Q V				
8+50	0.3148	0.99	Q V				
8+55	0.3218	1.02	Q V				
9+ 0	0.3288	1.02	Q V				
9+ 5	0.3364	1.09	Q V				
9+10	0.3442	1.13	Q V				
9+15	0.3520	1.14	Q V				
9+20	0.3601	1.17	Q V				
9+25	0.3683	1.20	Q V				
9+30	0.3766	1.20	Q V				
9+35	0.3851	1.23	Q V				
9+40	0.3938	1.26	Q V				
9+45	0.4024	1.26	Q V				
9+50	0.4113	1.29	Q V				
9+55	0.4204	1.32	Q V				
10+ 0	0.4295	1.32	Q V				
10+ 5	0.4369	1.07	Q V				
10+10	0.4432	0.92	Q V				
10+15	0.4494	0.90	Q V				
10+20	0.4556	0.90	Q V				
10+25	0.4618	0.90	Q V				
10+30	0.4680	0.90	Q V				
10+35	0.4754	1.08	Q V				



```
15+40       1.0852      1.15  |   Q     |         |         |    V    |
15+45       1.0930      1.14  |   Q     |         |         |    V    |
15+50       1.1009      1.14  |   Q     |         |         |    V    |
15+55       1.1087      1.14  |   Q     |         |         |    V    |
16+ 0       1.1166      1.14  |   Q     |         |         |     V   |
16+ 5       1.1208      0.61  | Q       |         |         |     V   |
16+10       1.1228      0.29  |Q        |         |         |     V   |
16+15       1.1244      0.24  Q         |         |         |     V   |
16+20       1.1261      0.24  Q         |         |         |     V   |
16+25       1.1277      0.24  Q         |         |         |     V   |
16+30       1.1294      0.24  Q         |         |         |     V   |
16+35       1.1308      0.20  Q         |         |         |     V   |
16+40       1.1320      0.18  Q         |         |         |     V   |
16+45       1.1333      0.18  Q         |         |         |     V   |
16+50       1.1345      0.18  Q         |         |         |     V   |
16+55       1.1357      0.18  Q         |         |         |     V   |
17+ 0       1.1370      0.18  Q         |         |         |     V   |
17+ 5       1.1387      0.25  |Q        |         |         |     V   |
17+10       1.1407      0.29  |Q        |         |         |     V   |
17+15       1.1428      0.30  |Q        |         |         |     V   |
17+20       1.1449      0.30  |Q        |         |         |     V   |
17+25       1.1469      0.30  |Q        |         |         |      V  |
17+30       1.1490      0.30  |Q        |         |         |      V  |
17+35       1.1511      0.30  |Q        |         |         |      V  |
17+40       1.1531      0.30  |Q        |         |         |      V  |
17+45       1.1552      0.30  |Q        |         |         |      V  |
17+50       1.1570      0.26  |Q        |         |         |      V  |
17+55       1.1587      0.24  Q         |         |         |      V  |
18+ 0       1.1603      0.24  Q         |         |         |      V  |
18+ 5       1.1620      0.24  Q         |         |         |      V  |
18+10       1.1636      0.24  Q         |         |         |      V  |
18+15       1.1653      0.24  Q         |         |         |      V  |
18+20       1.1670      0.24  Q         |         |         |      V  |
18+25       1.1686      0.24  Q         |         |         |      V  |
18+30       1.1703      0.24  Q         |         |         |      V  |
18+35       1.1717      0.20  Q         |         |         |      V  |
18+40       1.1729      0.18  Q         |         |         |      V  |
18+45       1.1742      0.18  Q         |         |         |      V  |
18+50       1.1752      0.14  Q         |         |         |      V  |
18+55       1.1760      0.12  Q         |         |         |      V  |
19+ 0       1.1768      0.12  Q         |         |         |      V  |
19+ 5       1.1779      0.16  Q         |         |         |       V |
19+10       1.1791      0.18  Q         |         |         |       V |
19+15       1.1804      0.18  Q         |         |         |       V |
19+20       1.1818      0.22  Q         |         |         |       V |
19+25       1.1835      0.24  Q         |         |         |       V |
19+30       1.1851      0.24  Q         |         |         |       V |
19+35       1.1865      0.20  Q         |         |         |       V |
19+40       1.1878      0.18  Q         |         |         |       V |
19+45       1.1890      0.18  Q         |         |         |       V |
19+50       1.1900      0.14  Q         |         |         |       V |
19+55       1.1909      0.12  Q         |         |         |       V |
20+ 0       1.1917      0.12  Q         |         |         |       V |
20+ 5       1.1928      0.16  Q         |         |         |       V |
20+10       1.1940      0.18  Q         |         |         |       V |
20+15       1.1952      0.18  Q         |         |         |       V |
20+20       1.1965      0.18  Q         |         |         |       V |
20+25       1.1977      0.18  Q         |         |         |       V |
20+30       1.1989      0.18  Q         |         |         |       V |
20+35       1.2002      0.18  Q         |         |         |       V |
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20+40	1.2014	0.18	Q	|	|	|	V |
20+45	1.2027	0.18	Q	|	|	|	V |
20+50	1.2037	0.14	Q	|	|	|	V |
20+55	1.2045	0.12	Q	|	|	|	V |
21+ 0	1.2053	0.12	Q	|	|	|	V |
21+ 5	1.2064	0.16	Q	|	|	|	V |
21+10	1.2076	0.18	Q	|	|	|	V |
21+15	1.2089	0.18	Q	|	|	|	V|
21+20	1.2099	0.14	Q	|	|	|	V|
21+25	1.2107	0.12	Q	|	|	|	V|
21+30	1.2115	0.12	Q	|	|	|	V|
21+35	1.2126	0.16	Q	|	|	|	V|
21+40	1.2138	0.18	Q	|	|	|	V|
21+45	1.2151	0.18	Q	|	|	|	V|
21+50	1.2161	0.14	Q	|	|	|	V|
21+55	1.2169	0.12	Q	|	|	|	V|
22+ 0	1.2177	0.12	Q	|	|	|	V|
22+ 5	1.2188	0.16	Q	|	|	|	V|
22+10	1.2200	0.18	Q	|	|	|	V|
22+15	1.2213	0.18	Q	|	|	|	V|
22+20	1.2222	0.14	Q	|	|	|	V|
22+25	1.2231	0.12	Q	|	|	|	V|
22+30	1.2239	0.12	Q	|	|	|	V|
22+35	1.2247	0.12	Q	|	|	|	V|
22+40	1.2256	0.12	Q	|	|	|	V|
22+45	1.2264	0.12	Q	|	|	|	V|
22+50	1.2272	0.12	Q	|	|	|	V|
22+55	1.2281	0.12	Q	|	|	|	V|
23+ 0	1.2289	0.12	Q	|	|	|	V|
23+ 5	1.2297	0.12	Q	|	|	|	V|
23+10	1.2305	0.12	Q	|	|	|	V|
23+15	1.2314	0.12	Q	|	|	|	V|
23+20	1.2322	0.12	Q	|	|	|	V|
23+25	1.2330	0.12	Q	|	|	|	V|
23+30	1.2338	0.12	Q	|	|	|	V|
23+35	1.2347	0.12	Q	|	|	|	V|
23+40	1.2355	0.12	Q	|	|	|	V|
23+45	1.2363	0.12	Q	|	|	|	V|
23+50	1.2371	0.12	Q	|	|	|	V|
23+55	1.2380	0.12	Q	|	|	|	V|
24+ 0	1.2388	0.12	Q	|	|	|	V|
24+ 5	1.2391	0.05	Q	|	|	|	V|
24+10	1.2392	0.01	Q	|	|	|	V

10-YEAR STORM

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 10/24/24 File: THECOVE110.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
1-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	0.57	3.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.45	9.71

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.932(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.932(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum = 100.000	Sum=	6.752

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	4.40	0.492	(0.143)	0.128	0.364
2	0.17	4.50	0.503	(0.143)	0.131	0.372
3	0.25	5.40	0.604	0.143	(0.157)	0.461
4	0.33	5.40	0.604	0.143	(0.157)	0.461
5	0.42	5.70	0.637	0.143	(0.166)	0.494
6	0.50	6.40	0.716	0.143	(0.186)	0.573
7	0.58	7.90	0.884	0.143	(0.230)	0.740
8	0.67	9.10	1.018	0.143	(0.265)	0.875
9	0.75	12.80	1.432	0.143	(0.372)	1.289
10	0.83	25.60	2.863	0.143	(0.744)	2.720
11	0.92	7.90	0.884	0.143	(0.230)	0.740
12	1.00	4.90	0.548	(0.143)	0.142	0.406

(Loss Rate Not Used)
Sum = 100.0 Sum = 9.5
Flood volume = Effective rainfall 0.79(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.14(In)
Total soil loss = 0.079(Ac.Ft)
Total rainfall = 0.93(In)
Flood volume = 19244.6 Cubic Feet
Total soil loss = 3422.1 Cubic Feet

Peak flow rate of this hydrograph = 12.150(CFS)

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1 - 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	0.0069	1.00	VQ				
0+10	0.0215	2.12	V Q				
0+15	0.0395	2.62	V Q				
0+20	0.0600	2.98	Q				
0+25	0.0819	3.17	QV				
0+30	0.1060	3.51	Q V				
0+35	0.1352	4.24	Q | V				
0+40	0.1708	5.17	Q V				
0+45	0.2179	6.84	Q V				
0+50	0.3016	12.15	Q V				
0+55	0.3796	11.33	Q V				
1+ 0	0.4175	5.50	Q V				
1+ 5	0.4350	2.54	Q				V
1+10	0.4402	0.75	Q				V
1+15	0.4415	0.19	Q				V
1+20	0.4418	0.05	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
3-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.00	6.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	2.50	16.75

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.617(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.617(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

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	1.30	0.252	(0.143)		0.066	0.187
2	0.17	1.30	0.252	(0.143)		0.066	0.187
3	0.25	1.10	0.213	(0.143)		0.055	0.158
4	0.33	1.50	0.291	(0.143)		0.076	0.215
5	0.42	1.50	0.291	(0.143)		0.076	0.215
6	0.50	1.80	0.349	(0.143)		0.091	0.258
7	0.58	1.50	0.291	(0.143)		0.076	0.215
8	0.67	1.80	0.349	(0.143)		0.091	0.258
9	0.75	1.80	0.349	(0.143)		0.091	0.258
10	0.83	1.50	0.291	(0.143)		0.076	0.215
11	0.92	1.60	0.310	(0.143)		0.081	0.230
12	1.00	1.80	0.349	(0.143)		0.091	0.258
13	1.08	2.20	0.427	(0.143)		0.111	0.316
14	1.17	2.20	0.427	(0.143)		0.111	0.316

15	1.25	2.20	0.427	(	0.143)	0.111	0.316
16	1.33	2.00	0.388	(	0.143)	0.101	0.287
17	1.42	2.60	0.505	(	0.143)	0.131	0.373
18	1.50	2.70	0.524	(	0.143)	0.136	0.388
19	1.58	2.40	0.466	(	0.143)	0.121	0.345
20	1.67	2.70	0.524	(	0.143)	0.136	0.388
21	1.75	3.30	0.640		0.143	(0.166)	0.497
22	1.83	3.10	0.602		0.143	(0.156)	0.459
23	1.92	2.90	0.563		0.143	(0.146)	0.420
24	2.00	3.00	0.582		0.143	(0.151)	0.439
25	2.08	3.10	0.602		0.143	(0.156)	0.459
26	2.17	4.20	0.815		0.143	(0.212)	0.672
27	2.25	5.00	0.970		0.143	(0.252)	0.827
28	2.33	3.50	0.679		0.143	(0.177)	0.536
29	2.42	6.80	1.320		0.143	(0.343)	1.177
30	2.50	7.30	1.417		0.143	(0.368)	1.274
31	2.58	8.20	1.591		0.143	(0.414)	1.448
32	2.67	5.90	1.145		0.143	(0.298)	1.002
33	2.75	2.00	0.388	(	0.143)	0.101	0.287
34	2.83	1.80	0.349	(	0.143)	0.091	0.258
35	2.92	1.80	0.349	(	0.143)	0.091	0.258
36	3.00	0.60	0.116	(	0.143)	0.030	0.086

(Loss Rate Not Used)

Sum = 100.0 Sum = 15.5

Flood volume = Effective rainfall 1.29(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 0.33(In)
Total soil loss = 0.182(Ac.Ft)
Total rainfall = 1.62(In)
Flood volume = 31381.6 Cubic Feet
Total soil loss = 7947.0 Cubic Feet

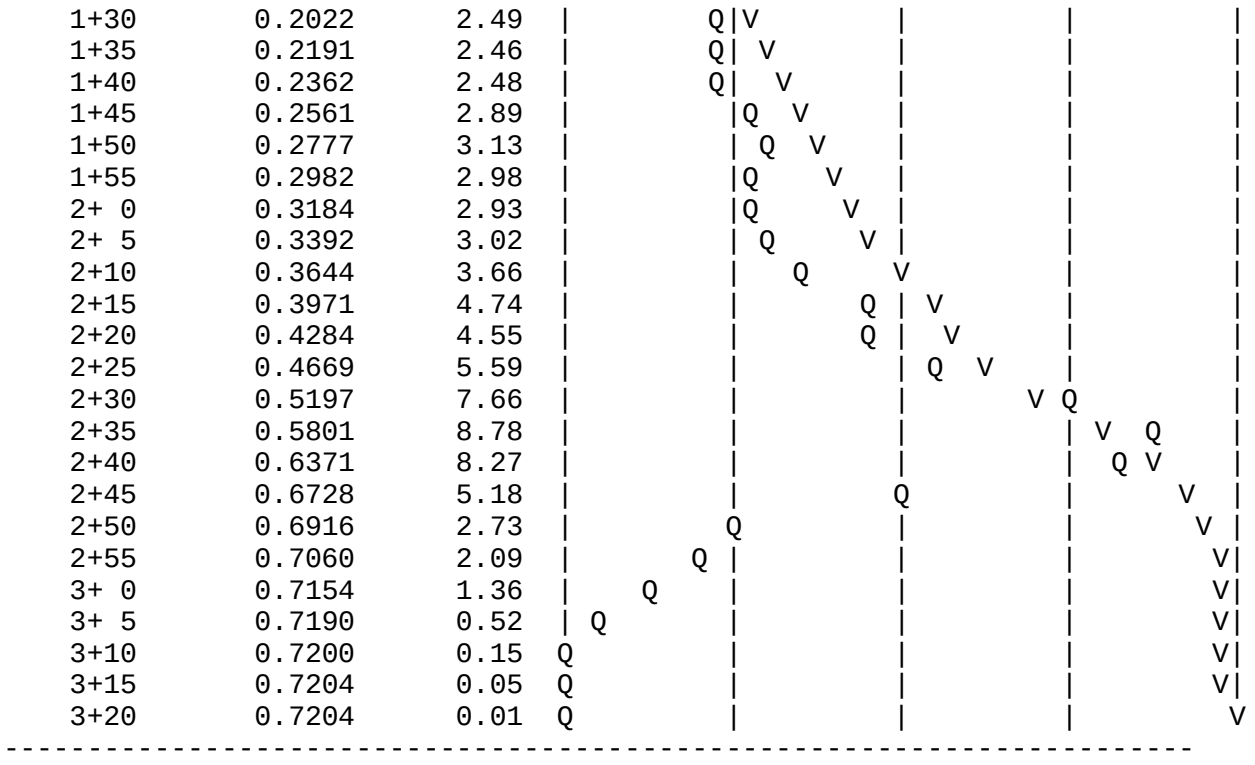
Peak flow rate of this hydrograph = 8.781(CFS)

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3 - 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	0.0035	0.51	V Q	|	|	|	|
0+10	0.0109	1.07	V Q	|	|	|	|
0+15	0.0186	1.11	|V Q	|	|	|	|
0+20	0.0271	1.23	|V Q	|	|	|	|
0+25	0.0368	1.41	| V Q	|	|	|	|
0+30	0.0475	1.56	| V Q	|	|	|	|
0+35	0.0584	1.58	| V Q	|	|	|	|
0+40	0.0694	1.60	| V Q	|	|	|	|
0+45	0.0812	1.71	| V Q	|	|	|	|
0+50	0.0923	1.62	| VQ	|	|	|	|
0+55	0.1029	1.53	| VQ	|	|	|	|
1+ 0	0.1141	1.63	| Q	|	|	|	|
1+ 5	0.1270	1.87	| Q	|	|	|	|
1+10	0.1412	2.06	| VQ	|	|	|	|
1+15	0.1558	2.11	| Q	|	|	|	|
1+20	0.1699	2.05	| QV	|	|	|	|
1+25	0.1851	2.21	| Q V	|	|	|	|


1+30 0.2022 2.49
1+35 0.2191 2.46
1+40 0.2362 2.48
1+45 0.2561 2.89
1+50 0.2777 3.13
1+55 0.2982 2.98
2+ 0 0.3184 2.93
2+ 5 0.3392 3.02
2+10 0.3644 3.66
2+15 0.3971 4.74
2+20 0.4284 4.55
2+25 0.4669 5.59
2+30 0.5197 7.66
2+35 0.5801 8.78
2+40 0.6371 8.27
2+45 0.6728 5.18
2+50 0.6916 2.73
2+55 0.7060 2.09
3+ 0 0.7154 1.36
3+ 5 0.7190 0.52
3+10 0.7200 0.15
3+15 0.7204 0.05
3+20 0.7204 0.01

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 10/24/24 File: THECOVE610.out

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6-HR

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Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.40	9.38

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	3.50	23.45

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 2.264(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.264(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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

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2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

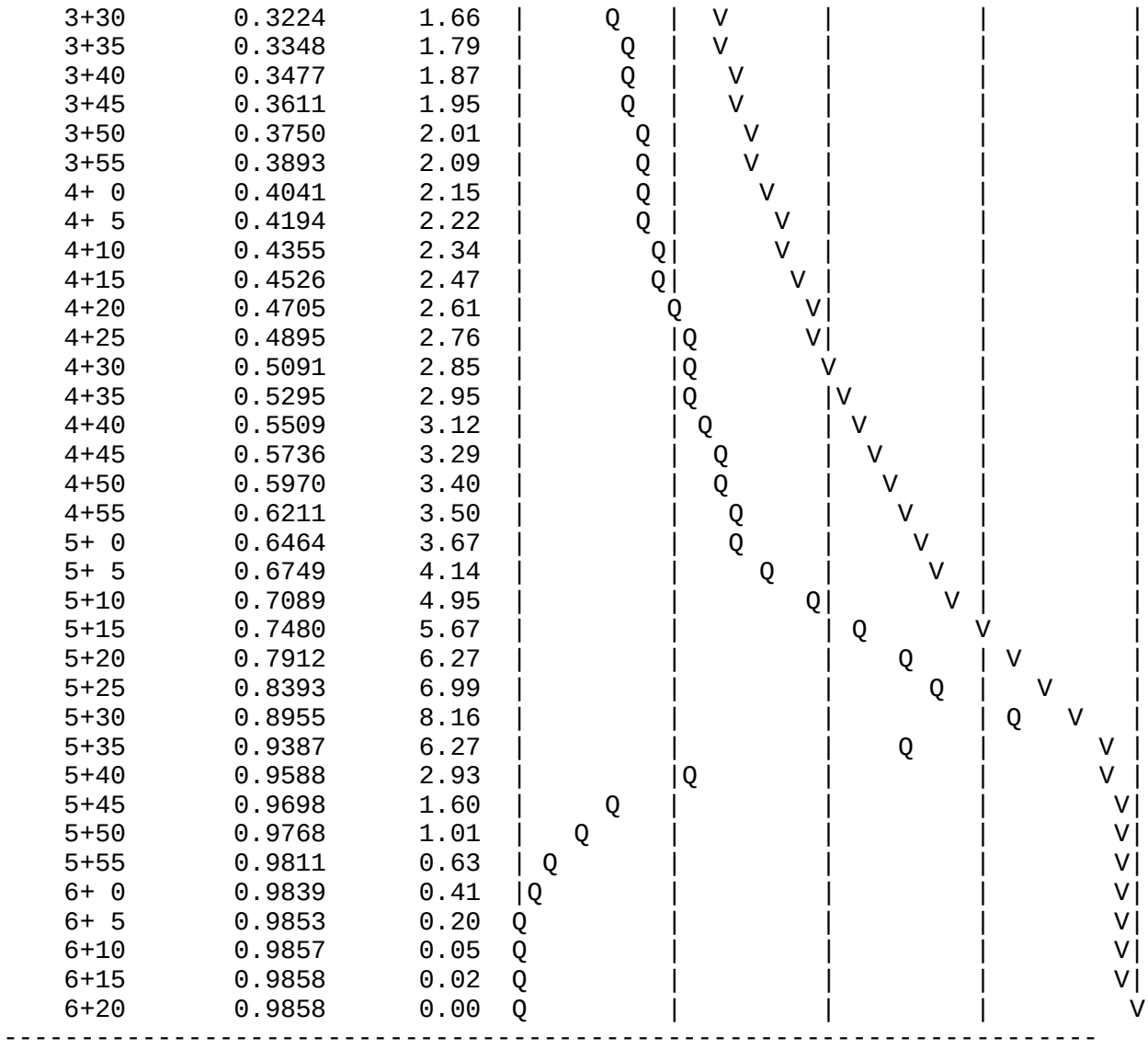
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.136	(0.143)		0.035	0.101
2	0.17	0.60	0.163	(0.143)		0.042	0.121
3	0.25	0.60	0.163	(0.143)		0.042	0.121
4	0.33	0.60	0.163	(0.143)		0.042	0.121
5	0.42	0.60	0.163	(0.143)		0.042	0.121
6	0.50	0.70	0.190	(0.143)		0.049	0.141
7	0.58	0.70	0.190	(0.143)		0.049	0.141
8	0.67	0.70	0.190	(0.143)		0.049	0.141
9	0.75	0.70	0.190	(0.143)		0.049	0.141
10	0.83	0.70	0.190	(0.143)		0.049	0.141
11	0.92	0.70	0.190	(0.143)		0.049	0.141
12	1.00	0.80	0.217	(0.143)		0.057	0.161
13	1.08	0.80	0.217	(0.143)		0.057	0.161
14	1.17	0.80	0.217	(0.143)		0.057	0.161

15	1.25	0.80	0.217	(0.143)	0.057	0.161
16	1.33	0.80	0.217	(0.143)	0.057	0.161
17	1.42	0.80	0.217	(0.143)	0.057	0.161
18	1.50	0.80	0.217	(0.143)	0.057	0.161
19	1.58	0.80	0.217	(0.143)	0.057	0.161
20	1.67	0.80	0.217	(0.143)	0.057	0.161
21	1.75	0.80	0.217	(0.143)	0.057	0.161
22	1.83	0.80	0.217	(0.143)	0.057	0.161
23	1.92	0.80	0.217	(0.143)	0.057	0.161
24	2.00	0.90	0.245	(0.143)	0.064	0.181
25	2.08	0.80	0.217	(0.143)	0.057	0.161
26	2.17	0.90	0.245	(0.143)	0.064	0.181
27	2.25	0.90	0.245	(0.143)	0.064	0.181
28	2.33	0.90	0.245	(0.143)	0.064	0.181
29	2.42	0.90	0.245	(0.143)	0.064	0.181
30	2.50	0.90	0.245	(0.143)	0.064	0.181
31	2.58	0.90	0.245	(0.143)	0.064	0.181
32	2.67	0.90	0.245	(0.143)	0.064	0.181
33	2.75	1.00	0.272	(0.143)	0.071	0.201
34	2.83	1.00	0.272	(0.143)	0.071	0.201
35	2.92	1.00	0.272	(0.143)	0.071	0.201
36	3.00	1.00	0.272	(0.143)	0.071	0.201
37	3.08	1.00	0.272	(0.143)	0.071	0.201
38	3.17	1.10	0.299	(0.143)	0.078	0.221
39	3.25	1.10	0.299	(0.143)	0.078	0.221
40	3.33	1.10	0.299	(0.143)	0.078	0.221
41	3.42	1.20	0.326	(0.143)	0.085	0.241
42	3.50	1.30	0.353	(0.143)	0.092	0.261
43	3.58	1.40	0.380	(0.143)	0.099	0.281
44	3.67	1.40	0.380	(0.143)	0.099	0.281
45	3.75	1.50	0.408	(0.143)	0.106	0.302
46	3.83	1.50	0.408	(0.143)	0.106	0.302
47	3.92	1.60	0.435	(0.143)	0.113	0.322
48	4.00	1.60	0.435	(0.143)	0.113	0.322
49	4.08	1.70	0.462	(0.143)	0.120	0.342
50	4.17	1.80	0.489	(0.143)	0.127	0.362
51	4.25	1.90	0.516	(0.143)	0.134	0.382
52	4.33	2.00	0.543	(0.143)	0.141	0.402
53	4.42	2.10	0.571	0.143	(0.148)	0.427
54	4.50	2.10	0.571	0.143	(0.148)	0.427
55	4.58	2.20	0.598	0.143	(0.155)	0.455
56	4.67	2.30	0.625	0.143	(0.162)	0.482
57	4.75	2.40	0.652	0.143	(0.170)	0.509
58	4.83	2.40	0.652	0.143	(0.170)	0.509
59	4.92	2.50	0.679	0.143	(0.177)	0.536
60	5.00	2.60	0.706	0.143	(0.184)	0.563
61	5.08	3.10	0.842	0.143	(0.219)	0.699
62	5.17	3.60	0.978	0.143	(0.254)	0.835
63	5.25	3.90	1.060	0.143	(0.275)	0.916
64	5.33	4.20	1.141	0.143	(0.297)	0.998
65	5.42	4.70	1.277	0.143	(0.332)	1.134
66	5.50	5.60	1.521	0.143	(0.396)	1.378
67	5.58	1.90	0.516	(0.143)	0.134	0.382
68	5.67	0.90	0.245	(0.143)	0.064	0.181
69	5.75	0.60	0.163	(0.143)	0.042	0.121
70	5.83	0.50	0.136	(0.143)	0.035	0.101
71	5.92	0.30	0.082	(0.143)	0.021	0.060
72	6.00	0.20	0.054	(0.143)	0.014	0.040
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	21.2

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   Flood volume = Effective rainfall      1.77(In)
    times area       6.7(Ac.)/[(In)/(Ft.)] =       1.0(Ac.Ft)
   Total soil loss =      0.50(In)
   Total soil loss =     0.278(Ac.Ft)
   Total rainfall =      2.26(In)
   Flood volume =       42942.4 Cubic Feet
   Total soil loss =       12118.0 Cubic Feet
   ----------------------------------------------------------------------
    Peak flow rate of this hydrograph =      8.155(CFS)
   ----------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0019      0.28  VQ        |         |         |         |
  0+10       0.0063      0.63  V Q       |         |         |         |
  0+15       0.0115      0.76  V  Q      |         |         |         |
  0+20       0.0170      0.80  V  Q      |         |         |         |
  0+25       0.0226      0.81  V  Q      |         |         |         |
  0+30       0.0285      0.87  |V Q      |         |         |         |
  0+35       0.0350      0.93  |V Q      |         |         |         |
  0+40       0.0415      0.94  |V Q      |         |         |         |
  0+45       0.0480      0.95  |V Q      |         |         |         |
  0+50       0.0545      0.95  | VQ      |         |         |         |
  0+55       0.0611      0.95  | VQ      |         |         |         |
  1+ 0       0.0680      1.01  | V Q     |         |         |         |
  1+ 5       0.0754      1.07  |  VQ     |         |         |         |
  1+10       0.0828      1.08  |  VQ     |         |         |         |
  1+15       0.0903      1.08  |  VQ     |         |         |         |
  1+20       0.0977      1.09  |  VQ     |         |         |         |
  1+25       0.1052      1.09  |   Q     |         |         |         |
  1+30       0.1127      1.09  |   Q     |         |         |         |
  1+35       0.1202      1.09  |   Q     |         |         |         |
  1+40       0.1277      1.09  |   QV    |         |         |         |
  1+45       0.1351      1.09  |   QV    |         |         |         |
  1+50       0.1426      1.09  |   QV    |         |         |         |
  1+55       0.1501      1.09  |   Q V   |         |         |         |
  2+ 0       0.1580      1.14  |   Q V   |         |         |         |
  2+ 5       0.1659      1.15  |   Q V   |         |         |         |
  2+10       0.1738      1.15  |   Q  V  |         |         |         |
  2+15       0.1821      1.21  |   Q  V  |         |         |         |
  2+20       0.1905      1.22  |   Q  V  |         |         |         |
  2+25       0.1989      1.22  |   Q   V |         |         |         |
  2+30       0.2073      1.22  |   Q   V |         |         |         |
  2+35       0.2158      1.22  |   Q   V |         |         |         |
  2+40       0.2242      1.22  |   Q    V|         |         |         |
  2+45       0.2330      1.28  |    Q   V|         |         |         |
  2+50       0.2422      1.34  |    Q   V|         |         |         |
  2+55       0.2515      1.35  |    Q    V         |         |         |
  3+ 0       0.2608      1.36  |    Q    V         |         |         |
  3+ 5       0.2702      1.36  |    Q    V         |         |         |
  3+10       0.2799      1.41  |    Q    |V        |         |         |
  3+15       0.2901      1.47  |    Q    |V        |         |         |
  3+20       0.3003      1.49  |    Q    | V       |         |         |
  3+25       0.3110      1.55  |     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 10/24/24 File: THECOVE2410.out

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RCFC & WCD Manual date - April 1978

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English Units used in output format

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100-YR
24-HR

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Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
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40% of lag time = 1.08 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]
6.70	2.50	16.75

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	6.00	40.20

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.940(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.940(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.254)		0.008	0.023
2	0.17	0.07	0.032	(0.253)		0.008	0.023
3	0.25	0.07	0.032	(0.252)		0.008	0.023
4	0.33	0.10	0.047	(0.251)		0.012	0.035
5	0.42	0.10	0.047	(0.250)		0.012	0.035
6	0.50	0.10	0.047	(0.249)		0.012	0.035
7	0.58	0.10	0.047	(0.248)		0.012	0.035
8	0.67	0.10	0.047	(0.247)		0.012	0.035
9	0.75	0.10	0.047	(0.246)		0.012	0.035
10	0.83	0.13	0.063	(0.245)		0.016	0.047
11	0.92	0.13	0.063	(0.244)		0.016	0.047
12	1.00	0.13	0.063	(0.243)		0.016	0.047
13	1.08	0.10	0.047	(0.242)		0.012	0.035
14	1.17	0.10	0.047	(0.241)		0.012	0.035

15	1.25	0.10	0.047	(0.240)	0.012	0.035
16	1.33	0.10	0.047	(0.239)	0.012	0.035
17	1.42	0.10	0.047	(0.238)	0.012	0.035
18	1.50	0.10	0.047	(0.237)	0.012	0.035
19	1.58	0.10	0.047	(0.236)	0.012	0.035
20	1.67	0.10	0.047	(0.235)	0.012	0.035
21	1.75	0.10	0.047	(0.234)	0.012	0.035
22	1.83	0.13	0.063	(0.233)	0.016	0.047
23	1.92	0.13	0.063	(0.232)	0.016	0.047
24	2.00	0.13	0.063	(0.231)	0.016	0.047
25	2.08	0.13	0.063	(0.231)	0.016	0.047
26	2.17	0.13	0.063	(0.230)	0.016	0.047
27	2.25	0.13	0.063	(0.229)	0.016	0.047
28	2.33	0.13	0.063	(0.228)	0.016	0.047
29	2.42	0.13	0.063	(0.227)	0.016	0.047
30	2.50	0.13	0.063	(0.226)	0.016	0.047
31	2.58	0.17	0.079	(0.225)	0.020	0.058
32	2.67	0.17	0.079	(0.224)	0.020	0.058
33	2.75	0.17	0.079	(0.223)	0.020	0.058
34	2.83	0.17	0.079	(0.222)	0.020	0.058
35	2.92	0.17	0.079	(0.221)	0.020	0.058
36	3.00	0.17	0.079	(0.220)	0.020	0.058
37	3.08	0.17	0.079	(0.219)	0.020	0.058
38	3.17	0.17	0.079	(0.219)	0.020	0.058
39	3.25	0.17	0.079	(0.218)	0.020	0.058
40	3.33	0.17	0.079	(0.217)	0.020	0.058
41	3.42	0.17	0.079	(0.216)	0.020	0.058
42	3.50	0.17	0.079	(0.215)	0.020	0.058
43	3.58	0.17	0.079	(0.214)	0.020	0.058
44	3.67	0.17	0.079	(0.213)	0.020	0.058
45	3.75	0.17	0.079	(0.212)	0.020	0.058
46	3.83	0.20	0.095	(0.211)	0.025	0.070
47	3.92	0.20	0.095	(0.210)	0.025	0.070
48	4.00	0.20	0.095	(0.210)	0.025	0.070
49	4.08	0.20	0.095	(0.209)	0.025	0.070
50	4.17	0.20	0.095	(0.208)	0.025	0.070
51	4.25	0.20	0.095	(0.207)	0.025	0.070
52	4.33	0.23	0.110	(0.206)	0.029	0.082
53	4.42	0.23	0.110	(0.205)	0.029	0.082
54	4.50	0.23	0.110	(0.204)	0.029	0.082
55	4.58	0.23	0.110	(0.203)	0.029	0.082
56	4.67	0.23	0.110	(0.202)	0.029	0.082
57	4.75	0.23	0.110	(0.202)	0.029	0.082
58	4.83	0.27	0.126	(0.201)	0.033	0.093
59	4.92	0.27	0.126	(0.200)	0.033	0.093
60	5.00	0.27	0.126	(0.199)	0.033	0.093
61	5.08	0.20	0.095	(0.198)	0.025	0.070
62	5.17	0.20	0.095	(0.197)	0.025	0.070
63	5.25	0.20	0.095	(0.196)	0.025	0.070
64	5.33	0.23	0.110	(0.196)	0.029	0.082
65	5.42	0.23	0.110	(0.195)	0.029	0.082
66	5.50	0.23	0.110	(0.194)	0.029	0.082
67	5.58	0.27	0.126	(0.193)	0.033	0.093
68	5.67	0.27	0.126	(0.192)	0.033	0.093
69	5.75	0.27	0.126	(0.191)	0.033	0.093
70	5.83	0.27	0.126	(0.190)	0.033	0.093
71	5.92	0.27	0.126	(0.190)	0.033	0.093
72	6.00	0.27	0.126	(0.189)	0.033	0.093
73	6.08	0.30	0.142	(0.188)	0.037	0.105
74	6.17	0.30	0.142	(0.187)	0.037	0.105

75	6.25	0.30	0.142	(0.186)	0.037	0.105
76	6.33	0.30	0.142	(0.185)	0.037	0.105
77	6.42	0.30	0.142	(0.185)	0.037	0.105
78	6.50	0.30	0.142	(0.184)	0.037	0.105
79	6.58	0.33	0.158	(0.183)	0.041	0.117
80	6.67	0.33	0.158	(0.182)	0.041	0.117
81	6.75	0.33	0.158	(0.181)	0.041	0.117
82	6.83	0.33	0.158	(0.181)	0.041	0.117
83	6.92	0.33	0.158	(0.180)	0.041	0.117
84	7.00	0.33	0.158	(0.179)	0.041	0.117
85	7.08	0.33	0.158	(0.178)	0.041	0.117
86	7.17	0.33	0.158	(0.177)	0.041	0.117
87	7.25	0.33	0.158	(0.176)	0.041	0.117
88	7.33	0.37	0.173	(0.176)	0.045	0.128
89	7.42	0.37	0.173	(0.175)	0.045	0.128
90	7.50	0.37	0.173	(0.174)	0.045	0.128
91	7.58	0.40	0.189	(0.173)	0.049	0.140
92	7.67	0.40	0.189	(0.172)	0.049	0.140
93	7.75	0.40	0.189	(0.172)	0.049	0.140
94	7.83	0.43	0.205	(0.171)	0.053	0.152
95	7.92	0.43	0.205	(0.170)	0.053	0.152
96	8.00	0.43	0.205	(0.169)	0.053	0.152
97	8.08	0.50	0.236	(0.168)	0.061	0.175
98	8.17	0.50	0.236	(0.168)	0.061	0.175
99	8.25	0.50	0.236	(0.167)	0.061	0.175
100	8.33	0.50	0.236	(0.166)	0.061	0.175
101	8.42	0.50	0.236	(0.165)	0.061	0.175
102	8.50	0.50	0.236	(0.165)	0.061	0.175
103	8.58	0.53	0.252	(0.164)	0.066	0.187
104	8.67	0.53	0.252	(0.163)	0.066	0.187
105	8.75	0.53	0.252	(0.162)	0.066	0.187
106	8.83	0.57	0.268	(0.162)	0.070	0.198
107	8.92	0.57	0.268	(0.161)	0.070	0.198
108	9.00	0.57	0.268	(0.160)	0.070	0.198
109	9.08	0.63	0.299	(0.159)	0.078	0.222
110	9.17	0.63	0.299	(0.158)	0.078	0.222
111	9.25	0.63	0.299	(0.158)	0.078	0.222
112	9.33	0.67	0.315	(0.157)	0.082	0.233
113	9.42	0.67	0.315	(0.156)	0.082	0.233
114	9.50	0.67	0.315	(0.155)	0.082	0.233
115	9.58	0.70	0.331	(0.155)	0.086	0.245
116	9.67	0.70	0.331	(0.154)	0.086	0.245
117	9.75	0.70	0.331	(0.153)	0.086	0.245
118	9.83	0.73	0.347	(0.153)	0.090	0.257
119	9.92	0.73	0.347	(0.152)	0.090	0.257
120	10.00	0.73	0.347	(0.151)	0.090	0.257
121	10.08	0.50	0.236	(0.150)	0.061	0.175
122	10.17	0.50	0.236	(0.150)	0.061	0.175
123	10.25	0.50	0.236	(0.149)	0.061	0.175
124	10.33	0.50	0.236	(0.148)	0.061	0.175
125	10.42	0.50	0.236	(0.147)	0.061	0.175
126	10.50	0.50	0.236	(0.147)	0.061	0.175
127	10.58	0.67	0.315	(0.146)	0.082	0.233
128	10.67	0.67	0.315	(0.145)	0.082	0.233
129	10.75	0.67	0.315	(0.145)	0.082	0.233
130	10.83	0.67	0.315	(0.144)	0.082	0.233
131	10.92	0.67	0.315	(0.143)	0.082	0.233
132	11.00	0.67	0.315	(0.142)	0.082	0.233
133	11.08	0.63	0.299	(0.142)	0.078	0.222
134	11.17	0.63	0.299	(0.141)	0.078	0.222

135	11.25	0.63	0.299	(0.140)	0.078	0.222
136	11.33	0.63	0.299	(0.140)	0.078	0.222
137	11.42	0.63	0.299	(0.139)	0.078	0.222
138	11.50	0.63	0.299	(0.138)	0.078	0.222
139	11.58	0.57	0.268	(0.138)	0.070	0.198
140	11.67	0.57	0.268	(0.137)	0.070	0.198
141	11.75	0.57	0.268	(0.136)	0.070	0.198
142	11.83	0.60	0.284	(0.136)	0.074	0.210
143	11.92	0.60	0.284	(0.135)	0.074	0.210
144	12.00	0.60	0.284	(0.134)	0.074	0.210
145	12.08	0.83	0.394	(0.134)	0.102	0.292
146	12.17	0.83	0.394	(0.133)	0.102	0.292
147	12.25	0.83	0.394	(0.132)	0.102	0.292
148	12.33	0.87	0.410	(0.132)	0.107	0.303
149	12.42	0.87	0.410	(0.131)	0.107	0.303
150	12.50	0.87	0.410	(0.130)	0.107	0.303
151	12.58	0.93	0.441	(0.130)	0.115	0.327
152	12.67	0.93	0.441	(0.129)	0.115	0.327
153	12.75	0.93	0.441	(0.128)	0.115	0.327
154	12.83	0.97	0.457	(0.128)	0.119	0.338
155	12.92	0.97	0.457	(0.127)	0.119	0.338
156	13.00	0.97	0.457	(0.126)	0.119	0.338
157	13.08	1.13	0.536	0.126	(0.139)	0.410
158	13.17	1.13	0.536	0.125	(0.139)	0.411
159	13.25	1.13	0.536	0.124	(0.139)	0.411
160	13.33	1.13	0.536	0.124	(0.139)	0.412
161	13.42	1.13	0.536	0.123	(0.139)	0.413
162	13.50	1.13	0.536	0.123	(0.139)	0.413
163	13.58	0.77	0.362	(0.122)	0.094	0.268
164	13.67	0.77	0.362	(0.121)	0.094	0.268
165	13.75	0.77	0.362	(0.121)	0.094	0.268
166	13.83	0.77	0.362	(0.120)	0.094	0.268
167	13.92	0.77	0.362	(0.119)	0.094	0.268
168	14.00	0.77	0.362	(0.119)	0.094	0.268
169	14.08	0.90	0.426	(0.118)	0.111	0.315
170	14.17	0.90	0.426	(0.118)	0.111	0.315
171	14.25	0.90	0.426	(0.117)	0.111	0.315
172	14.33	0.87	0.410	(0.116)	0.107	0.303
173	14.42	0.87	0.410	(0.116)	0.107	0.303
174	14.50	0.87	0.410	(0.115)	0.107	0.303
175	14.58	0.87	0.410	(0.115)	0.107	0.303
176	14.67	0.87	0.410	(0.114)	0.107	0.303
177	14.75	0.87	0.410	(0.113)	0.107	0.303
178	14.83	0.83	0.394	(0.113)	0.102	0.292
179	14.92	0.83	0.394	(0.112)	0.102	0.292
180	15.00	0.83	0.394	(0.112)	0.102	0.292
181	15.08	0.80	0.378	(0.111)	0.098	0.280
182	15.17	0.80	0.378	(0.111)	0.098	0.280
183	15.25	0.80	0.378	(0.110)	0.098	0.280
184	15.33	0.77	0.362	(0.109)	0.094	0.268
185	15.42	0.77	0.362	(0.109)	0.094	0.268
186	15.50	0.77	0.362	(0.108)	0.094	0.268
187	15.58	0.63	0.299	(0.108)	0.078	0.222
188	15.67	0.63	0.299	(0.107)	0.078	0.222
189	15.75	0.63	0.299	(0.107)	0.078	0.222
190	15.83	0.63	0.299	(0.106)	0.078	0.222
191	15.92	0.63	0.299	(0.106)	0.078	0.222
192	16.00	0.63	0.299	(0.105)	0.078	0.222
193	16.08	0.13	0.063	(0.104)	0.016	0.047
194	16.17	0.13	0.063	(0.104)	0.016	0.047

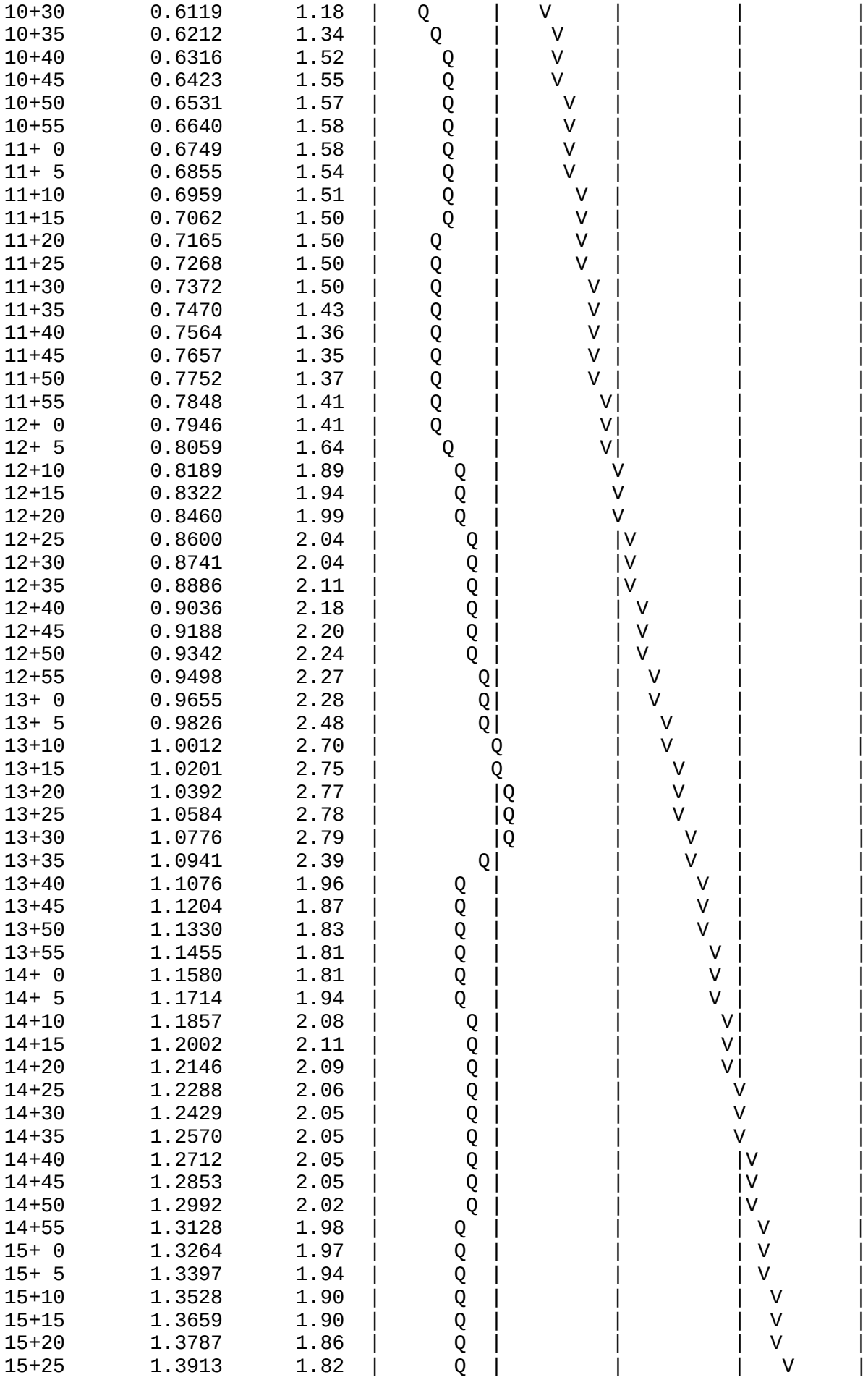
195	16.25	0.13	0.063	(0.103)	0.016	0.047
196	16.33	0.13	0.063	(0.103)	0.016	0.047
197	16.42	0.13	0.063	(0.102)	0.016	0.047
198	16.50	0.13	0.063	(0.102)	0.016	0.047
199	16.58	0.10	0.047	(0.101)	0.012	0.035
200	16.67	0.10	0.047	(0.101)	0.012	0.035
201	16.75	0.10	0.047	(0.100)	0.012	0.035
202	16.83	0.10	0.047	(0.100)	0.012	0.035
203	16.92	0.10	0.047	(0.099)	0.012	0.035
204	17.00	0.10	0.047	(0.099)	0.012	0.035
205	17.08	0.17	0.079	(0.098)	0.020	0.058
206	17.17	0.17	0.079	(0.098)	0.020	0.058
207	17.25	0.17	0.079	(0.097)	0.020	0.058
208	17.33	0.17	0.079	(0.097)	0.020	0.058
209	17.42	0.17	0.079	(0.096)	0.020	0.058
210	17.50	0.17	0.079	(0.096)	0.020	0.058
211	17.58	0.17	0.079	(0.095)	0.020	0.058
212	17.67	0.17	0.079	(0.095)	0.020	0.058
213	17.75	0.17	0.079	(0.094)	0.020	0.058
214	17.83	0.13	0.063	(0.094)	0.016	0.047
215	17.92	0.13	0.063	(0.093)	0.016	0.047
216	18.00	0.13	0.063	(0.093)	0.016	0.047
217	18.08	0.13	0.063	(0.093)	0.016	0.047
218	18.17	0.13	0.063	(0.092)	0.016	0.047
219	18.25	0.13	0.063	(0.092)	0.016	0.047
220	18.33	0.13	0.063	(0.091)	0.016	0.047
221	18.42	0.13	0.063	(0.091)	0.016	0.047
222	18.50	0.13	0.063	(0.090)	0.016	0.047
223	18.58	0.10	0.047	(0.090)	0.012	0.035
224	18.67	0.10	0.047	(0.089)	0.012	0.035
225	18.75	0.10	0.047	(0.089)	0.012	0.035
226	18.83	0.07	0.032	(0.089)	0.008	0.023
227	18.92	0.07	0.032	(0.088)	0.008	0.023
228	19.00	0.07	0.032	(0.088)	0.008	0.023
229	19.08	0.10	0.047	(0.087)	0.012	0.035
230	19.17	0.10	0.047	(0.087)	0.012	0.035
231	19.25	0.10	0.047	(0.087)	0.012	0.035
232	19.33	0.13	0.063	(0.086)	0.016	0.047
233	19.42	0.13	0.063	(0.086)	0.016	0.047
234	19.50	0.13	0.063	(0.085)	0.016	0.047
235	19.58	0.10	0.047	(0.085)	0.012	0.035
236	19.67	0.10	0.047	(0.085)	0.012	0.035
237	19.75	0.10	0.047	(0.084)	0.012	0.035
238	19.83	0.07	0.032	(0.084)	0.008	0.023
239	19.92	0.07	0.032	(0.083)	0.008	0.023
240	20.00	0.07	0.032	(0.083)	0.008	0.023
241	20.08	0.10	0.047	(0.083)	0.012	0.035
242	20.17	0.10	0.047	(0.082)	0.012	0.035
243	20.25	0.10	0.047	(0.082)	0.012	0.035
244	20.33	0.10	0.047	(0.082)	0.012	0.035
245	20.42	0.10	0.047	(0.081)	0.012	0.035
246	20.50	0.10	0.047	(0.081)	0.012	0.035
247	20.58	0.10	0.047	(0.081)	0.012	0.035
248	20.67	0.10	0.047	(0.080)	0.012	0.035
249	20.75	0.10	0.047	(0.080)	0.012	0.035
250	20.83	0.07	0.032	(0.080)	0.008	0.023
251	20.92	0.07	0.032	(0.079)	0.008	0.023
252	21.00	0.07	0.032	(0.079)	0.008	0.023
253	21.08	0.10	0.047	(0.079)	0.012	0.035
254	21.17	0.10	0.047	(0.078)	0.012	0.035

```
255  21.25     0.10      0.047       (  0.078)       0.012        0.035
256  21.33     0.07      0.032       (  0.078)       0.008        0.023
257  21.42     0.07      0.032       (  0.077)       0.008        0.023
258  21.50     0.07      0.032       (  0.077)       0.008        0.023
259  21.58     0.10      0.047       (  0.077)       0.012        0.035
260  21.67     0.10      0.047       (  0.077)       0.012        0.035
261  21.75     0.10      0.047       (  0.076)       0.012        0.035
262  21.83     0.07      0.032       (  0.076)       0.008        0.023
263  21.92     0.07      0.032       (  0.076)       0.008        0.023
264  22.00     0.07      0.032       (  0.076)       0.008        0.023
265  22.08     0.10      0.047       (  0.075)       0.012        0.035
266  22.17     0.10      0.047       (  0.075)       0.012        0.035
267  22.25     0.10      0.047       (  0.075)       0.012        0.035
268  22.33     0.07      0.032       (  0.075)       0.008        0.023
269  22.42     0.07      0.032       (  0.074)       0.008        0.023
270  22.50     0.07      0.032       (  0.074)       0.008        0.023
271  22.58     0.07      0.032       (  0.074)       0.008        0.023
272  22.67     0.07      0.032       (  0.074)       0.008        0.023
273  22.75     0.07      0.032       (  0.073)       0.008        0.023
274  22.83     0.07      0.032       (  0.073)       0.008        0.023
275  22.92     0.07      0.032       (  0.073)       0.008        0.023
276  23.00     0.07      0.032       (  0.073)       0.008        0.023
277  23.08     0.07      0.032       (  0.073)       0.008        0.023
278  23.17     0.07      0.032       (  0.073)       0.008        0.023
279  23.25     0.07      0.032       (  0.072)       0.008        0.023
280  23.33     0.07      0.032       (  0.072)       0.008        0.023
281  23.42     0.07      0.032       (  0.072)       0.008        0.023
282  23.50     0.07      0.032       (  0.072)       0.008        0.023
283  23.58     0.07      0.032       (  0.072)       0.008        0.023
284  23.67     0.07      0.032       (  0.072)       0.008        0.023
285  23.75     0.07      0.032       (  0.072)       0.008        0.023
286  23.83     0.07      0.032       (  0.072)       0.008        0.023
287  23.92     0.07      0.032       (  0.072)       0.008        0.023
288  24.00     0.07      0.032       (  0.072)       0.008        0.023
          (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    35.1
     Flood volume = Effective rainfall      2.92(In)
      times area       6.7(Ac.)/[(In)/(Ft.)] =       1.6(Ac.Ft)
     Total soil loss =      1.02(In)
     Total soil loss =     0.568(Ac.Ft)
     Total rainfall =      3.94(In)
     Flood volume =       71093.4 Cubic Feet
     Total soil loss =       24728.4 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      2.789(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       0.0004      0.06  Q         |         |         |         |
   0+10       0.0014      0.13  Q         |         |         |         |
   0+15       0.0024      0.15  Q         |         |         |         |
   0+20       0.0037      0.19  Q         |         |         |         |
   0+25       0.0052      0.22  Q         |         |         |         |
```

0+30	0.0068	0.23	Q	|	|	|	|
0+35	0.0084	0.24	Q	|	|	|	|
0+40	0.0101	0.24	Q	|	|	|	|
0+45	0.0117	0.24	Q	|	|	|	|
0+50	0.0135	0.27	VQ	|	|	|	|
0+55	0.0156	0.30	VQ	|	|	|	|
1+ 0	0.0178	0.31	VQ	|	|	|	|
1+ 5	0.0197	0.28	VQ	|	|	|	|
1+10	0.0214	0.25	Q	|	|	|	|
1+15	0.0231	0.24	Q	|	|	|	|
1+20	0.0247	0.24	Q	|	|	|	|
1+25	0.0263	0.24	Q	|	|	|	|
1+30	0.0280	0.24	Q	|	|	|	|
1+35	0.0296	0.24	Q	|	|	|	|
1+40	0.0312	0.24	Q	|	|	|	|
1+45	0.0329	0.24	Q	|	|	|	|
1+50	0.0347	0.27	VQ	|	|	|	|
1+55	0.0368	0.30	VQ	|	|	|	|
2+ 0	0.0389	0.31	VQ	|	|	|	|
2+ 5	0.0411	0.31	|Q	|	|	|	|
2+10	0.0433	0.32	|Q	|	|	|	|
2+15	0.0454	0.32	|Q	|	|	|	|
2+20	0.0476	0.32	|Q	|	|	|	|
2+25	0.0498	0.32	|Q	|	|	|	|
2+30	0.0520	0.32	|Q	|	|	|	|
2+35	0.0543	0.35	|Q	|	|	|	|
2+40	0.0570	0.38	|Q	|	|	|	|
2+45	0.0597	0.39	|Q	|	|	|	|
2+50	0.0624	0.39	|Q	|	|	|	|
2+55	0.0651	0.39	|Q	|	|	|	|
3+ 0	0.0678	0.39	|Q	|	|	|	|
3+ 5	0.0705	0.39	|Q	|	|	|	|
3+10	0.0732	0.39	|Q	|	|	|	|
3+15	0.0759	0.39	|Q	|	|	|	|
3+20	0.0786	0.39	|Q	|	|	|	|
3+25	0.0814	0.39	|Q	|	|	|	|
3+30	0.0841	0.39	|QV	|	|	|	|
3+35	0.0868	0.39	|QV	|	|	|	|
3+40	0.0895	0.39	|QV	|	|	|	|
3+45	0.0922	0.39	|QV	|	|	|	|
3+50	0.0951	0.43	|QV	|	|	|	|
3+55	0.0983	0.46	|QV	|	|	|	|
4+ 0	0.1015	0.47	|QV	|	|	|	|
4+ 5	0.1048	0.47	|QV	|	|	|	|
4+10	0.1080	0.47	|QV	|	|	|	|
4+15	0.1113	0.47	|QV	|	|	|	|
4+20	0.1148	0.50	| Q	|	|	|	|
4+25	0.1185	0.54	| Q	|	|	|	|
4+30	0.1223	0.55	| Q	|	|	|	|
4+35	0.1260	0.55	| QV	|	|	|	|
4+40	0.1298	0.55	| QV	|	|	|	|
4+45	0.1336	0.55	| QV	|	|	|	|
4+50	0.1377	0.58	| QV	|	|	|	|
4+55	0.1419	0.62	| QV	|	|	|	|
5+ 0	0.1462	0.63	| QV	|	|	|	|
5+ 5	0.1501	0.56	| QV	|	|	|	|
5+10	0.1535	0.50	|Q V	|	|	|	|
5+15	0.1569	0.48	|Q V	|	|	|	|
5+20	0.1604	0.51	| QV	|	|	|	|
5+25	0.1641	0.54	| Q V	|	|	|	|

5+30	0.1678	0.55	Q V				
5+35	0.1718	0.58	Q V				
5+40	0.1761	0.62	Q V				
5+45	0.1804	0.63	Q V				
5+50	0.1848	0.63	Q V				
5+55	0.1891	0.63	Q V				
6+ 0	0.1934	0.63	Q V				
6+ 5	0.1980	0.66	Q V				
6+10	0.2028	0.70	Q V				
6+15	0.2077	0.70	Q V				
6+20	0.2125	0.71	Q V				
6+25	0.2174	0.71	Q V				
6+30	0.2223	0.71	Q V				
6+35	0.2274	0.74	Q V				
6+40	0.2327	0.78	Q V				
6+45	0.2381	0.78	Q V				
6+50	0.2436	0.79	Q V				
6+55	0.2490	0.79	Q V				
7+ 0	0.2544	0.79	Q V				
7+ 5	0.2598	0.79	Q V				
7+10	0.2653	0.79	Q V				
7+15	0.2707	0.79	Q V				
7+20	0.2763	0.82	Q V				
7+25	0.2822	0.85	Q V				
7+30	0.2882	0.86	Q V				
7+35	0.2943	0.90	Q V				
7+40	0.3008	0.93	Q V				
7+45	0.3073	0.94	Q V				
7+50	0.3140	0.98	Q V				
7+55	0.3209	1.01	Q V				
8+ 0	0.3280	1.02	Q V				
8+ 5	0.3355	1.09	Q V				
8+10	0.3434	1.16	Q V				
8+15	0.3515	1.17	Q V				
8+20	0.3596	1.18	Q V				
8+25	0.3678	1.18	Q V				
8+30	0.3759	1.18	Q V				
8+35	0.3843	1.21	Q V				
8+40	0.3929	1.25	Q V				
8+45	0.4015	1.26	Q V				
8+50	0.4104	1.29	Q V				
8+55	0.4196	1.33	Q V				
9+ 0	0.4288	1.34	Q V				
9+ 5	0.4384	1.40	Q V				
9+10	0.4486	1.47	Q V				
9+15	0.4588	1.49	Q V				
9+20	0.4693	1.53	Q V				
9+25	0.4801	1.56	Q V				
9+30	0.4909	1.57	Q V				
9+35	0.5020	1.61	Q V				
9+40	0.5133	1.64	Q V				
9+45	0.5247	1.65	Q V				
9+50	0.5363	1.69	Q V				
9+55	0.5481	1.72	Q V				
10+ 0	0.5600	1.73	Q V				
10+ 5	0.5704	1.51	Q V				
10+10	0.5791	1.26	Q V				
10+15	0.5875	1.21	Q V				
10+20	0.5957	1.19	Q V				
10+25	0.6038	1.18	Q V				



```
15+30       1.4038      1.82  |      Q  |         |         |   V     |
15+35       1.4154      1.69  |     Q   |         |         |   V     |
15+40       1.4260      1.54  |     Q   |         |         |   V     |
15+45       1.4365      1.51  |     Q   |         |         |    V    |
15+50       1.4468      1.50  |     Q   |         |         |    V    |
15+55       1.4571      1.50  |    Q    |         |         |    V    |
16+ 0       1.4674      1.50  |    Q    |         |         |    V    |
16+ 5       1.4744      1.02  |   Q     |         |         |     V   |
16+10       1.4778      0.49  |Q        |         |         |     V   |
16+15       1.4804      0.38  |Q        |         |         |     V   |
16+20       1.4827      0.33  |Q        |         |         |     V   |
16+25       1.4849      0.32  |Q        |         |         |     V   |
16+30       1.4871      0.32  |Q        |         |         |     V   |
16+35       1.4890      0.28  |Q        |         |         |     V   |
16+40       1.4907      0.25  Q         |         |         |     V   |
16+45       1.4924      0.24  Q         |         |         |     V   |
16+50       1.4940      0.24  Q         |         |         |     V   |
16+55       1.4956      0.24  Q         |         |         |     V   |
17+ 0       1.4973      0.24  Q         |         |         |     V   |
17+ 5       1.4993      0.30  |Q        |         |         |     V   |
17+10       1.5019      0.37  |Q        |         |         |     V   |
17+15       1.5045      0.39  |Q        |         |         |     V   |
17+20       1.5072      0.39  |Q        |         |         |     V   |
17+25       1.5100      0.39  |Q        |         |         |      V  |
17+30       1.5127      0.39  |Q        |         |         |      V  |
17+35       1.5154      0.39  |Q        |         |         |      V  |
17+40       1.5181      0.39  |Q        |         |         |      V  |
17+45       1.5208      0.39  |Q        |         |         |      V  |
17+50       1.5233      0.36  |Q        |         |         |      V  |
17+55       1.5256      0.33  |Q        |         |         |      V  |
18+ 0       1.5278      0.32  |Q        |         |         |      V  |
18+ 5       1.5299      0.32  |Q        |         |         |      V  |
18+10       1.5321      0.32  |Q        |         |         |      V  |
18+15       1.5343      0.32  |Q        |         |         |      V  |
18+20       1.5364      0.32  |Q        |         |         |      V  |
18+25       1.5386      0.32  |Q        |         |         |      V  |
18+30       1.5408      0.32  |Q        |         |         |      V  |
18+35       1.5427      0.28  |Q        |         |         |      V  |
18+40       1.5444      0.25  Q         |         |         |      V  |
18+45       1.5461      0.24  Q         |         |         |      V  |
18+50       1.5475      0.21  Q         |         |         |      V  |
18+55       1.5487      0.17  Q         |         |         |      V  |
19+ 0       1.5498      0.16  Q         |         |         |      V  |
19+ 5       1.5511      0.19  Q         |         |         |       V |
19+10       1.5527      0.22  Q         |         |         |       V |
19+15       1.5543      0.23  Q         |         |         |       V |
19+20       1.5561      0.27  |Q        |         |         |       V |
19+25       1.5582      0.30  |Q        |         |         |       V |
19+30       1.5603      0.31  |Q        |         |         |       V |
19+35       1.5623      0.28  |Q        |         |         |       V |
19+40       1.5640      0.25  Q         |         |         |       V |
19+45       1.5656      0.24  Q         |         |         |       V |
19+50       1.5670      0.21  Q         |         |         |       V |
19+55       1.5682      0.17  Q         |         |         |       V |
20+ 0       1.5693      0.16  Q         |         |         |       V |
20+ 5       1.5706      0.19  Q         |         |         |       V |
20+10       1.5722      0.22  Q         |         |         |       V |
20+15       1.5738      0.23  Q         |         |         |       V |
20+20       1.5754      0.24  Q         |         |         |       V |
20+25       1.5770      0.24  Q         |         |         |       V |
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  20+30      1.5787     0.24  Q          |          |          |        V |
  20+35      1.5803     0.24  Q          |          |          |        V |
  20+40      1.5819     0.24  Q          |          |          |        V |
  20+45      1.5835     0.24  Q          |          |          |        V |
  20+50      1.5850     0.20  Q          |          |          |        V |
  20+55      1.5861     0.17  Q          |          |          |        V |
  21+ 0      1.5872     0.16  Q          |          |          |        V |
  21+ 5      1.5886     0.19  Q          |          |          |        V |
  21+10      1.5901     0.22  Q          |          |          |        V |
  21+15      1.5917     0.23  Q          |          |          |         V|
  21+20      1.5931     0.20  Q          |          |          |         V|
  21+25      1.5943     0.17  Q          |          |          |         V|
  21+30      1.5954     0.16  Q          |          |          |         V|
  21+35      1.5967     0.19  Q          |          |          |         V|
  21+40      1.5982     0.22  Q          |          |          |         V|
  21+45      1.5998     0.23  Q          |          |          |         V|
  21+50      1.6012     0.20  Q          |          |          |         V|
  21+55      1.6024     0.17  Q          |          |          |         V|
  22+ 0      1.6035     0.16  Q          |          |          |         V|
  22+ 5      1.6048     0.19  Q          |          |          |         V|
  22+10      1.6064     0.22  Q          |          |          |         V|
  22+15      1.6080     0.23  Q          |          |          |         V|
  22+20      1.6094     0.20  Q          |          |          |         V|
  22+25      1.6105     0.17  Q          |          |          |         V|
  22+30      1.6117     0.16  Q          |          |          |         V|
  22+35      1.6127     0.16  Q          |          |          |         V|
  22+40      1.6138     0.16  Q          |          |          |         V|
  22+45      1.6149     0.16  Q          |          |          |         V|
  22+50      1.6160     0.16  Q          |          |          |         V|
  22+55      1.6171     0.16  Q          |          |          |         V|
  23+ 0      1.6182     0.16  Q          |          |          |         V|
  23+ 5      1.6193     0.16  Q          |          |          |         V|
  23+10      1.6203     0.16  Q          |          |          |         V|
  23+15      1.6214     0.16  Q          |          |          |         V|
  23+20      1.6225     0.16  Q          |          |          |         V|
  23+25      1.6236     0.16  Q          |          |          |         V|
  23+30      1.6247     0.16  Q          |          |          |         V|
  23+35      1.6258     0.16  Q          |          |          |         V|
  23+40      1.6269     0.16  Q          |          |          |         V|
  23+45      1.6279     0.16  Q          |          |          |         V|
  23+50      1.6290     0.16  Q          |          |          |         V|
  23+55      1.6301     0.16  Q          |          |          |         V|
  24+ 0      1.6312     0.16  Q          |          |          |         V|
  24+ 5      1.6318     0.09  Q          |          |          |         V|
  24+10      1.6320     0.02  Q          |          |          |         V|
  24+15      1.6321     0.01  Q          |          |          |         V|
  24+20      1.6321     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 10/24/24 File: THECOVE110.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
1-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	0.57	5.66

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.45	14.40

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.932(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.932(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
		Sum = 100.000	Sum=	10.008

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	4.40	0.492	(0.189)	0.167	0.325
2	0.17	4.50	0.503	(0.189)	0.171	0.332
3	0.25	5.40	0.604	0.189	(0.205)	0.415
4	0.33	5.40	0.604	0.189	(0.205)	0.415
5	0.42	5.70	0.637	0.189	(0.217)	0.448
6	0.50	6.40	0.716	0.189	(0.243)	0.527
7	0.58	7.90	0.883	0.189	(0.300)	0.694
8	0.67	9.10	1.018	0.189	(0.346)	0.829
9	0.75	12.80	1.431	0.189	(0.487)	1.242
10	0.83	25.60	2.863	0.189	(0.973)	2.674
11	0.92	7.90	0.883	0.189	(0.300)	0.694
12	1.00	4.90	0.548	(0.189)	0.186	0.362
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	9.0

```
    Flood volume = Effective rainfall      0.75(In)
     times area       9.9(Ac.)/[(In)/(Ft.)] =       0.6(Ac.Ft)
    Total soil loss =      0.19(In)
    Total soil loss =     0.153(Ac.Ft)
    Total rainfall =      0.93(In)
    Flood volume =       26907.6 Cubic Feet
    Total soil loss =        6685.6 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     19.713(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0119      1.72  V  Q      |          |          |          |
    0+10       0.0328      3.03  | V   Q   |          |          |          |
    0+15       0.0587      3.76  |  V   Q  |          |          |          |
    0+20       0.0868      4.09  |    V  Q |          |          |          |
    0+25       0.1166      4.33  |      VQ |          |          |          |
    0+30       0.1503      4.88  |        Q|          |          |          |
    0+35       0.1923      6.10  |         | Q        |          |          |
    0+40       0.2442      7.53  |         |    Q     |          |          |
    0+45       0.3157     10.39  |         |          Q          |          |
    0+50       0.4515     19.71  |         |          |        V|         Q|
    0+55       0.5556     15.12  |         |          |         Q    V     |
    1+ 0       0.6022      6.76  |         |  Q       |          |       V  |
    1+ 5       0.6157      1.97  |  Q      |          |          |        V|
    1+10       0.6177      0.29  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 10/24/24 File: THECOVE310.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
3-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.00	9.93

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	2.50	24.82

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.617(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.617(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	1.30	0.252	(0.189)		0.086	0.166
2	0.17	1.30	0.252	(0.189)		0.086	0.166
3	0.25	1.10	0.213	(0.189)		0.073	0.141
4	0.33	1.50	0.291	(0.189)		0.099	0.192
5	0.42	1.50	0.291	(0.189)		0.099	0.192
6	0.50	1.80	0.349	(0.189)		0.119	0.231
7	0.58	1.50	0.291	(0.189)		0.099	0.192
8	0.67	1.80	0.349	(0.189)		0.119	0.231
9	0.75	1.80	0.349	(0.189)		0.119	0.231
10	0.83	1.50	0.291	(0.189)		0.099	0.192
11	0.92	1.60	0.310	(0.189)		0.106	0.205
12	1.00	1.80	0.349	(0.189)		0.119	0.231
13	1.08	2.20	0.427	(0.189)		0.145	0.282
14	1.17	2.20	0.427	(0.189)		0.145	0.282
15	1.25	2.20	0.427	(0.189)		0.145	0.282
16	1.33	2.00	0.388	(0.189)		0.132	0.256

17	1.42	2.60	0.505	(	0.189)	0.172	0.333
18	1.50	2.70	0.524	(	0.189)	0.178	0.346
19	1.58	2.40	0.466	(	0.189)	0.158	0.307
20	1.67	2.70	0.524	(	0.189)	0.178	0.346
21	1.75	3.30	0.640		0.189	(0.218)	0.451
22	1.83	3.10	0.602		0.189	(0.205)	0.413
23	1.92	2.90	0.563		0.189	(0.191)	0.374
24	2.00	3.00	0.582		0.189	(0.198)	0.393
25	2.08	3.10	0.602		0.189	(0.205)	0.413
26	2.17	4.20	0.815		0.189	(0.277)	0.626
27	2.25	5.00	0.970		0.189	(0.330)	0.781
28	2.33	3.50	0.679		0.189	(0.231)	0.490
29	2.42	6.80	1.320		0.189	(0.449)	1.131
30	2.50	7.30	1.417		0.189	(0.482)	1.228
31	2.58	8.20	1.591		0.189	(0.541)	1.402
32	2.67	5.90	1.145		0.189	(0.389)	0.956
33	2.75	2.00	0.388	(	0.189)	0.132	0.256
34	2.83	1.80	0.349	(	0.189)	0.119	0.231
35	2.92	1.80	0.349	(	0.189)	0.119	0.231
36	3.00	0.60	0.116	(	0.189)	0.040	0.077

(Loss Rate Not Used)

Sum = 100.0 Sum = 14.3

Flood volume = Effective rainfall 1.19(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 1.0(Ac.Ft)
Total soil loss = 0.43(In)
Total soil loss = 0.355(Ac.Ft)
Total rainfall = 1.62(In)
Flood volume = 42814.8 Cubic Feet
Total soil loss = 15472.9 Cubic Feet

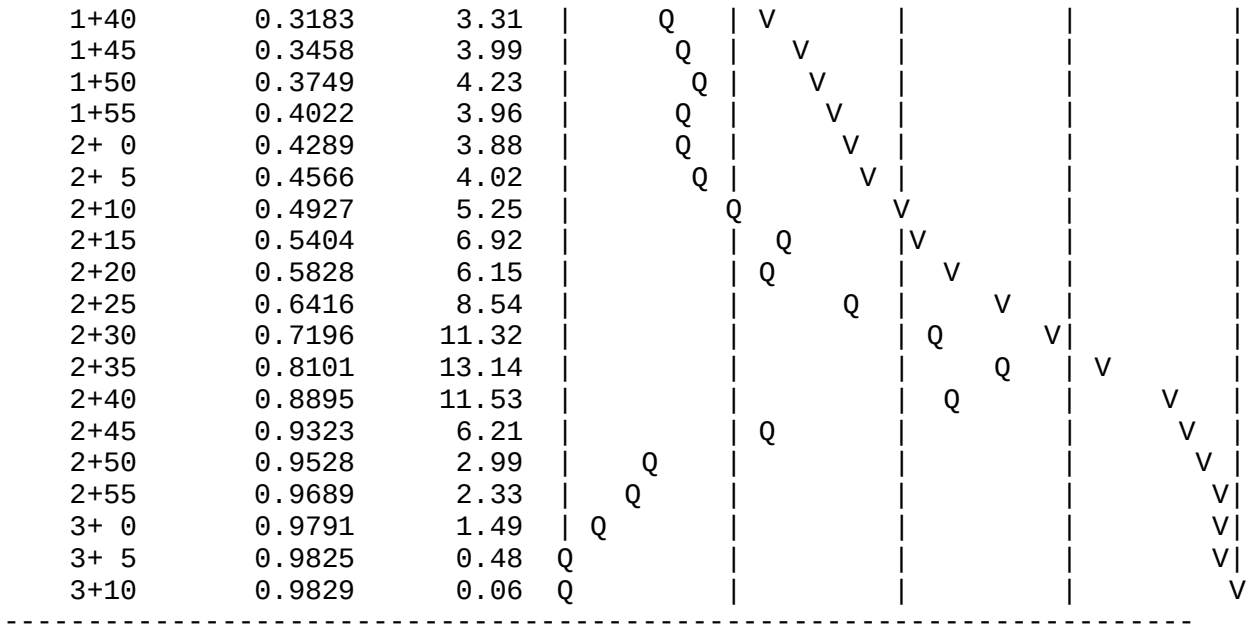
Peak flow rate of this hydrograph = 13.141(CFS)

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3 - 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	0.0061	0.88	VQ | | | |
0+10	0.0167	1.53	V Q | | | |
0+15	0.0272	1.53	|V Q | | | |
0+20	0.0389	1.70	|V Q | | | |
0+25	0.0519	1.88	| VQ | | | |
0+30	0.0665	2.13	| V Q | | | |
0+35	0.0808	2.07	| VQ | | | |
0+40	0.0957	2.16	| VQ | | | |
0+45	0.1114	2.28	| Q | | | |
0+50	0.1259	2.10	| QV | | | |
0+55	0.1398	2.02	| QV | | | |
1+ 0	0.1548	2.18	| Q V | | | |
1+ 5	0.1724	2.56	| Q V | | | |
1+10	0.1916	2.78	| Q V | | | |
1+15	0.2110	2.82	| Q V | | | |
1+20	0.2295	2.69	| Q V| | | |
1+25	0.2501	2.99	| Q V | | |
1+30	0.2731	3.34	| Q |V | | |
1+35	0.2955	3.25	| Q | V | | |


1+40 0.3183 3.31
1+45 0.3458 3.99
1+50 0.3749 4.23
1+55 0.4022 3.96
2+ 0 0.4289 3.88
2+ 5 0.4566 4.02
2+10 0.4927 5.25
2+15 0.5404 6.92
2+20 0.5828 6.15
2+25 0.6416 8.54
2+30 0.7196 11.32
2+35 0.8101 13.14
2+40 0.8895 11.53
2+45 0.9323 6.21
2+50 0.9528 2.99
2+55 0.9689 2.33
3+ 0 0.9791 1.49
3+ 5 0.9825 0.48
3+10 0.9829 0.06

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 10/24/24 File: THECOVE610.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
6-HRR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.40	13.90

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	3.50	34.75

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 2.264(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.264(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.50	0.136	(0.189)		0.046	0.090
2	0.17	0.60	0.163	(0.189)		0.055	0.108
3	0.25	0.60	0.163	(0.189)		0.055	0.108
4	0.33	0.60	0.163	(0.189)		0.055	0.108
5	0.42	0.60	0.163	(0.189)		0.055	0.108
6	0.50	0.70	0.190	(0.189)		0.065	0.126
7	0.58	0.70	0.190	(0.189)		0.065	0.126
8	0.67	0.70	0.190	(0.189)		0.065	0.126
9	0.75	0.70	0.190	(0.189)		0.065	0.126
10	0.83	0.70	0.190	(0.189)		0.065	0.126
11	0.92	0.70	0.190	(0.189)		0.065	0.126
12	1.00	0.80	0.217	(0.189)		0.074	0.143
13	1.08	0.80	0.217	(0.189)		0.074	0.143
14	1.17	0.80	0.217	(0.189)		0.074	0.143
15	1.25	0.80	0.217	(0.189)		0.074	0.143
16	1.33	0.80	0.217	(0.189)		0.074	0.143

17	1.42	0.80	0.217	(0.189)	0.074	0.143
18	1.50	0.80	0.217	(0.189)	0.074	0.143
19	1.58	0.80	0.217	(0.189)	0.074	0.143
20	1.67	0.80	0.217	(0.189)	0.074	0.143
21	1.75	0.80	0.217	(0.189)	0.074	0.143
22	1.83	0.80	0.217	(0.189)	0.074	0.143
23	1.92	0.80	0.217	(0.189)	0.074	0.143
24	2.00	0.90	0.244	(0.189)	0.083	0.161
25	2.08	0.80	0.217	(0.189)	0.074	0.143
26	2.17	0.90	0.244	(0.189)	0.083	0.161
27	2.25	0.90	0.244	(0.189)	0.083	0.161
28	2.33	0.90	0.244	(0.189)	0.083	0.161
29	2.42	0.90	0.244	(0.189)	0.083	0.161
30	2.50	0.90	0.244	(0.189)	0.083	0.161
31	2.58	0.90	0.244	(0.189)	0.083	0.161
32	2.67	0.90	0.244	(0.189)	0.083	0.161
33	2.75	1.00	0.272	(0.189)	0.092	0.179
34	2.83	1.00	0.272	(0.189)	0.092	0.179
35	2.92	1.00	0.272	(0.189)	0.092	0.179
36	3.00	1.00	0.272	(0.189)	0.092	0.179
37	3.08	1.00	0.272	(0.189)	0.092	0.179
38	3.17	1.10	0.299	(0.189)	0.102	0.197
39	3.25	1.10	0.299	(0.189)	0.102	0.197
40	3.33	1.10	0.299	(0.189)	0.102	0.197
41	3.42	1.20	0.326	(0.189)	0.111	0.215
42	3.50	1.30	0.353	(0.189)	0.120	0.233
43	3.58	1.40	0.380	(0.189)	0.129	0.251
44	3.67	1.40	0.380	(0.189)	0.129	0.251
45	3.75	1.50	0.407	(0.189)	0.139	0.269
46	3.83	1.50	0.407	(0.189)	0.139	0.269
47	3.92	1.60	0.435	(0.189)	0.148	0.287
48	4.00	1.60	0.435	(0.189)	0.148	0.287
49	4.08	1.70	0.462	(0.189)	0.157	0.305
50	4.17	1.80	0.489	(0.189)	0.166	0.323
51	4.25	1.90	0.516	(0.189)	0.175	0.341
52	4.33	2.00	0.543	(0.189)	0.185	0.359
53	4.42	2.10	0.570	0.189	(0.194)	0.382
54	4.50	2.10	0.570	0.189	(0.194)	0.382
55	4.58	2.20	0.598	0.189	(0.203)	0.409
56	4.67	2.30	0.625	0.189	(0.212)	0.436
57	4.75	2.40	0.652	0.189	(0.222)	0.463
58	4.83	2.40	0.652	0.189	(0.222)	0.463
59	4.92	2.50	0.679	0.189	(0.231)	0.490
60	5.00	2.60	0.706	0.189	(0.240)	0.517
61	5.08	3.10	0.842	0.189	(0.286)	0.653
62	5.17	3.60	0.978	0.189	(0.333)	0.789
63	5.25	3.90	1.059	0.189	(0.360)	0.870
64	5.33	4.20	1.141	0.189	(0.388)	0.952
65	5.42	4.70	1.277	0.189	(0.434)	1.088
66	5.50	5.60	1.521	0.189	(0.517)	1.332
67	5.58	1.90	0.516	(0.189)	0.175	0.341
68	5.67	0.90	0.244	(0.189)	0.083	0.161
69	5.75	0.60	0.163	(0.189)	0.055	0.108
70	5.83	0.50	0.136	(0.189)	0.046	0.090
71	5.92	0.30	0.081	(0.189)	0.028	0.054
72	6.00	0.20	0.054	(0.189)	0.018	0.036

(Loss Rate Not Used)

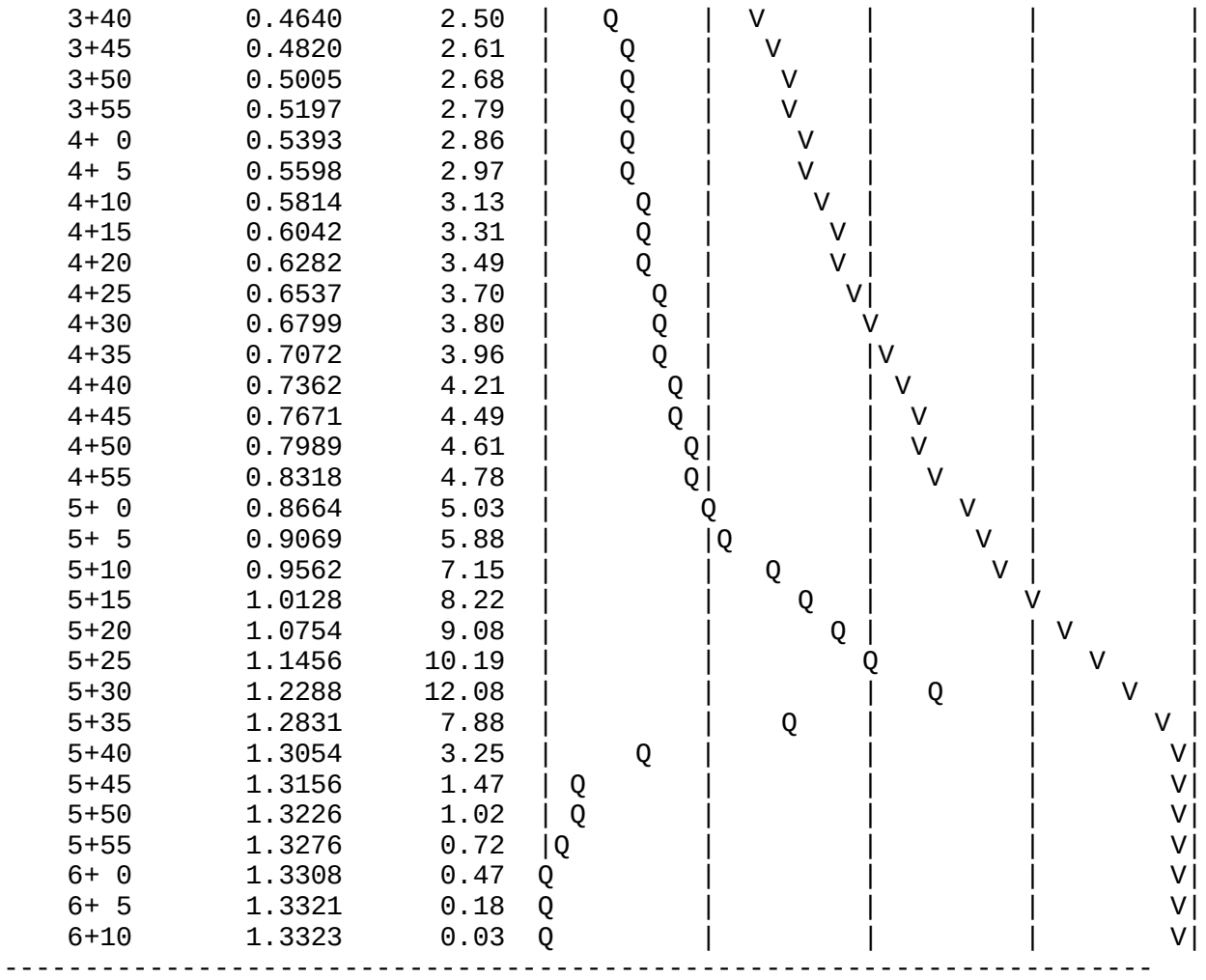
Sum = 100.0 Sum = 19.3

Flood volume = Effective rainfall 1.61(In)

times area 9.9(Ac.)/[(In)/(Ft.)] = 1.3(Ac.Ft)

```
   Total soil loss =      0.65(In)
   Total soil loss =     0.541(Ac.Ft)
   Total rainfall =      2.26(In)
   Flood volume =       58035.1 Cubic Feet
   Total soil loss =       23568.5 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =     12.082(CFS)
   ---------------------------------------------------------------------
   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0033      0.48  Q         |          |          |          |
  0+10       0.0096      0.92  VQ        |          |          |          |
  0+15       0.0169      1.06  V Q       |          |          |          |
  0+20       0.0244      1.08  V Q       |          |          |          |
  0+25       0.0318      1.08  V Q       |          |          |          |
  0+30       0.0399      1.17  |VQ       |          |          |          |
  0+35       0.0484      1.24  |VQ       |          |          |          |
  0+40       0.0571      1.26  |VQ       |          |          |          |
  0+45       0.0657      1.26  |VQ       |          |          |          |
  0+50       0.0744      1.26  | Q       |          |          |          |
  0+55       0.0830      1.26  | Q       |          |          |          |
  1+ 0       0.0923      1.35  | Q       |          |          |          |
  1+ 5       0.1021      1.42  | QV      |          |          |          |
  1+10       0.1120      1.44  | QV      |          |          |          |
  1+15       0.1219      1.44  | QV      |          |          |          |
  1+20       0.1318      1.44  | QV      |          |          |          |
  1+25       0.1417      1.44  | Q V     |          |          |          |
  1+30       0.1516      1.44  | Q V     |          |          |          |
  1+35       0.1615      1.44  | Q V     |          |          |          |
  1+40       0.1714      1.44  | Q  V    |          |          |          |
  1+45       0.1813      1.44  | Q  V    |          |          |          |
  1+50       0.1912      1.44  | Q  V    |          |          |          |
  1+55       0.2010      1.44  | Q   V   |          |          |          |
  2+ 0       0.2116      1.53  |  Q  V   |          |          |          |
  2+ 5       0.2220      1.51  |  Q  V   |          |          |          |
  2+10       0.2326      1.55  |  Q  V   |          |          |          |
  2+15       0.2436      1.60  |  Q   V  |          |          |          |
  2+20       0.2548      1.62  |  Q   V  |          |          |          |
  2+25       0.2659      1.62  |  Q   V  |          |          |          |
  2+30       0.2770      1.62  |  Q    V |          |          |          |
  2+35       0.2882      1.62  |  Q    V |          |          |          |
  2+40       0.2993      1.62  |  Q    V |          |          |          |
  2+45       0.3111      1.71  |  Q     V|          |          |          |
  2+50       0.3233      1.78  |  Q     V|          |          |          |
  2+55       0.3357      1.80  |  Q      V          |          |          |
  3+ 0       0.3481      1.80  |  Q      V          |          |          |
  3+ 5       0.3604      1.80  |  Q      V          |          |          |
  3+10       0.3734      1.89  |  Q      |V         |          |          |
  3+15       0.3869      1.96  |  Q      |V         |          |          |
  3+20       0.4005      1.97  |  Q      | V        |          |          |
  3+25       0.4148      2.07  |   Q     | V        |          |          |
  3+30       0.4302      2.24  |   Q     | V        |          |          |
  3+35       0.4468      2.41  |   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 10/24/24 File: THECOVE2410.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
10-YR
24-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 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]
9.93	2.50	24.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	6.00	59.58

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.940(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.940(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.335)		0.011	0.021
2	0.17	0.07	0.032	(0.334)		0.011	0.021
3	0.25	0.07	0.032	(0.332)		0.011	0.021
4	0.33	0.10	0.047	(0.331)		0.016	0.031
5	0.42	0.10	0.047	(0.330)		0.016	0.031
6	0.50	0.10	0.047	(0.329)		0.016	0.031
7	0.58	0.10	0.047	(0.327)		0.016	0.031
8	0.67	0.10	0.047	(0.326)		0.016	0.031
9	0.75	0.10	0.047	(0.325)		0.016	0.031
10	0.83	0.13	0.063	(0.323)		0.021	0.042
11	0.92	0.13	0.063	(0.322)		0.021	0.042
12	1.00	0.13	0.063	(0.321)		0.021	0.042
13	1.08	0.10	0.047	(0.320)		0.016	0.031
14	1.17	0.10	0.047	(0.318)		0.016	0.031
15	1.25	0.10	0.047	(0.317)		0.016	0.031
16	1.33	0.10	0.047	(0.316)		0.016	0.031

17	1.42	0.10	0.047	(0.315)	0.016	0.031
18	1.50	0.10	0.047	(0.313)	0.016	0.031
19	1.58	0.10	0.047	(0.312)	0.016	0.031
20	1.67	0.10	0.047	(0.311)	0.016	0.031
21	1.75	0.10	0.047	(0.310)	0.016	0.031
22	1.83	0.13	0.063	(0.308)	0.021	0.042
23	1.92	0.13	0.063	(0.307)	0.021	0.042
24	2.00	0.13	0.063	(0.306)	0.021	0.042
25	2.08	0.13	0.063	(0.305)	0.021	0.042
26	2.17	0.13	0.063	(0.303)	0.021	0.042
27	2.25	0.13	0.063	(0.302)	0.021	0.042
28	2.33	0.13	0.063	(0.301)	0.021	0.042
29	2.42	0.13	0.063	(0.300)	0.021	0.042
30	2.50	0.13	0.063	(0.298)	0.021	0.042
31	2.58	0.17	0.079	(0.297)	0.027	0.052
32	2.67	0.17	0.079	(0.296)	0.027	0.052
33	2.75	0.17	0.079	(0.295)	0.027	0.052
34	2.83	0.17	0.079	(0.294)	0.027	0.052
35	2.92	0.17	0.079	(0.292)	0.027	0.052
36	3.00	0.17	0.079	(0.291)	0.027	0.052
37	3.08	0.17	0.079	(0.290)	0.027	0.052
38	3.17	0.17	0.079	(0.289)	0.027	0.052
39	3.25	0.17	0.079	(0.288)	0.027	0.052
40	3.33	0.17	0.079	(0.286)	0.027	0.052
41	3.42	0.17	0.079	(0.285)	0.027	0.052
42	3.50	0.17	0.079	(0.284)	0.027	0.052
43	3.58	0.17	0.079	(0.283)	0.027	0.052
44	3.67	0.17	0.079	(0.282)	0.027	0.052
45	3.75	0.17	0.079	(0.280)	0.027	0.052
46	3.83	0.20	0.095	(0.279)	0.032	0.062
47	3.92	0.20	0.095	(0.278)	0.032	0.062
48	4.00	0.20	0.095	(0.277)	0.032	0.062
49	4.08	0.20	0.095	(0.276)	0.032	0.062
50	4.17	0.20	0.095	(0.275)	0.032	0.062
51	4.25	0.20	0.095	(0.273)	0.032	0.062
52	4.33	0.23	0.110	(0.272)	0.038	0.073
53	4.42	0.23	0.110	(0.271)	0.038	0.073
54	4.50	0.23	0.110	(0.270)	0.038	0.073
55	4.58	0.23	0.110	(0.269)	0.038	0.073
56	4.67	0.23	0.110	(0.268)	0.038	0.073
57	4.75	0.23	0.110	(0.266)	0.038	0.073
58	4.83	0.27	0.126	(0.265)	0.043	0.083
59	4.92	0.27	0.126	(0.264)	0.043	0.083
60	5.00	0.27	0.126	(0.263)	0.043	0.083
61	5.08	0.20	0.095	(0.262)	0.032	0.062
62	5.17	0.20	0.095	(0.261)	0.032	0.062
63	5.25	0.20	0.095	(0.260)	0.032	0.062
64	5.33	0.23	0.110	(0.258)	0.038	0.073
65	5.42	0.23	0.110	(0.257)	0.038	0.073
66	5.50	0.23	0.110	(0.256)	0.038	0.073
67	5.58	0.27	0.126	(0.255)	0.043	0.083
68	5.67	0.27	0.126	(0.254)	0.043	0.083
69	5.75	0.27	0.126	(0.253)	0.043	0.083
70	5.83	0.27	0.126	(0.252)	0.043	0.083
71	5.92	0.27	0.126	(0.251)	0.043	0.083
72	6.00	0.27	0.126	(0.249)	0.043	0.083
73	6.08	0.30	0.142	(0.248)	0.048	0.094
74	6.17	0.30	0.142	(0.247)	0.048	0.094
75	6.25	0.30	0.142	(0.246)	0.048	0.094
76	6.33	0.30	0.142	(0.245)	0.048	0.094

77	6.42	0.30	0.142	(0.244)	0.048	0.094
78	6.50	0.30	0.142	(0.243)	0.048	0.094
79	6.58	0.33	0.158	(0.242)	0.054	0.104
80	6.67	0.33	0.158	(0.241)	0.054	0.104
81	6.75	0.33	0.158	(0.240)	0.054	0.104
82	6.83	0.33	0.158	(0.239)	0.054	0.104
83	6.92	0.33	0.158	(0.237)	0.054	0.104
84	7.00	0.33	0.158	(0.236)	0.054	0.104
85	7.08	0.33	0.158	(0.235)	0.054	0.104
86	7.17	0.33	0.158	(0.234)	0.054	0.104
87	7.25	0.33	0.158	(0.233)	0.054	0.104
88	7.33	0.37	0.173	(0.232)	0.059	0.114
89	7.42	0.37	0.173	(0.231)	0.059	0.114
90	7.50	0.37	0.173	(0.230)	0.059	0.114
91	7.58	0.40	0.189	(0.229)	0.064	0.125
92	7.67	0.40	0.189	(0.228)	0.064	0.125
93	7.75	0.40	0.189	(0.227)	0.064	0.125
94	7.83	0.43	0.205	(0.226)	0.070	0.135
95	7.92	0.43	0.205	(0.225)	0.070	0.135
96	8.00	0.43	0.205	(0.224)	0.070	0.135
97	8.08	0.50	0.236	(0.223)	0.080	0.156
98	8.17	0.50	0.236	(0.222)	0.080	0.156
99	8.25	0.50	0.236	(0.221)	0.080	0.156
100	8.33	0.50	0.236	(0.220)	0.080	0.156
101	8.42	0.50	0.236	(0.219)	0.080	0.156
102	8.50	0.50	0.236	(0.217)	0.080	0.156
103	8.58	0.53	0.252	(0.216)	0.086	0.166
104	8.67	0.53	0.252	(0.215)	0.086	0.166
105	8.75	0.53	0.252	(0.214)	0.086	0.166
106	8.83	0.57	0.268	(0.213)	0.091	0.177
107	8.92	0.57	0.268	(0.212)	0.091	0.177
108	9.00	0.57	0.268	(0.211)	0.091	0.177
109	9.08	0.63	0.299	(0.210)	0.102	0.198
110	9.17	0.63	0.299	(0.209)	0.102	0.198
111	9.25	0.63	0.299	(0.208)	0.102	0.198
112	9.33	0.67	0.315	(0.207)	0.107	0.208
113	9.42	0.67	0.315	(0.206)	0.107	0.208
114	9.50	0.67	0.315	(0.205)	0.107	0.208
115	9.58	0.70	0.331	(0.204)	0.113	0.218
116	9.67	0.70	0.331	(0.203)	0.113	0.218
117	9.75	0.70	0.331	(0.202)	0.113	0.218
118	9.83	0.73	0.347	(0.202)	0.118	0.229
119	9.92	0.73	0.347	(0.201)	0.118	0.229
120	10.00	0.73	0.347	(0.200)	0.118	0.229
121	10.08	0.50	0.236	(0.199)	0.080	0.156
122	10.17	0.50	0.236	(0.198)	0.080	0.156
123	10.25	0.50	0.236	(0.197)	0.080	0.156
124	10.33	0.50	0.236	(0.196)	0.080	0.156
125	10.42	0.50	0.236	(0.195)	0.080	0.156
126	10.50	0.50	0.236	(0.194)	0.080	0.156
127	10.58	0.67	0.315	(0.193)	0.107	0.208
128	10.67	0.67	0.315	(0.192)	0.107	0.208
129	10.75	0.67	0.315	(0.191)	0.107	0.208
130	10.83	0.67	0.315	(0.190)	0.107	0.208
131	10.92	0.67	0.315	(0.189)	0.107	0.208
132	11.00	0.67	0.315	(0.188)	0.107	0.208
133	11.08	0.63	0.299	(0.187)	0.102	0.198
134	11.17	0.63	0.299	(0.186)	0.102	0.198
135	11.25	0.63	0.299	(0.185)	0.102	0.198
136	11.33	0.63	0.299	(0.185)	0.102	0.198

137	11.42	0.63	0.299	(0.184)	0.102	0.198
138	11.50	0.63	0.299	(0.183)	0.102	0.198
139	11.58	0.57	0.268	(0.182)	0.091	0.177
140	11.67	0.57	0.268	(0.181)	0.091	0.177
141	11.75	0.57	0.268	(0.180)	0.091	0.177
142	11.83	0.60	0.284	(0.179)	0.096	0.187
143	11.92	0.60	0.284	(0.178)	0.096	0.187
144	12.00	0.60	0.284	(0.177)	0.096	0.187
145	12.08	0.83	0.394	(0.176)	0.134	0.260
146	12.17	0.83	0.394	(0.176)	0.134	0.260
147	12.25	0.83	0.394	(0.175)	0.134	0.260
148	12.33	0.87	0.410	(0.174)	0.139	0.270
149	12.42	0.87	0.410	(0.173)	0.139	0.270
150	12.50	0.87	0.410	(0.172)	0.139	0.270
151	12.58	0.93	0.441	(0.171)	0.150	0.291
152	12.67	0.93	0.441	(0.170)	0.150	0.291
153	12.75	0.93	0.441	(0.169)	0.150	0.291
154	12.83	0.97	0.457	(0.169)	0.155	0.302
155	12.92	0.97	0.457	(0.168)	0.155	0.302
156	13.00	0.97	0.457	(0.167)	0.155	0.302
157	13.08	1.13	0.536	0.166	(0.182)	0.370
158	13.17	1.13	0.536	0.165	(0.182)	0.371
159	13.25	1.13	0.536	0.164	(0.182)	0.371
160	13.33	1.13	0.536	0.164	(0.182)	0.372
161	13.42	1.13	0.536	0.163	(0.182)	0.373
162	13.50	1.13	0.536	0.162	(0.182)	0.374
163	13.58	0.77	0.362	(0.161)	0.123	0.239
164	13.67	0.77	0.362	(0.160)	0.123	0.239
165	13.75	0.77	0.362	(0.159)	0.123	0.239
166	13.83	0.77	0.362	(0.159)	0.123	0.239
167	13.92	0.77	0.362	(0.158)	0.123	0.239
168	14.00	0.77	0.362	(0.157)	0.123	0.239
169	14.08	0.90	0.426	(0.156)	0.145	0.281
170	14.17	0.90	0.426	(0.155)	0.145	0.281
171	14.25	0.90	0.426	(0.155)	0.145	0.281
172	14.33	0.87	0.410	(0.154)	0.139	0.270
173	14.42	0.87	0.410	(0.153)	0.139	0.270
174	14.50	0.87	0.410	(0.152)	0.139	0.270
175	14.58	0.87	0.410	(0.151)	0.139	0.270
176	14.67	0.87	0.410	(0.151)	0.139	0.270
177	14.75	0.87	0.410	(0.150)	0.139	0.270
178	14.83	0.83	0.394	(0.149)	0.134	0.260
179	14.92	0.83	0.394	(0.148)	0.134	0.260
180	15.00	0.83	0.394	(0.148)	0.134	0.260
181	15.08	0.80	0.378	(0.147)	0.129	0.250
182	15.17	0.80	0.378	(0.146)	0.129	0.250
183	15.25	0.80	0.378	(0.145)	0.129	0.250
184	15.33	0.77	0.362	(0.145)	0.123	0.239
185	15.42	0.77	0.362	(0.144)	0.123	0.239
186	15.50	0.77	0.362	(0.143)	0.123	0.239
187	15.58	0.63	0.299	(0.142)	0.102	0.198
188	15.67	0.63	0.299	(0.142)	0.102	0.198
189	15.75	0.63	0.299	(0.141)	0.102	0.198
190	15.83	0.63	0.299	(0.140)	0.102	0.198
191	15.92	0.63	0.299	(0.140)	0.102	0.198
192	16.00	0.63	0.299	(0.139)	0.102	0.198
193	16.08	0.13	0.063	(0.138)	0.021	0.042
194	16.17	0.13	0.063	(0.137)	0.021	0.042
195	16.25	0.13	0.063	(0.137)	0.021	0.042
196	16.33	0.13	0.063	(0.136)	0.021	0.042

197	16.42	0.13	0.063	(0.135)	0.021	0.042
198	16.50	0.13	0.063	(0.135)	0.021	0.042
199	16.58	0.10	0.047	(0.134)	0.016	0.031
200	16.67	0.10	0.047	(0.133)	0.016	0.031
201	16.75	0.10	0.047	(0.133)	0.016	0.031
202	16.83	0.10	0.047	(0.132)	0.016	0.031
203	16.92	0.10	0.047	(0.131)	0.016	0.031
204	17.00	0.10	0.047	(0.131)	0.016	0.031
205	17.08	0.17	0.079	(0.130)	0.027	0.052
206	17.17	0.17	0.079	(0.129)	0.027	0.052
207	17.25	0.17	0.079	(0.129)	0.027	0.052
208	17.33	0.17	0.079	(0.128)	0.027	0.052
209	17.42	0.17	0.079	(0.127)	0.027	0.052
210	17.50	0.17	0.079	(0.127)	0.027	0.052
211	17.58	0.17	0.079	(0.126)	0.027	0.052
212	17.67	0.17	0.079	(0.125)	0.027	0.052
213	17.75	0.17	0.079	(0.125)	0.027	0.052
214	17.83	0.13	0.063	(0.124)	0.021	0.042
215	17.92	0.13	0.063	(0.124)	0.021	0.042
216	18.00	0.13	0.063	(0.123)	0.021	0.042
217	18.08	0.13	0.063	(0.122)	0.021	0.042
218	18.17	0.13	0.063	(0.122)	0.021	0.042
219	18.25	0.13	0.063	(0.121)	0.021	0.042
220	18.33	0.13	0.063	(0.121)	0.021	0.042
221	18.42	0.13	0.063	(0.120)	0.021	0.042
222	18.50	0.13	0.063	(0.119)	0.021	0.042
223	18.58	0.10	0.047	(0.119)	0.016	0.031
224	18.67	0.10	0.047	(0.118)	0.016	0.031
225	18.75	0.10	0.047	(0.118)	0.016	0.031
226	18.83	0.07	0.032	(0.117)	0.011	0.021
227	18.92	0.07	0.032	(0.117)	0.011	0.021
228	19.00	0.07	0.032	(0.116)	0.011	0.021
229	19.08	0.10	0.047	(0.115)	0.016	0.031
230	19.17	0.10	0.047	(0.115)	0.016	0.031
231	19.25	0.10	0.047	(0.114)	0.016	0.031
232	19.33	0.13	0.063	(0.114)	0.021	0.042
233	19.42	0.13	0.063	(0.113)	0.021	0.042
234	19.50	0.13	0.063	(0.113)	0.021	0.042
235	19.58	0.10	0.047	(0.112)	0.016	0.031
236	19.67	0.10	0.047	(0.112)	0.016	0.031
237	19.75	0.10	0.047	(0.111)	0.016	0.031
238	19.83	0.07	0.032	(0.111)	0.011	0.021
239	19.92	0.07	0.032	(0.110)	0.011	0.021
240	20.00	0.07	0.032	(0.110)	0.011	0.021
241	20.08	0.10	0.047	(0.109)	0.016	0.031
242	20.17	0.10	0.047	(0.109)	0.016	0.031
243	20.25	0.10	0.047	(0.108)	0.016	0.031
244	20.33	0.10	0.047	(0.108)	0.016	0.031
245	20.42	0.10	0.047	(0.107)	0.016	0.031
246	20.50	0.10	0.047	(0.107)	0.016	0.031
247	20.58	0.10	0.047	(0.106)	0.016	0.031
248	20.67	0.10	0.047	(0.106)	0.016	0.031
249	20.75	0.10	0.047	(0.106)	0.016	0.031
250	20.83	0.07	0.032	(0.105)	0.011	0.021
251	20.92	0.07	0.032	(0.105)	0.011	0.021
252	21.00	0.07	0.032	(0.104)	0.011	0.021
253	21.08	0.10	0.047	(0.104)	0.016	0.031
254	21.17	0.10	0.047	(0.103)	0.016	0.031
255	21.25	0.10	0.047	(0.103)	0.016	0.031
256	21.33	0.07	0.032	(0.103)	0.011	0.021

257	21.42	0.07	0.032	(0.102)	0.011	0.021
258	21.50	0.07	0.032	(0.102)	0.011	0.021
259	21.58	0.10	0.047	(0.102)	0.016	0.031
260	21.67	0.10	0.047	(0.101)	0.016	0.031
261	21.75	0.10	0.047	(0.101)	0.016	0.031
262	21.83	0.07	0.032	(0.100)	0.011	0.021
263	21.92	0.07	0.032	(0.100)	0.011	0.021
264	22.00	0.07	0.032	(0.100)	0.011	0.021
265	22.08	0.10	0.047	(0.099)	0.016	0.031
266	22.17	0.10	0.047	(0.099)	0.016	0.031
267	22.25	0.10	0.047	(0.099)	0.016	0.031
268	22.33	0.07	0.032	(0.099)	0.011	0.021
269	22.42	0.07	0.032	(0.098)	0.011	0.021
270	22.50	0.07	0.032	(0.098)	0.011	0.021
271	22.58	0.07	0.032	(0.098)	0.011	0.021
272	22.67	0.07	0.032	(0.097)	0.011	0.021
273	22.75	0.07	0.032	(0.097)	0.011	0.021
274	22.83	0.07	0.032	(0.097)	0.011	0.021
275	22.92	0.07	0.032	(0.097)	0.011	0.021
276	23.00	0.07	0.032	(0.096)	0.011	0.021
277	23.08	0.07	0.032	(0.096)	0.011	0.021
278	23.17	0.07	0.032	(0.096)	0.011	0.021
279	23.25	0.07	0.032	(0.096)	0.011	0.021
280	23.33	0.07	0.032	(0.096)	0.011	0.021
281	23.42	0.07	0.032	(0.095)	0.011	0.021
282	23.50	0.07	0.032	(0.095)	0.011	0.021
283	23.58	0.07	0.032	(0.095)	0.011	0.021
284	23.67	0.07	0.032	(0.095)	0.011	0.021
285	23.75	0.07	0.032	(0.095)	0.011	0.021
286	23.83	0.07	0.032	(0.095)	0.011	0.021
287	23.92	0.07	0.032	(0.095)	0.011	0.021
288	24.00	0.07	0.032	(0.095)	0.011	0.021

(Loss Rate Not Used)

Sum = 100.0 Sum = 31.3

Flood volume = Effective rainfall 2.61(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 2.2(Ac.Ft)
Total soil loss = 1.33(In)
Total soil loss = 1.101(Ac.Ft)
Total rainfall = 3.94(In)
Flood volume = 94058.6 Cubic Feet
Total soil loss = 47956.9 Cubic Feet

Peak flow rate of this hydrograph = 3.740(CFS)

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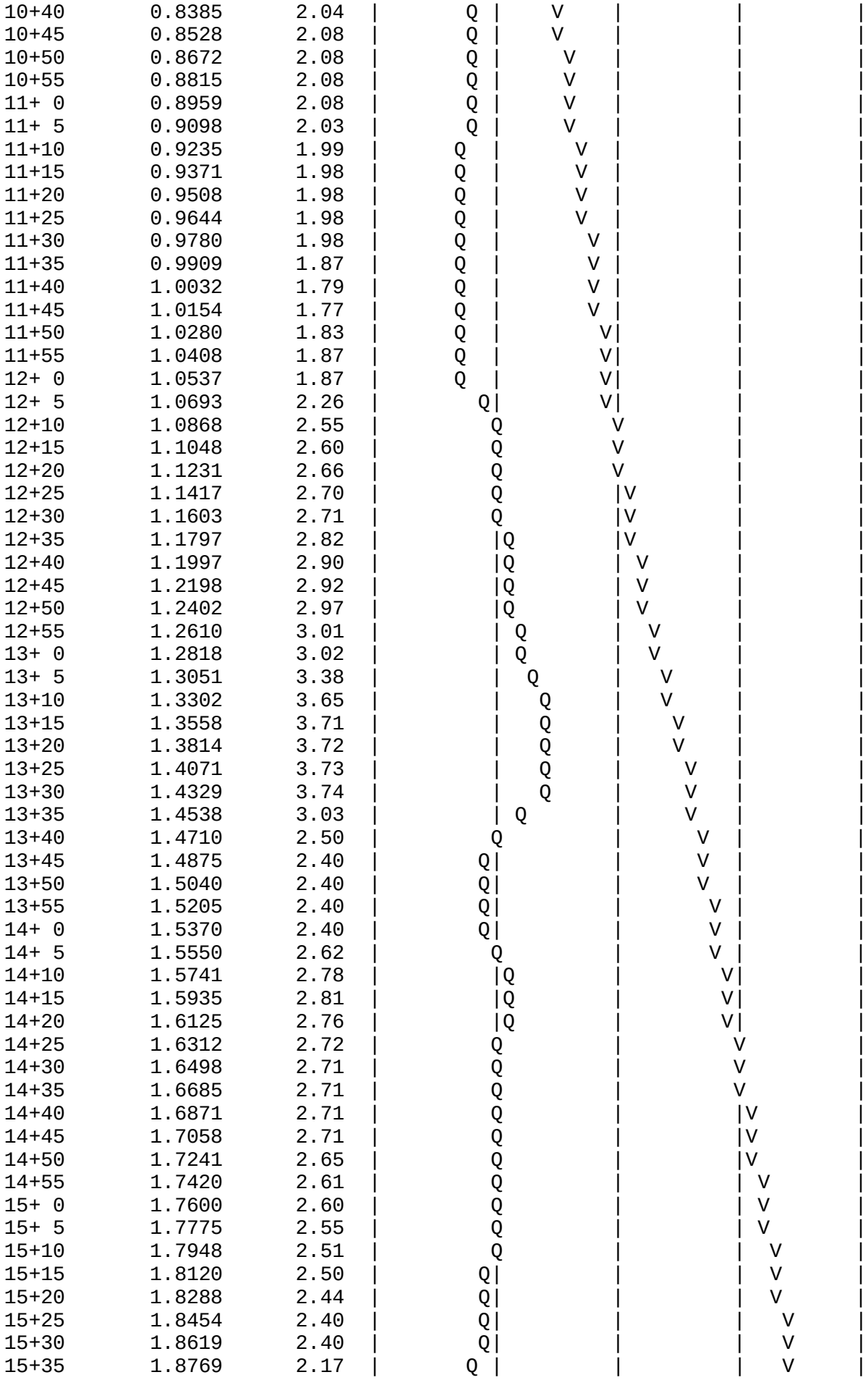
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0008	0.11	Q	|	|	|	|
0+10	0.0021	0.19	Q	|	|	|	|
0+15	0.0035	0.21	Q	|	|	|	|
0+20	0.0053	0.26	VQ	|	|	|	|
0+25	0.0074	0.30	VQ	|	|	|	|
0+30	0.0096	0.31	VQ	|	|	|	|
0+35	0.0117	0.31	VQ	|	|	|	|

```
0+40       0.0139      0.31  VQ       |          |          |          |
0+45       0.0160      0.31  VQ       |          |          |          |
0+50       0.0186      0.37  VQ       |          |          |          |
0+55       0.0214      0.41  VQ       |          |          |          |
1+ 0       0.0242      0.42  VQ       |          |          |          |
1+ 5       0.0267      0.36  VQ       |          |          |          |
1+10       0.0289      0.32  VQ       |          |          |          |
1+15       0.0311      0.31  VQ       |          |          |          |
1+20       0.0332      0.31  VQ       |          |          |          |
1+25       0.0354      0.31  VQ       |          |          |          |
1+30       0.0375      0.31  VQ       |          |          |          |
1+35       0.0397      0.31  VQ       |          |          |          |
1+40       0.0419      0.31  VQ       |          |          |          |
1+45       0.0440      0.31  VQ       |          |          |          |
1+50       0.0465      0.37  VQ       |          |          |          |
1+55       0.0493      0.41  VQ       |          |          |          |
2+ 0       0.0522      0.42  VQ       |          |          |          |
2+ 5       0.0551      0.42  |Q       |          |          |          |
2+10       0.0580      0.42  |Q       |          |          |          |
2+15       0.0608      0.42  |Q       |          |          |          |
2+20       0.0637      0.42  |Q       |          |          |          |
2+25       0.0666      0.42  |Q       |          |          |          |
2+30       0.0694      0.42  |Q       |          |          |          |
2+35       0.0727      0.47  |Q       |          |          |          |
2+40       0.0762      0.51  |VQ      |          |          |          |
2+45       0.0798      0.52  |VQ      |          |          |          |
2+50       0.0834      0.52  |VQ      |          |          |          |
2+55       0.0870      0.52  |VQ      |          |          |          |
3+ 0       0.0906      0.52  |VQ      |          |          |          |
3+ 5       0.0941      0.52  |VQ      |          |          |          |
3+10       0.0977      0.52  |VQ      |          |          |          |
3+15       0.1013      0.52  |VQ      |          |          |          |
3+20       0.1049      0.52  |VQ      |          |          |          |
3+25       0.1085      0.52  | Q      |          |          |          |
3+30       0.1121      0.52  | Q      |          |          |          |
3+35       0.1157      0.52  | Q      |          |          |          |
3+40       0.1192      0.52  | Q      |          |          |          |
3+45       0.1228      0.52  | Q      |          |          |          |
3+50       0.1268      0.58  | Q      |          |          |          |
3+55       0.1310      0.62  | Q      |          |          |          |
4+ 0       0.1353      0.62  | Q      |          |          |          |
4+ 5       0.1397      0.62  | Q      |          |          |          |
4+10       0.1440      0.62  | Q      |          |          |          |
4+15       0.1483      0.62  | Q      |          |          |          |
4+20       0.1529      0.68  | Q      |          |          |          |
4+25       0.1579      0.72  | Q      |          |          |          |
4+30       0.1629      0.73  | QV     |          |          |          |
4+35       0.1679      0.73  | QV     |          |          |          |
4+40       0.1730      0.73  | QV     |          |          |          |
4+45       0.1780      0.73  | QV     |          |          |          |
4+50       0.1834      0.78  |  Q     |          |          |          |
4+55       0.1891      0.82  |  Q     |          |          |          |
5+ 0       0.1948      0.83  |  Q     |          |          |          |
5+ 5       0.1998      0.72  | QV     |          |          |          |
5+10       0.2042      0.64  | QV     |          |          |          |
5+15       0.2085      0.62  | QV     |          |          |          |
5+20       0.2132      0.68  | QV     |          |          |          |
5+25       0.2182      0.72  | Q V    |          |          |          |
5+30       0.2232      0.73  | Q V    |          |          |          |
5+35       0.2286      0.78  |  QV    |          |          |          |
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5+40	0.2343	0.82	QV				
5+45	0.2400	0.83	QV				
5+50	0.2457	0.83	QV				
5+55	0.2515	0.83	QV				
6+ 0	0.2572	0.83	QV				
6+ 5	0.2633	0.89	QV				
6+10	0.2697	0.93	QV				
6+15	0.2762	0.94	Q V				
6+20	0.2826	0.94	Q V				
6+25	0.2891	0.94	Q V				
6+30	0.2955	0.94	Q V				
6+35	0.3024	0.99	Q V				
6+40	0.3095	1.03	QV				
6+45	0.3167	1.04	QV				
6+50	0.3238	1.04	QV				
6+55	0.3310	1.04	Q V				
7+ 0	0.3382	1.04	Q V				
7+ 5	0.3454	1.04	Q V				
7+10	0.3525	1.04	Q V				
7+15	0.3597	1.04	Q V				
7+20	0.3673	1.10	Q V				
7+25	0.3751	1.14	Q V				
7+30	0.3830	1.15	Q V				
7+35	0.3913	1.20	Q V				
7+40	0.3998	1.24	Q V				
7+45	0.4084	1.25	Q V				
7+50	0.4174	1.30	Q V				
7+55	0.4267	1.35	Q V				
8+ 0	0.4360	1.35	Q V				
8+ 5	0.4461	1.46	Q V				
8+10	0.4567	1.55	Q V				
8+15	0.4675	1.56	Q V				
8+20	0.4782	1.56	Q V				
8+25	0.4890	1.56	Q V				
8+30	0.4998	1.56	Q V				
8+35	0.5109	1.62	Q V				
8+40	0.5223	1.66	Q V				
8+45	0.5338	1.67	Q V				
8+50	0.5456	1.72	Q V				
8+55	0.5578	1.76	Q V				
9+ 0	0.5700	1.77	Q V				
9+ 5	0.5829	1.88	Q V				
9+10	0.5964	1.96	Q V				
9+15	0.6101	1.98	Q V				
9+20	0.6241	2.03	Q V				
9+25	0.6384	2.07	Q V				
9+30	0.6527	2.08	Q V				
9+35	0.6674	2.14	Q V				
9+40	0.6824	2.18	Q V				
9+45	0.6975	2.19	Q V				
9+50	0.7129	2.24	Q V				
9+55	0.7287	2.28	Q V				
10+ 0	0.7444	2.29	Q V				
10+ 5	0.7576	1.90	Q V				
10+10	0.7687	1.62	Q V				
10+15	0.7795	1.56	Q V				
10+20	0.7902	1.56	Q V				
10+25	0.8010	1.56	Q V				
10+30	0.8118	1.56	Q V				
10+35	0.8244	1.84	Q V				



15+40	1.8907	2.01	| Q |	|	|	V |
15+45	1.9044	1.98	| Q |	|	|	V |
15+50	1.9180	1.98	| Q |	|	|	V |
15+55	1.9316	1.98	| Q |	|	|	V |
16+ 0	1.9452	1.98	| Q |	|	|	V |
16+ 5	1.9532	1.15	| Q |	|	|	V |
16+10	1.9569	0.54	| Q |	|	|	V |
16+15	1.9598	0.42	|Q |	|	|	V |
16+20	1.9626	0.42	|Q |	|	|	V |
16+25	1.9655	0.42	|Q |	|	|	V |
16+30	1.9684	0.42	|Q |	|	|	V |
16+35	1.9708	0.36	|Q |	|	|	V |
16+40	1.9731	0.32	|Q |	|	|	V |
16+45	1.9752	0.31	|Q |	|	|	V |
16+50	1.9774	0.31	|Q |	|	|	V |
16+55	1.9795	0.31	|Q |	|	|	V |
17+ 0	1.9817	0.31	|Q |	|	|	V |
17+ 5	1.9846	0.42	|Q |	|	|	V |
17+10	1.9880	0.50	| Q |	|	|	V |
17+15	1.9916	0.52	| Q |	|	|	V |
17+20	1.9952	0.52	| Q |	|	|	V |
17+25	1.9988	0.52	| Q |	|	|	V |
17+30	2.0024	0.52	| Q |	|	|	V |
17+35	2.0060	0.52	| Q |	|	|	V |
17+40	2.0096	0.52	| Q |	|	|	V |
17+45	2.0132	0.52	| Q |	|	|	V |
17+50	2.0164	0.47	|Q |	|	|	V |
17+55	2.0193	0.42	|Q |	|	|	V |
18+ 0	2.0222	0.42	|Q |	|	|	V |
18+ 5	2.0250	0.42	|Q |	|	|	V |
18+10	2.0279	0.42	|Q |	|	|	V |
18+15	2.0308	0.42	|Q |	|	|	V |
18+20	2.0336	0.42	|Q |	|	|	V |
18+25	2.0365	0.42	|Q |	|	|	V |
18+30	2.0394	0.42	|Q |	|	|	V |
18+35	2.0419	0.36	|Q |	|	|	V |
18+40	2.0441	0.32	|Q |	|	|	V |
18+45	2.0462	0.31	|Q |	|	|	V |
18+50	2.0480	0.26	|Q |	|	|	V |
18+55	2.0495	0.22	Q |	|	|	V |
19+ 0	2.0509	0.21	Q |	|	|	V |
19+ 5	2.0527	0.26	|Q |	|	|	V |
19+10	2.0548	0.30	|Q |	|	|	V |
19+15	2.0570	0.31	|Q |	|	|	V |
19+20	2.0595	0.37	|Q |	|	|	V |
19+25	2.0623	0.41	|Q |	|	|	V |
19+30	2.0652	0.42	|Q |	|	|	V |
19+35	2.0677	0.36	|Q |	|	|	V |
19+40	2.0699	0.32	|Q |	|	|	V |
19+45	2.0720	0.31	|Q |	|	|	V |
19+50	2.0738	0.26	|Q |	|	|	V |
19+55	2.0753	0.22	Q |	|	|	V |
20+ 0	2.0767	0.21	Q |	|	|	V |
20+ 5	2.0785	0.26	|Q |	|	|	V |
20+10	2.0806	0.30	|Q |	|	|	V |
20+15	2.0828	0.31	|Q |	|	|	V |
20+20	2.0849	0.31	|Q |	|	|	V |
20+25	2.0871	0.31	|Q |	|	|	V |
20+30	2.0893	0.31	|Q |	|	|	V |
20+35	2.0914	0.31	|Q |	|	|	V |

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  20+40       2.0936      0.31  |Q        |          |          |        V |
  20+45       2.0957      0.31  |Q        |          |          |        V |
  20+50       2.0975      0.26  |Q        |          |          |        V |
  20+55       2.0990      0.22  Q         |          |          |        V |
  21+ 0       2.1004      0.21  Q         |          |          |        V |
  21+ 5       2.1022      0.26  |Q        |          |          |        V |
  21+10       2.1043      0.30  |Q        |          |          |        V |
  21+15       2.1065      0.31  |Q        |          |          |         V|
  21+20       2.1082      0.26  |Q        |          |          |         V|
  21+25       2.1097      0.22  Q         |          |          |         V|
  21+30       2.1112      0.21  Q         |          |          |         V|
  21+35       2.1130      0.26  |Q        |          |          |         V|
  21+40       2.1151      0.30  |Q        |          |          |         V|
  21+45       2.1172      0.31  |Q        |          |          |         V|
  21+50       2.1190      0.26  |Q        |          |          |         V|
  21+55       2.1205      0.22  Q         |          |          |         V|
  22+ 0       2.1219      0.21  Q         |          |          |         V|
  22+ 5       2.1237      0.26  |Q        |          |          |         V|
  22+10       2.1258      0.30  |Q        |          |          |         V|
  22+15       2.1280      0.31  |Q        |          |          |         V|
  22+20       2.1298      0.26  |Q        |          |          |         V|
  22+25       2.1312      0.22  Q         |          |          |         V|
  22+30       2.1327      0.21  Q         |          |          |         V|
  22+35       2.1341      0.21  Q         |          |          |         V|
  22+40       2.1355      0.21  Q         |          |          |         V|
  22+45       2.1370      0.21  Q         |          |          |         V|
  22+50       2.1384      0.21  Q         |          |          |         V|
  22+55       2.1399      0.21  Q         |          |          |         V|
  23+ 0       2.1413      0.21  Q         |          |          |         V|
  23+ 5       2.1427      0.21  Q         |          |          |         V|
  23+10       2.1442      0.21  Q         |          |          |         V|
  23+15       2.1456      0.21  Q         |          |          |         V|
  23+20       2.1470      0.21  Q         |          |          |         V|
  23+25       2.1485      0.21  Q         |          |          |         V|
  23+30       2.1499      0.21  Q         |          |          |         V|
  23+35       2.1513      0.21  Q         |          |          |         V|
  23+40       2.1528      0.21  Q         |          |          |         V|
  23+45       2.1542      0.21  Q         |          |          |         V|
  23+50       2.1556      0.21  Q         |          |          |         V|
  23+55       2.1571      0.21  Q         |          |          |         V|
  24+ 0       2.1585      0.21  Q         |          |          |         V|
  24+ 5       2.1592      0.10  Q         |          |          |         V|
  24+10       2.1593      0.02  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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 10/24/24 File: AREAC110.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
10-YR
1-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	0.59	4.19

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.45	10.31

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 0.944(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.944(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
		Sum = 100.000	Sum=	7.166

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	4.40	0.498	(0.201)		0.184	0.314
2	0.17	4.50	0.510	(0.201)		0.189	0.321
3	0.25	5.40	0.612	0.201	(	0.226)	0.410
4	0.33	5.40	0.612	0.201	(	0.226)	0.410
5	0.42	5.70	0.646	0.201	(	0.239)	0.444
6	0.50	6.40	0.725	0.201	(	0.268)	0.524
7	0.58	7.90	0.895	0.201	(	0.331)	0.694
8	0.67	9.10	1.031	0.201	(	0.381)	0.829
9	0.75	12.80	1.450	0.201	(	0.536)	1.248
10	0.83	25.60	2.899	0.201	(	1.073)	2.698
11	0.92	7.90	0.895	0.201	(	0.331)	0.694
12	1.00	4.90	0.555	0.201	(	0.205)	0.354
	(Loss Rate Not Used)						
Sum =		100.0				Sum =	8.9

```
    Flood volume = Effective rainfall      0.75(In)
     times area       7.1(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
    Total soil loss =      0.20(In)
    Total soil loss =     0.118(Ac.Ft)
    Total rainfall =      0.94(In)
    Flood volume =       19228.7 Cubic Feet
    Total soil loss =        5128.9 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     14.910(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - 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       0.0091      1.32  V Q       |          |          |          |
    0+10       0.0240      2.16  | V Q     |          |          |          |
    0+15       0.0425      2.68  |  V Q    |          |          |          |
    0+20       0.0625      2.91  |    Q    |          |          |          |
    0+25       0.0837      3.09  |     QV  |          |          |          |
    0+30       0.1079      3.51  |      Q V|          |          |          |
    0+35       0.1385      4.44  |       Q | V        |          |          |
    0+40       0.1762      5.48  |         Q    V     |          |          |
    0+45       0.2290      7.66  |          |    Q    V          |          |
    0+50       0.3317     14.91  |          |          |        QV          |
    0+55       0.4029     10.34  |          |          Q          |     V    |
    1+ 0       0.4325      4.29  |       Q  |          |          |        V |
    1+ 5       0.4405      1.17  | Q        |          |          |        V |
    1+10       0.4414      0.13  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 10/24/24 File: AREAC310.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
10-YR
3-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.00	7.11

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	2.50	17.78

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.617(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.617(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	1.30	0.252	(0.201)		0.093	0.159
2	0.17	1.30	0.252	(0.201)		0.093	0.159
3	0.25	1.10	0.213	(0.201)		0.079	0.134
4	0.33	1.50	0.291	(0.201)		0.108	0.183
5	0.42	1.50	0.291	(0.201)		0.108	0.183
6	0.50	1.80	0.349	(0.201)		0.129	0.220
7	0.58	1.50	0.291	(0.201)		0.108	0.183
8	0.67	1.80	0.349	(0.201)		0.129	0.220
9	0.75	1.80	0.349	(0.201)		0.129	0.220
10	0.83	1.50	0.291	(0.201)		0.108	0.183
11	0.92	1.60	0.310	(0.201)		0.115	0.196
12	1.00	1.80	0.349	(0.201)		0.129	0.220
13	1.08	2.20	0.427	(0.201)		0.158	0.269
14	1.17	2.20	0.427	(0.201)		0.158	0.269
15	1.25	2.20	0.427	(0.201)		0.158	0.269
16	1.33	2.00	0.388	(0.201)		0.144	0.244

17	1.42	2.60	0.505	(	0.201)	0.187	0.318
18	1.50	2.70	0.524	(	0.201)	0.194	0.330
19	1.58	2.40	0.466	(	0.201)	0.172	0.293
20	1.67	2.70	0.524	(	0.201)	0.194	0.330
21	1.75	3.30	0.640		0.201	(0.237)	0.439
22	1.83	3.10	0.602		0.201	(0.223)	0.400
23	1.92	2.90	0.563		0.201	(0.208)	0.362
24	2.00	3.00	0.582		0.201	(0.215)	0.381
25	2.08	3.10	0.602		0.201	(0.223)	0.400
26	2.17	4.20	0.815		0.201	(0.302)	0.614
27	2.25	5.00	0.970		0.201	(0.359)	0.769
28	2.33	3.50	0.679		0.201	(0.251)	0.478
29	2.42	6.80	1.320		0.201	(0.488)	1.118
30	2.50	7.30	1.417		0.201	(0.524)	1.215
31	2.58	8.20	1.591		0.201	(0.589)	1.390
32	2.67	5.90	1.145		0.201	(0.424)	0.944
33	2.75	2.00	0.388	(	0.201)	0.144	0.244
34	2.83	1.80	0.349	(	0.201)	0.129	0.220
35	2.92	1.80	0.349	(	0.201)	0.129	0.220
36	3.00	0.60	0.116	(	0.201)	0.043	0.073

(Loss Rate Not Used)

Sum = 100.0 Sum = 13.9

Flood volume = Effective rainfall 1.15(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 0.46(In)
Total soil loss = 0.274(Ac.Ft)
Total rainfall = 1.62(In)
Flood volume = 29794.9 Cubic Feet
Total soil loss = 11940.3 Cubic Feet

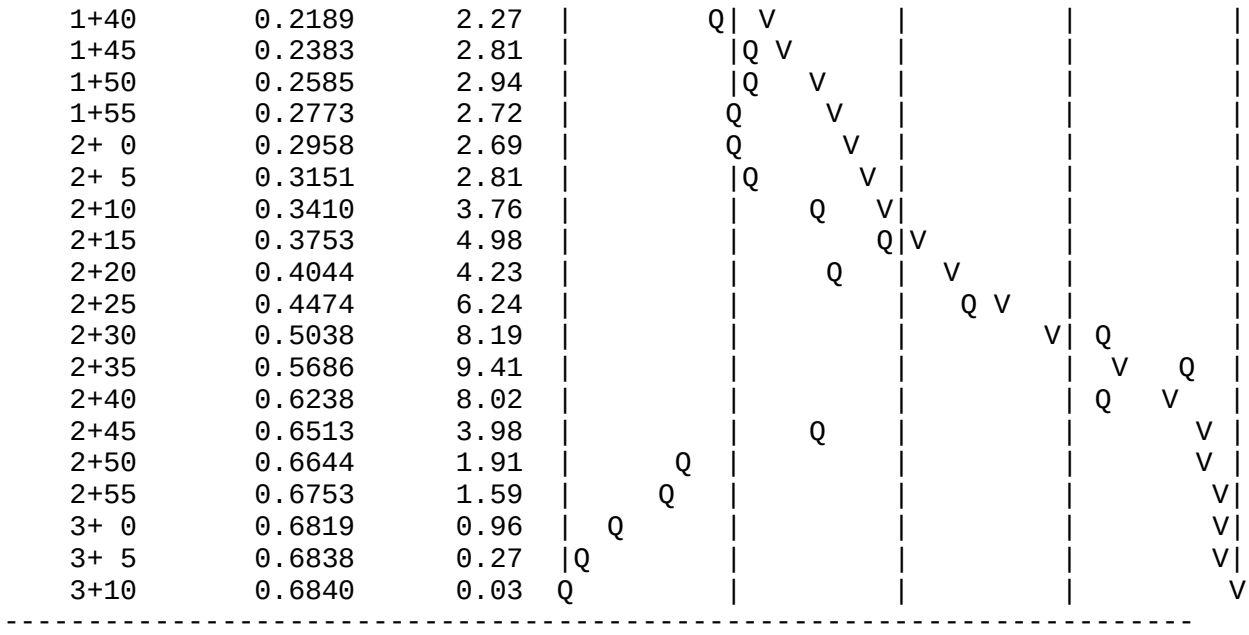
Peak flow rate of this hydrograph = 9.414(CFS)

++

3 - 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	0.0046	0.67	V Q | | | |
0+10	0.0121	1.08	V Q | | | |
0+15	0.0192	1.04	|V Q | | | |
0+20	0.0273	1.18	|V Q | | | |
0+25	0.0362	1.30	| V Q | | | |
0+30	0.0464	1.47	| V Q | | | |
0+35	0.0561	1.41	| V Q | | | |
0+40	0.0663	1.48	| V Q | | | |
0+45	0.0771	1.56	| V Q | | | |
0+50	0.0869	1.42	| Q | | | |
0+55	0.0964	1.38	| Q | | | |
1+ 0	0.1067	1.50	| Q | | | |
1+ 5	0.1189	1.77	| VQ | | | |
1+10	0.1321	1.91	| Q | | | |
1+15	0.1453	1.93	| QV | | | |
1+20	0.1579	1.83	| Q V| | | |
1+25	0.1722	2.07	| Q V | | |
1+30	0.1880	2.30	| QV | | |
1+35	0.2032	2.21	| Q |V | | |


1+40 0.2189 2.27
1+45 0.2383 2.81
1+50 0.2585 2.94
1+55 0.2773 2.72
2+ 0 0.2958 2.69
2+ 5 0.3151 2.81
2+10 0.3410 3.76
2+15 0.3753 4.98
2+20 0.4044 4.23
2+25 0.4474 6.24
2+30 0.5038 8.19
2+35 0.5686 9.41
2+40 0.6238 8.02
2+45 0.6513 3.98
2+50 0.6644 1.91
2+55 0.6753 1.59
3+ 0 0.6819 0.96
3+ 5 0.6838 0.27
3+10 0.6840 0.03

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 10/24/24 File: AREAC610.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
10-YR
6-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.40	9.95

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	3.50	24.89

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 2.264(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.264(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.50	0.136	(0.201)	0.050	0.086
2	0.17	0.60	0.163	(0.201)	0.060	0.103
3	0.25	0.60	0.163	(0.201)	0.060	0.103
4	0.33	0.60	0.163	(0.201)	0.060	0.103
5	0.42	0.60	0.163	(0.201)	0.060	0.103
6	0.50	0.70	0.190	(0.201)	0.070	0.120
7	0.58	0.70	0.190	(0.201)	0.070	0.120
8	0.67	0.70	0.190	(0.201)	0.070	0.120
9	0.75	0.70	0.190	(0.201)	0.070	0.120
10	0.83	0.70	0.190	(0.201)	0.070	0.120
11	0.92	0.70	0.190	(0.201)	0.070	0.120
12	1.00	0.80	0.217	(0.201)	0.080	0.137
13	1.08	0.80	0.217	(0.201)	0.080	0.137
14	1.17	0.80	0.217	(0.201)	0.080	0.137
15	1.25	0.80	0.217	(0.201)	0.080	0.137
16	1.33	0.80	0.217	(0.201)	0.080	0.137

17	1.42	0.80	0.217	(0.201)	0.080	0.137
18	1.50	0.80	0.217	(0.201)	0.080	0.137
19	1.58	0.80	0.217	(0.201)	0.080	0.137
20	1.67	0.80	0.217	(0.201)	0.080	0.137
21	1.75	0.80	0.217	(0.201)	0.080	0.137
22	1.83	0.80	0.217	(0.201)	0.080	0.137
23	1.92	0.80	0.217	(0.201)	0.080	0.137
24	2.00	0.90	0.245	(0.201)	0.090	0.154
25	2.08	0.80	0.217	(0.201)	0.080	0.137
26	2.17	0.90	0.245	(0.201)	0.090	0.154
27	2.25	0.90	0.245	(0.201)	0.090	0.154
28	2.33	0.90	0.245	(0.201)	0.090	0.154
29	2.42	0.90	0.245	(0.201)	0.090	0.154
30	2.50	0.90	0.245	(0.201)	0.090	0.154
31	2.58	0.90	0.245	(0.201)	0.090	0.154
32	2.67	0.90	0.245	(0.201)	0.090	0.154
33	2.75	1.00	0.272	(0.201)	0.101	0.171
34	2.83	1.00	0.272	(0.201)	0.101	0.171
35	2.92	1.00	0.272	(0.201)	0.101	0.171
36	3.00	1.00	0.272	(0.201)	0.101	0.171
37	3.08	1.00	0.272	(0.201)	0.101	0.171
38	3.17	1.10	0.299	(0.201)	0.111	0.188
39	3.25	1.10	0.299	(0.201)	0.111	0.188
40	3.33	1.10	0.299	(0.201)	0.111	0.188
41	3.42	1.20	0.326	(0.201)	0.121	0.205
42	3.50	1.30	0.353	(0.201)	0.131	0.222
43	3.58	1.40	0.380	(0.201)	0.141	0.240
44	3.67	1.40	0.380	(0.201)	0.141	0.240
45	3.75	1.50	0.408	(0.201)	0.151	0.257
46	3.83	1.50	0.408	(0.201)	0.151	0.257
47	3.92	1.60	0.435	(0.201)	0.161	0.274
48	4.00	1.60	0.435	(0.201)	0.161	0.274
49	4.08	1.70	0.462	(0.201)	0.171	0.291
50	4.17	1.80	0.489	(0.201)	0.181	0.308
51	4.25	1.90	0.516	(0.201)	0.191	0.325
52	4.33	2.00	0.543	(0.201)	0.201	0.342
53	4.42	2.10	0.571	0.201	(0.211)	0.369
54	4.50	2.10	0.571	0.201	(0.211)	0.369
55	4.58	2.20	0.598	0.201	(0.221)	0.396
56	4.67	2.30	0.625	0.201	(0.231)	0.424
57	4.75	2.40	0.652	0.201	(0.241)	0.451
58	4.83	2.40	0.652	0.201	(0.241)	0.451
59	4.92	2.50	0.679	0.201	(0.251)	0.478
60	5.00	2.60	0.706	0.201	(0.261)	0.505
61	5.08	3.10	0.842	0.201	(0.312)	0.641
62	5.17	3.60	0.978	0.201	(0.362)	0.777
63	5.25	3.90	1.060	0.201	(0.392)	0.858
64	5.33	4.20	1.141	0.201	(0.422)	0.940
65	5.42	4.70	1.277	0.201	(0.472)	1.076
66	5.50	5.60	1.521	0.201	(0.563)	1.320
67	5.58	1.90	0.516	(0.201)	0.191	0.325
68	5.67	0.90	0.245	(0.201)	0.090	0.154
69	5.75	0.60	0.163	(0.201)	0.060	0.103
70	5.83	0.50	0.136	(0.201)	0.050	0.086
71	5.92	0.30	0.082	(0.201)	0.030	0.051
72	6.00	0.20	0.054	(0.201)	0.020	0.034

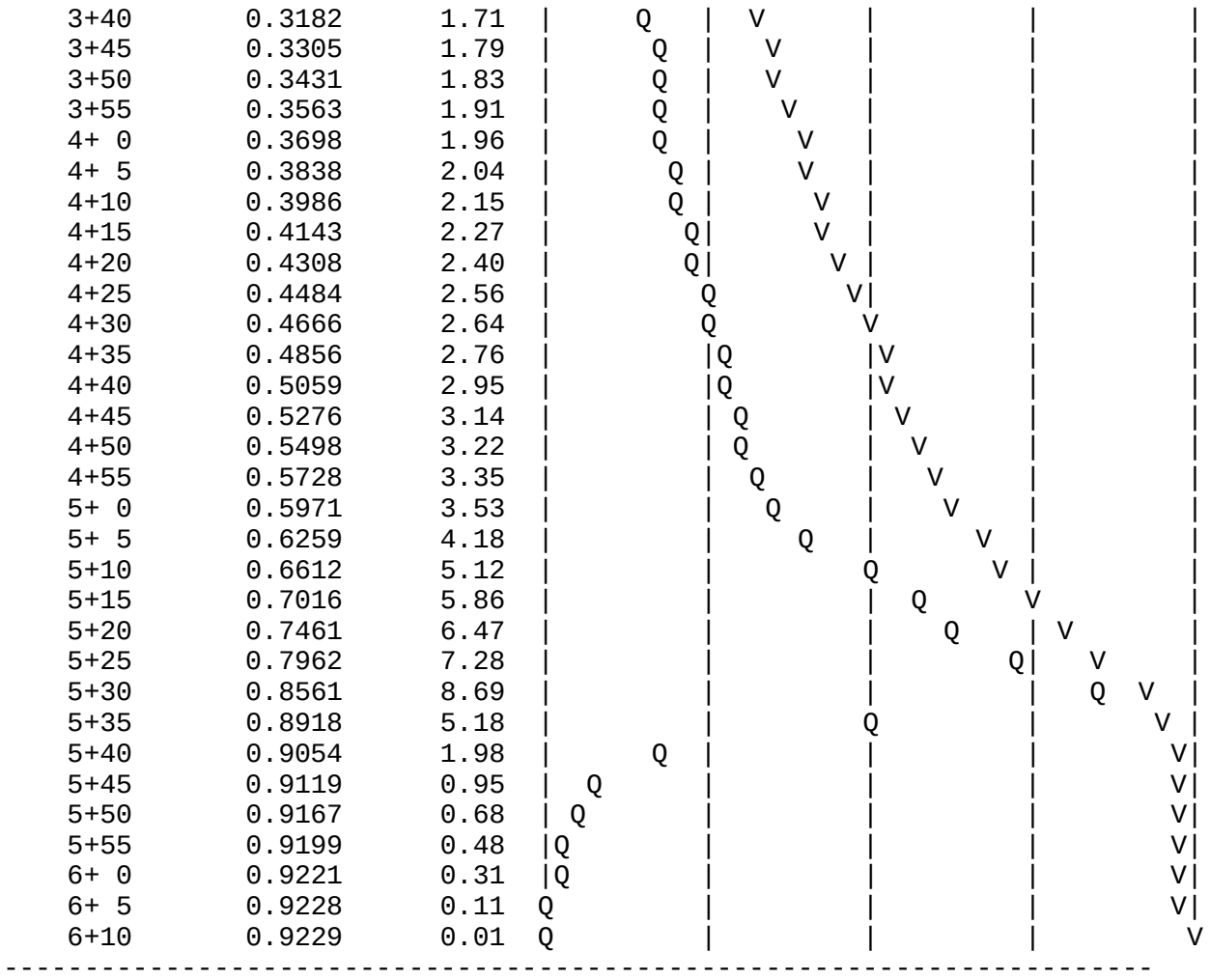
(Loss Rate Not Used)

Sum = 100.0 Sum = 18.7

Flood volume = Effective rainfall 1.56(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 0.9(Ac.Ft)

```
   Total soil loss =      0.71(In)
   Total soil loss =     0.418(Ac.Ft)
   Total rainfall =      2.26(In)
   Flood volume =       40200.7 Cubic Feet
   Total soil loss =       18229.0 Cubic Feet
   ------------------------------------------------------------------------
    Peak flow rate of this hydrograph =      8.693(CFS)
   ------------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0025      0.36  VQ        |         |         |         |
  0+10       0.0070      0.65  V Q       |         |         |         |
  0+15       0.0120      0.73  V Q       |         |         |         |
  0+20       0.0171      0.74  V Q       |         |         |         |
  0+25       0.0222      0.74  V Q       |         |         |         |
  0+30       0.0277      0.81  |V Q       |         |         |         |
  0+35       0.0336      0.85  |V Q       |         |         |         |
  0+40       0.0395      0.86  |V Q       |         |         |         |
  0+45       0.0454      0.86  |V Q       |         |         |         |
  0+50       0.0513      0.86  | VQ       |         |         |         |
  0+55       0.0573      0.86  | VQ       |         |         |         |
  1+ 0       0.0637      0.93  | VQ       |         |         |         |
  1+ 5       0.0704      0.98  |  Q       |         |         |         |
  1+10       0.0771      0.98  |  Q       |         |         |         |
  1+15       0.0839      0.98  |  Q       |         |         |         |
  1+20       0.0907      0.98  |  Q       |         |         |         |
  1+25       0.0974      0.98  |  QV      |         |         |         |
  1+30       0.1042      0.98  |  QV      |         |         |         |
  1+35       0.1109      0.98  |  QV      |         |         |         |
  1+40       0.1177      0.98  |  Q V     |         |         |         |
  1+45       0.1245      0.98  |  Q V     |         |         |         |
  1+50       0.1312      0.98  |  Q V     |         |         |         |
  1+55       0.1380      0.98  |  Q V     |         |         |         |
  2+ 0       0.1452      1.05  |   Q V    |         |         |         |
  2+ 5       0.1523      1.03  |   Q V    |         |         |         |
  2+10       0.1596      1.06  |   Q V    |         |         |         |
  2+15       0.1672      1.10  |   Q  V   |         |         |         |
  2+20       0.1748      1.10  |   Q  V   |         |         |         |
  2+25       0.1824      1.10  |   Q  V   |         |         |         |
  2+30       0.1900      1.10  |   Q   V  |         |         |         |
  2+35       0.1976      1.10  |   Q   V  |         |         |         |
  2+40       0.2052      1.10  |   Q   V  |         |         |         |
  2+45       0.2133      1.18  |   Q    V|         |         |         |
  2+50       0.2217      1.22  |   Q    V|         |         |         |
  2+55       0.2302      1.23  |   Q    V|         |         |         |
  3+ 0       0.2386      1.23  |   Q     V         |         |         |
  3+ 5       0.2471      1.23  |   Q     V         |         |         |
  3+10       0.2560      1.30  |    Q    |V        |         |         |
  3+15       0.2653      1.34  |    Q    |V        |         |         |
  3+20       0.2746      1.35  |    Q    |V        |         |         |
  3+25       0.2844      1.42  |    Q    | V       |         |         |
  3+30       0.2949      1.54  |     Q   | V       |         |         |
  3+35       0.3064      1.66  |     Q   |  V      |         |         |
```


3+40 0.3182 1.71
3+45 0.3305 1.79
3+50 0.3431 1.83
3+55 0.3563 1.91
4+ 0 0.3698 1.96
4+ 5 0.3838 2.04
4+10 0.3986 2.15
4+15 0.4143 2.27
4+20 0.4308 2.40
4+25 0.4484 2.56
4+30 0.4666 2.64
4+35 0.4856 2.76
4+40 0.5059 2.95
4+45 0.5276 3.14
4+50 0.5498 3.22
4+55 0.5728 3.35
5+ 0 0.5971 3.53
5+ 5 0.6259 4.18
5+10 0.6612 5.12
5+15 0.7016 5.86
5+20 0.7461 6.47
5+25 0.7962 7.28
5+30 0.8561 8.69
5+35 0.8918 5.18
5+40 0.9054 1.98
5+45 0.9119 0.95
5+50 0.9167 0.68
5+55 0.9199 0.48
6+ 0 0.9221 0.31
6+ 5 0.9228 0.11
6+10 0.9229 0.01

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 10/24/24 File: AREAC2410.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
10-YR
24-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 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]
7.11	2.50	17.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	6.00	42.66

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 3.940(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.940(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.357)		0.012	0.020
2	0.17	0.07	0.032	(0.355)		0.012	0.020
3	0.25	0.07	0.032	(0.354)		0.012	0.020
4	0.33	0.10	0.047	(0.352)		0.017	0.030
5	0.42	0.10	0.047	(0.351)		0.017	0.030
6	0.50	0.10	0.047	(0.350)		0.017	0.030
7	0.58	0.10	0.047	(0.348)		0.017	0.030
8	0.67	0.10	0.047	(0.347)		0.017	0.030
9	0.75	0.10	0.047	(0.346)		0.017	0.030
10	0.83	0.13	0.063	(0.344)		0.023	0.040
11	0.92	0.13	0.063	(0.343)		0.023	0.040
12	1.00	0.13	0.063	(0.342)		0.023	0.040
13	1.08	0.10	0.047	(0.340)		0.017	0.030
14	1.17	0.10	0.047	(0.339)		0.017	0.030
15	1.25	0.10	0.047	(0.338)		0.017	0.030
16	1.33	0.10	0.047	(0.336)		0.017	0.030

17	1.42	0.10	0.047	(0.335)	0.017	0.030
18	1.50	0.10	0.047	(0.334)	0.017	0.030
19	1.58	0.10	0.047	(0.332)	0.017	0.030
20	1.67	0.10	0.047	(0.331)	0.017	0.030
21	1.75	0.10	0.047	(0.330)	0.017	0.030
22	1.83	0.13	0.063	(0.328)	0.023	0.040
23	1.92	0.13	0.063	(0.327)	0.023	0.040
24	2.00	0.13	0.063	(0.326)	0.023	0.040
25	2.08	0.13	0.063	(0.324)	0.023	0.040
26	2.17	0.13	0.063	(0.323)	0.023	0.040
27	2.25	0.13	0.063	(0.322)	0.023	0.040
28	2.33	0.13	0.063	(0.320)	0.023	0.040
29	2.42	0.13	0.063	(0.319)	0.023	0.040
30	2.50	0.13	0.063	(0.318)	0.023	0.040
31	2.58	0.17	0.079	(0.316)	0.029	0.050
32	2.67	0.17	0.079	(0.315)	0.029	0.050
33	2.75	0.17	0.079	(0.314)	0.029	0.050
34	2.83	0.17	0.079	(0.313)	0.029	0.050
35	2.92	0.17	0.079	(0.311)	0.029	0.050
36	3.00	0.17	0.079	(0.310)	0.029	0.050
37	3.08	0.17	0.079	(0.309)	0.029	0.050
38	3.17	0.17	0.079	(0.307)	0.029	0.050
39	3.25	0.17	0.079	(0.306)	0.029	0.050
40	3.33	0.17	0.079	(0.305)	0.029	0.050
41	3.42	0.17	0.079	(0.304)	0.029	0.050
42	3.50	0.17	0.079	(0.302)	0.029	0.050
43	3.58	0.17	0.079	(0.301)	0.029	0.050
44	3.67	0.17	0.079	(0.300)	0.029	0.050
45	3.75	0.17	0.079	(0.299)	0.029	0.050
46	3.83	0.20	0.095	(0.297)	0.035	0.060
47	3.92	0.20	0.095	(0.296)	0.035	0.060
48	4.00	0.20	0.095	(0.295)	0.035	0.060
49	4.08	0.20	0.095	(0.293)	0.035	0.060
50	4.17	0.20	0.095	(0.292)	0.035	0.060
51	4.25	0.20	0.095	(0.291)	0.035	0.060
52	4.33	0.23	0.110	(0.290)	0.041	0.069
53	4.42	0.23	0.110	(0.289)	0.041	0.069
54	4.50	0.23	0.110	(0.287)	0.041	0.069
55	4.58	0.23	0.110	(0.286)	0.041	0.069
56	4.67	0.23	0.110	(0.285)	0.041	0.069
57	4.75	0.23	0.110	(0.284)	0.041	0.069
58	4.83	0.27	0.126	(0.282)	0.047	0.079
59	4.92	0.27	0.126	(0.281)	0.047	0.079
60	5.00	0.27	0.126	(0.280)	0.047	0.079
61	5.08	0.20	0.095	(0.279)	0.035	0.060
62	5.17	0.20	0.095	(0.278)	0.035	0.060
63	5.25	0.20	0.095	(0.276)	0.035	0.060
64	5.33	0.23	0.110	(0.275)	0.041	0.069
65	5.42	0.23	0.110	(0.274)	0.041	0.069
66	5.50	0.23	0.110	(0.273)	0.041	0.069
67	5.58	0.27	0.126	(0.271)	0.047	0.079
68	5.67	0.27	0.126	(0.270)	0.047	0.079
69	5.75	0.27	0.126	(0.269)	0.047	0.079
70	5.83	0.27	0.126	(0.268)	0.047	0.079
71	5.92	0.27	0.126	(0.267)	0.047	0.079
72	6.00	0.27	0.126	(0.266)	0.047	0.079
73	6.08	0.30	0.142	(0.264)	0.052	0.089
74	6.17	0.30	0.142	(0.263)	0.052	0.089
75	6.25	0.30	0.142	(0.262)	0.052	0.089
76	6.33	0.30	0.142	(0.261)	0.052	0.089

77	6.42	0.30	0.142	(0.260)	0.052	0.089
78	6.50	0.30	0.142	(0.259)	0.052	0.089
79	6.58	0.33	0.158	(0.257)	0.058	0.099
80	6.67	0.33	0.158	(0.256)	0.058	0.099
81	6.75	0.33	0.158	(0.255)	0.058	0.099
82	6.83	0.33	0.158	(0.254)	0.058	0.099
83	6.92	0.33	0.158	(0.253)	0.058	0.099
84	7.00	0.33	0.158	(0.252)	0.058	0.099
85	7.08	0.33	0.158	(0.250)	0.058	0.099
86	7.17	0.33	0.158	(0.249)	0.058	0.099
87	7.25	0.33	0.158	(0.248)	0.058	0.099
88	7.33	0.37	0.173	(0.247)	0.064	0.109
89	7.42	0.37	0.173	(0.246)	0.064	0.109
90	7.50	0.37	0.173	(0.245)	0.064	0.109
91	7.58	0.40	0.189	(0.244)	0.070	0.119
92	7.67	0.40	0.189	(0.243)	0.070	0.119
93	7.75	0.40	0.189	(0.241)	0.070	0.119
94	7.83	0.43	0.205	(0.240)	0.076	0.129
95	7.92	0.43	0.205	(0.239)	0.076	0.129
96	8.00	0.43	0.205	(0.238)	0.076	0.129
97	8.08	0.50	0.236	(0.237)	0.087	0.149
98	8.17	0.50	0.236	(0.236)	0.087	0.149
99	8.25	0.50	0.236	(0.235)	0.087	0.149
100	8.33	0.50	0.236	(0.234)	0.087	0.149
101	8.42	0.50	0.236	(0.233)	0.087	0.149
102	8.50	0.50	0.236	(0.231)	0.087	0.149
103	8.58	0.53	0.252	(0.230)	0.093	0.159
104	8.67	0.53	0.252	(0.229)	0.093	0.159
105	8.75	0.53	0.252	(0.228)	0.093	0.159
106	8.83	0.57	0.268	(0.227)	0.099	0.169
107	8.92	0.57	0.268	(0.226)	0.099	0.169
108	9.00	0.57	0.268	(0.225)	0.099	0.169
109	9.08	0.63	0.299	(0.224)	0.111	0.189
110	9.17	0.63	0.299	(0.223)	0.111	0.189
111	9.25	0.63	0.299	(0.222)	0.111	0.189
112	9.33	0.67	0.315	(0.221)	0.117	0.199
113	9.42	0.67	0.315	(0.220)	0.117	0.199
114	9.50	0.67	0.315	(0.219)	0.117	0.199
115	9.58	0.70	0.331	(0.218)	0.122	0.208
116	9.67	0.70	0.331	(0.217)	0.122	0.208
117	9.75	0.70	0.331	(0.216)	0.122	0.208
118	9.83	0.73	0.347	(0.215)	0.128	0.218
119	9.92	0.73	0.347	(0.213)	0.128	0.218
120	10.00	0.73	0.347	(0.212)	0.128	0.218
121	10.08	0.50	0.236	(0.211)	0.087	0.149
122	10.17	0.50	0.236	(0.210)	0.087	0.149
123	10.25	0.50	0.236	(0.209)	0.087	0.149
124	10.33	0.50	0.236	(0.208)	0.087	0.149
125	10.42	0.50	0.236	(0.207)	0.087	0.149
126	10.50	0.50	0.236	(0.206)	0.087	0.149
127	10.58	0.67	0.315	(0.205)	0.117	0.199
128	10.67	0.67	0.315	(0.204)	0.117	0.199
129	10.75	0.67	0.315	(0.203)	0.117	0.199
130	10.83	0.67	0.315	(0.202)	0.117	0.199
131	10.92	0.67	0.315	(0.201)	0.117	0.199
132	11.00	0.67	0.315	(0.200)	0.117	0.199
133	11.08	0.63	0.299	(0.199)	0.111	0.189
134	11.17	0.63	0.299	(0.198)	0.111	0.189
135	11.25	0.63	0.299	(0.197)	0.111	0.189
136	11.33	0.63	0.299	(0.196)	0.111	0.189

137	11.42	0.63	0.299	(0.195)	0.111	0.189
138	11.50	0.63	0.299	(0.194)	0.111	0.189
139	11.58	0.57	0.268	(0.194)	0.099	0.169
140	11.67	0.57	0.268	(0.193)	0.099	0.169
141	11.75	0.57	0.268	(0.192)	0.099	0.169
142	11.83	0.60	0.284	(0.191)	0.105	0.179
143	11.92	0.60	0.284	(0.190)	0.105	0.179
144	12.00	0.60	0.284	(0.189)	0.105	0.179
145	12.08	0.83	0.394	(0.188)	0.146	0.248
146	12.17	0.83	0.394	(0.187)	0.146	0.248
147	12.25	0.83	0.394	(0.186)	0.146	0.248
148	12.33	0.87	0.410	(0.185)	0.152	0.258
149	12.42	0.87	0.410	(0.184)	0.152	0.258
150	12.50	0.87	0.410	(0.183)	0.152	0.258
151	12.58	0.93	0.441	(0.182)	0.163	0.278
152	12.67	0.93	0.441	(0.181)	0.163	0.278
153	12.75	0.93	0.441	(0.180)	0.163	0.278
154	12.83	0.97	0.457	(0.179)	0.169	0.288
155	12.92	0.97	0.457	(0.179)	0.169	0.288
156	13.00	0.97	0.457	(0.178)	0.169	0.288
157	13.08	1.13	0.536	0.177	(0.198)	0.359
158	13.17	1.13	0.536	0.176	(0.198)	0.360
159	13.25	1.13	0.536	0.175	(0.198)	0.361
160	13.33	1.13	0.536	0.174	(0.198)	0.362
161	13.42	1.13	0.536	0.173	(0.198)	0.363
162	13.50	1.13	0.536	0.172	(0.198)	0.364
163	13.58	0.77	0.362	(0.171)	0.134	0.228
164	13.67	0.77	0.362	(0.171)	0.134	0.228
165	13.75	0.77	0.362	(0.170)	0.134	0.228
166	13.83	0.77	0.362	(0.169)	0.134	0.228
167	13.92	0.77	0.362	(0.168)	0.134	0.228
168	14.00	0.77	0.362	(0.167)	0.134	0.228
169	14.08	0.90	0.426	(0.166)	0.157	0.268
170	14.17	0.90	0.426	(0.165)	0.157	0.268
171	14.25	0.90	0.426	(0.165)	0.157	0.268
172	14.33	0.87	0.410	(0.164)	0.152	0.258
173	14.42	0.87	0.410	(0.163)	0.152	0.258
174	14.50	0.87	0.410	(0.162)	0.152	0.258
175	14.58	0.87	0.410	(0.161)	0.152	0.258
176	14.67	0.87	0.410	(0.160)	0.152	0.258
177	14.75	0.87	0.410	(0.160)	0.152	0.258
178	14.83	0.83	0.394	(0.159)	0.146	0.248
179	14.92	0.83	0.394	(0.158)	0.146	0.248
180	15.00	0.83	0.394	(0.157)	0.146	0.248
181	15.08	0.80	0.378	(0.156)	0.140	0.238
182	15.17	0.80	0.378	(0.156)	0.140	0.238
183	15.25	0.80	0.378	(0.155)	0.140	0.238
184	15.33	0.77	0.362	(0.154)	0.134	0.228
185	15.42	0.77	0.362	(0.153)	0.134	0.228
186	15.50	0.77	0.362	(0.152)	0.134	0.228
187	15.58	0.63	0.299	(0.152)	0.111	0.189
188	15.67	0.63	0.299	(0.151)	0.111	0.189
189	15.75	0.63	0.299	(0.150)	0.111	0.189
190	15.83	0.63	0.299	(0.149)	0.111	0.189
191	15.92	0.63	0.299	(0.148)	0.111	0.189
192	16.00	0.63	0.299	(0.148)	0.111	0.189
193	16.08	0.13	0.063	(0.147)	0.023	0.040
194	16.17	0.13	0.063	(0.146)	0.023	0.040
195	16.25	0.13	0.063	(0.145)	0.023	0.040
196	16.33	0.13	0.063	(0.145)	0.023	0.040

197	16.42	0.13	0.063	(0.144)	0.023	0.040
198	16.50	0.13	0.063	(0.143)	0.023	0.040
199	16.58	0.10	0.047	(0.143)	0.017	0.030
200	16.67	0.10	0.047	(0.142)	0.017	0.030
201	16.75	0.10	0.047	(0.141)	0.017	0.030
202	16.83	0.10	0.047	(0.140)	0.017	0.030
203	16.92	0.10	0.047	(0.140)	0.017	0.030
204	17.00	0.10	0.047	(0.139)	0.017	0.030
205	17.08	0.17	0.079	(0.138)	0.029	0.050
206	17.17	0.17	0.079	(0.138)	0.029	0.050
207	17.25	0.17	0.079	(0.137)	0.029	0.050
208	17.33	0.17	0.079	(0.136)	0.029	0.050
209	17.42	0.17	0.079	(0.135)	0.029	0.050
210	17.50	0.17	0.079	(0.135)	0.029	0.050
211	17.58	0.17	0.079	(0.134)	0.029	0.050
212	17.67	0.17	0.079	(0.133)	0.029	0.050
213	17.75	0.17	0.079	(0.133)	0.029	0.050
214	17.83	0.13	0.063	(0.132)	0.023	0.040
215	17.92	0.13	0.063	(0.132)	0.023	0.040
216	18.00	0.13	0.063	(0.131)	0.023	0.040
217	18.08	0.13	0.063	(0.130)	0.023	0.040
218	18.17	0.13	0.063	(0.130)	0.023	0.040
219	18.25	0.13	0.063	(0.129)	0.023	0.040
220	18.33	0.13	0.063	(0.128)	0.023	0.040
221	18.42	0.13	0.063	(0.128)	0.023	0.040
222	18.50	0.13	0.063	(0.127)	0.023	0.040
223	18.58	0.10	0.047	(0.126)	0.017	0.030
224	18.67	0.10	0.047	(0.126)	0.017	0.030
225	18.75	0.10	0.047	(0.125)	0.017	0.030
226	18.83	0.07	0.032	(0.125)	0.012	0.020
227	18.92	0.07	0.032	(0.124)	0.012	0.020
228	19.00	0.07	0.032	(0.123)	0.012	0.020
229	19.08	0.10	0.047	(0.123)	0.017	0.030
230	19.17	0.10	0.047	(0.122)	0.017	0.030
231	19.25	0.10	0.047	(0.122)	0.017	0.030
232	19.33	0.13	0.063	(0.121)	0.023	0.040
233	19.42	0.13	0.063	(0.121)	0.023	0.040
234	19.50	0.13	0.063	(0.120)	0.023	0.040
235	19.58	0.10	0.047	(0.119)	0.017	0.030
236	19.67	0.10	0.047	(0.119)	0.017	0.030
237	19.75	0.10	0.047	(0.118)	0.017	0.030
238	19.83	0.07	0.032	(0.118)	0.012	0.020
239	19.92	0.07	0.032	(0.117)	0.012	0.020
240	20.00	0.07	0.032	(0.117)	0.012	0.020
241	20.08	0.10	0.047	(0.116)	0.017	0.030
242	20.17	0.10	0.047	(0.116)	0.017	0.030
243	20.25	0.10	0.047	(0.115)	0.017	0.030
244	20.33	0.10	0.047	(0.115)	0.017	0.030
245	20.42	0.10	0.047	(0.114)	0.017	0.030
246	20.50	0.10	0.047	(0.114)	0.017	0.030
247	20.58	0.10	0.047	(0.113)	0.017	0.030
248	20.67	0.10	0.047	(0.113)	0.017	0.030
249	20.75	0.10	0.047	(0.112)	0.017	0.030
250	20.83	0.07	0.032	(0.112)	0.012	0.020
251	20.92	0.07	0.032	(0.111)	0.012	0.020
252	21.00	0.07	0.032	(0.111)	0.012	0.020
253	21.08	0.10	0.047	(0.111)	0.017	0.030
254	21.17	0.10	0.047	(0.110)	0.017	0.030
255	21.25	0.10	0.047	(0.110)	0.017	0.030
256	21.33	0.07	0.032	(0.109)	0.012	0.020

257	21.42	0.07	0.032	(0.109)	0.012	0.020
258	21.50	0.07	0.032	(0.108)	0.012	0.020
259	21.58	0.10	0.047	(0.108)	0.017	0.030
260	21.67	0.10	0.047	(0.108)	0.017	0.030
261	21.75	0.10	0.047	(0.107)	0.017	0.030
262	21.83	0.07	0.032	(0.107)	0.012	0.020
263	21.92	0.07	0.032	(0.107)	0.012	0.020
264	22.00	0.07	0.032	(0.106)	0.012	0.020
265	22.08	0.10	0.047	(0.106)	0.017	0.030
266	22.17	0.10	0.047	(0.106)	0.017	0.030
267	22.25	0.10	0.047	(0.105)	0.017	0.030
268	22.33	0.07	0.032	(0.105)	0.012	0.020
269	22.42	0.07	0.032	(0.105)	0.012	0.020
270	22.50	0.07	0.032	(0.104)	0.012	0.020
271	22.58	0.07	0.032	(0.104)	0.012	0.020
272	22.67	0.07	0.032	(0.104)	0.012	0.020
273	22.75	0.07	0.032	(0.103)	0.012	0.020
274	22.83	0.07	0.032	(0.103)	0.012	0.020
275	22.92	0.07	0.032	(0.103)	0.012	0.020
276	23.00	0.07	0.032	(0.103)	0.012	0.020
277	23.08	0.07	0.032	(0.102)	0.012	0.020
278	23.17	0.07	0.032	(0.102)	0.012	0.020
279	23.25	0.07	0.032	(0.102)	0.012	0.020
280	23.33	0.07	0.032	(0.102)	0.012	0.020
281	23.42	0.07	0.032	(0.101)	0.012	0.020
282	23.50	0.07	0.032	(0.101)	0.012	0.020
283	23.58	0.07	0.032	(0.101)	0.012	0.020
284	23.67	0.07	0.032	(0.101)	0.012	0.020
285	23.75	0.07	0.032	(0.101)	0.012	0.020
286	23.83	0.07	0.032	(0.101)	0.012	0.020
287	23.92	0.07	0.032	(0.101)	0.012	0.020
288	24.00	0.07	0.032	(0.101)	0.012	0.020

(Loss Rate Not Used)

Sum = 100.0 Sum = 29.9

Flood volume = Effective rainfall 2.49(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 1.5(Ac.Ft)
Total soil loss = 1.45(In)
Total soil loss = 0.857(Ac.Ft)
Total rainfall = 3.94(In)
Flood volume = 64368.0 Cubic Feet
Total soil loss = 37317.4 Cubic Feet

Peak flow rate of this hydrograph = 2.603(CFS)

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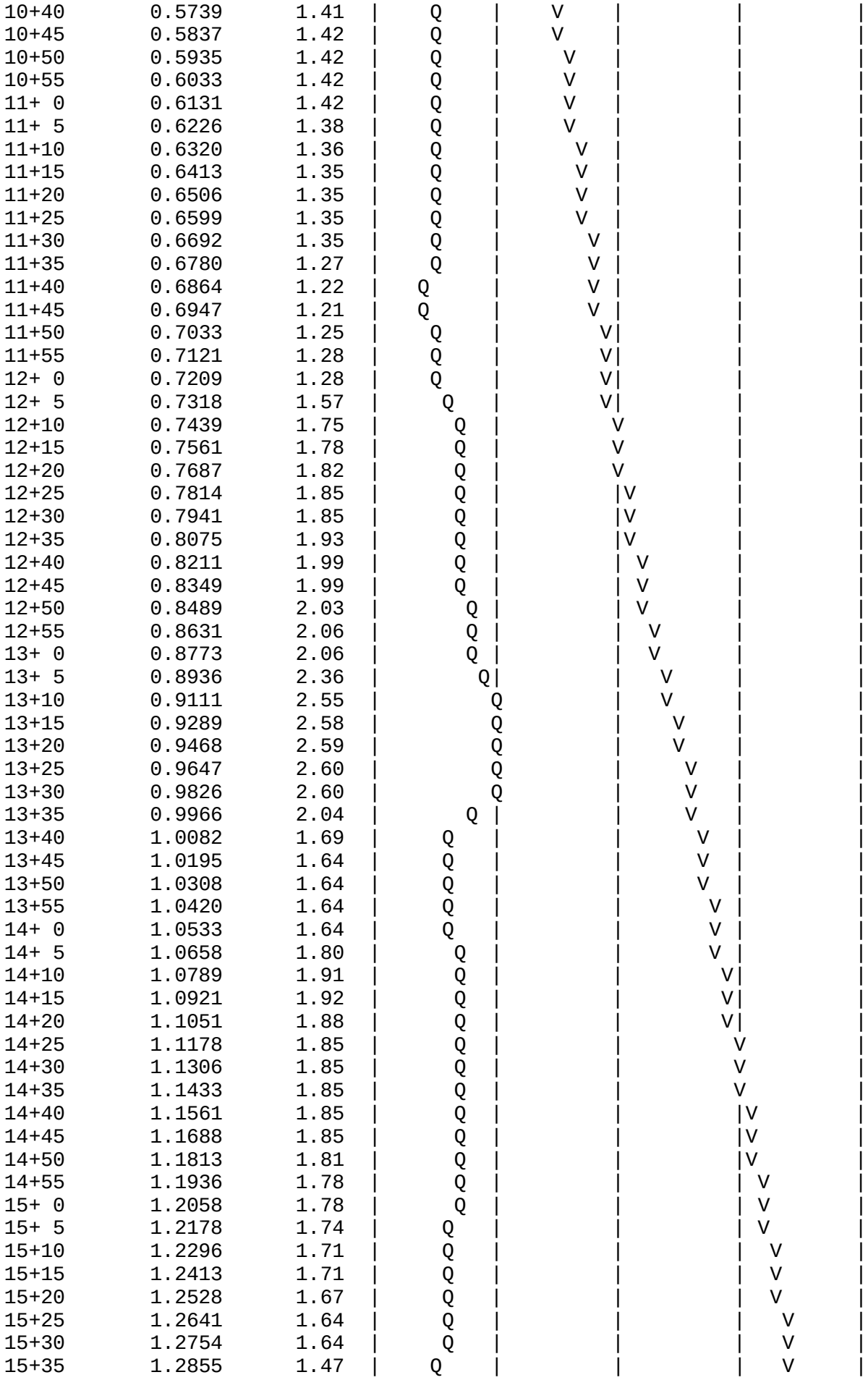
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0006	0.08	Q	|	|	|	|
0+10	0.0015	0.13	Q	|	|	|	|
0+15	0.0025	0.14	Q	|	|	|	|
0+20	0.0038	0.18	Q	|	|	|	|
0+25	0.0052	0.21	Q	|	|	|	|
0+30	0.0067	0.21	Q	|	|	|	|
0+35	0.0081	0.21	Q	|	|	|	|

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0+40       0.0096      0.21  Q        |          |          |          |
0+45       0.0111      0.21  Q        |          |          |          |
0+50       0.0128      0.26  VQ       |          |          |          |
0+55       0.0148      0.28  VQ       |          |          |          |
1+ 0       0.0167      0.28  VQ       |          |          |          |
1+ 5       0.0184      0.24  Q        |          |          |          |
1+10       0.0199      0.22  Q        |          |          |          |
1+15       0.0214      0.21  Q        |          |          |          |
1+20       0.0228      0.21  Q        |          |          |          |
1+25       0.0243      0.21  Q        |          |          |          |
1+30       0.0258      0.21  Q        |          |          |          |
1+35       0.0273      0.21  Q        |          |          |          |
1+40       0.0287      0.21  Q        |          |          |          |
1+45       0.0302      0.21  Q        |          |          |          |
1+50       0.0320      0.26  VQ       |          |          |          |
1+55       0.0339      0.28  VQ       |          |          |          |
2+ 0       0.0359      0.28  VQ       |          |          |          |
2+ 5       0.0378      0.28  |Q       |          |          |          |
2+10       0.0398      0.28  |Q       |          |          |          |
2+15       0.0417      0.28  |Q       |          |          |          |
2+20       0.0437      0.28  |Q       |          |          |          |
2+25       0.0457      0.28  |Q       |          |          |          |
2+30       0.0476      0.28  |Q       |          |          |          |
2+35       0.0499      0.33  |Q       |          |          |          |
2+40       0.0523      0.35  |Q       |          |          |          |
2+45       0.0547      0.36  |Q       |          |          |          |
2+50       0.0572      0.36  |Q       |          |          |          |
2+55       0.0597      0.36  |Q       |          |          |          |
3+ 0       0.0621      0.36  |Q       |          |          |          |
3+ 5       0.0646      0.36  |Q       |          |          |          |
3+10       0.0670      0.36  |Q       |          |          |          |
3+15       0.0695      0.36  |Q       |          |          |          |
3+20       0.0719      0.36  |Q       |          |          |          |
3+25       0.0744      0.36  |QV      |          |          |          |
3+30       0.0768      0.36  |QV      |          |          |          |
3+35       0.0793      0.36  |QV      |          |          |          |
3+40       0.0817      0.36  |QV      |          |          |          |
3+45       0.0842      0.36  |QV      |          |          |          |
3+50       0.0869      0.40  |QV      |          |          |          |
3+55       0.0898      0.42  |QV      |          |          |          |
4+ 0       0.0928      0.43  |QV      |          |          |          |
4+ 5       0.0957      0.43  |QV      |          |          |          |
4+10       0.0986      0.43  |QV      |          |          |          |
4+15       0.1016      0.43  |QV      |          |          |          |
4+20       0.1048      0.47  |QV      |          |          |          |
4+25       0.1082      0.49  |QV      |          |          |          |
4+30       0.1116      0.50  |Q V     |          |          |          |
4+35       0.1151      0.50  |Q V     |          |          |          |
4+40       0.1185      0.50  |Q V     |          |          |          |
4+45       0.1219      0.50  |Q V     |          |          |          |
4+50       0.1257      0.54  | QV     |          |          |          |
4+55       0.1296      0.57  | QV     |          |          |          |
5+ 0       0.1335      0.57  | QV     |          |          |          |
5+ 5       0.1368      0.49  |Q V     |          |          |          |
5+10       0.1398      0.43  |Q V     |          |          |          |
5+15       0.1428      0.43  |Q V     |          |          |          |
5+20       0.1460      0.47  |Q V     |          |          |          |
5+25       0.1494      0.49  |Q  V    |          |          |          |
5+30       0.1528      0.50  |Q  V    |          |          |          |
5+35       0.1565      0.54  | Q V    |          |          |          |
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5+40	0.1604	0.57	Q V				
5+45	0.1644	0.57	Q V				
5+50	0.1683	0.57	Q V				
5+55	0.1722	0.57	Q V				
6+ 0	0.1761	0.57	Q V				
6+ 5	0.1803	0.61	Q V				
6+10	0.1847	0.64	Q V				
6+15	0.1891	0.64	Q V				
6+20	0.1936	0.64	Q V				
6+25	0.1980	0.64	Q V				
6+30	0.2024	0.64	Q V				
6+35	0.2071	0.68	Q V				
6+40	0.2120	0.71	Q V				
6+45	0.2169	0.71	Q V				
6+50	0.2218	0.71	Q V				
6+55	0.2267	0.71	Q V				
7+ 0	0.2316	0.71	Q V				
7+ 5	0.2365	0.71	Q V				
7+10	0.2414	0.71	Q V				
7+15	0.2463	0.71	Q V				
7+20	0.2515	0.75	Q V				
7+25	0.2568	0.78	Q V				
7+30	0.2622	0.78	Q V				
7+35	0.2679	0.82	Q V				
7+40	0.2738	0.85	Q V				
7+45	0.2796	0.85	Q V				
7+50	0.2858	0.90	Q V				
7+55	0.2922	0.92	Q V				
8+ 0	0.2985	0.93	Q V				
8+ 5	0.3055	1.01	Q V				
8+10	0.3128	1.06	Q V				
8+15	0.3201	1.07	Q V				
8+20	0.3275	1.07	Q V				
8+25	0.3348	1.07	Q V				
8+30	0.3422	1.07	Q V				
8+35	0.3498	1.11	Q V				
8+40	0.3577	1.14	Q V				
8+45	0.3655	1.14	Q V				
8+50	0.3736	1.18	Q V				
8+55	0.3819	1.21	Q V				
9+ 0	0.3903	1.21	Q V				
9+ 5	0.3992	1.29	Q V				
9+10	0.4084	1.34	Q V				
9+15	0.4178	1.35	Q V				
9+20	0.4274	1.39	Q V				
9+25	0.4371	1.42	Q V				
9+30	0.4469	1.42	Q V				
9+35	0.4570	1.47	Q V				
9+40	0.4673	1.49	Q V				
9+45	0.4776	1.49	Q V				
9+50	0.4882	1.54	Q V				
9+55	0.4989	1.56	Q V				
10+ 0	0.5097	1.57	Q V				
10+ 5	0.5185	1.27	Q V				
10+10	0.5260	1.09	Q V				
10+15	0.5334	1.07	Q V				
10+20	0.5407	1.07	Q V				
10+25	0.5481	1.07	Q V				
10+30	0.5554	1.07	Q V				
10+35	0.5642	1.28	Q V				



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15+40       1.2949      1.37  |    Q    |         |         |    V    |
15+45       1.3042      1.35  |    Q    |         |         |    V    |
15+50       1.3136      1.35  |    Q    |         |         |    V    |
15+55       1.3229      1.35  |    Q    |         |         |    V    |
16+ 0       1.3322      1.35  |    Q    |         |         |     V   |
16+ 5       1.3372      0.72  | Q       |         |         |     V   |
16+10       1.3395      0.34  |Q        |         |         |     V   |
16+15       1.3415      0.28  |Q        |         |         |     V   |
16+20       1.3434      0.28  |Q        |         |         |     V   |
16+25       1.3454      0.28  |Q        |         |         |     V   |
16+30       1.3474      0.28  |Q        |         |         |     V   |
16+35       1.3490      0.24  Q         |         |         |     V   |
16+40       1.3505      0.22  Q         |         |         |     V   |
16+45       1.3520      0.21  Q         |         |         |     V   |
16+50       1.3535      0.21  Q         |         |         |     V   |
16+55       1.3549      0.21  Q         |         |         |     V   |
17+ 0       1.3564      0.21  Q         |         |         |     V   |
17+ 5       1.3585      0.30  |Q        |         |         |     V   |
17+10       1.3609      0.35  |Q        |         |         |     V   |
17+15       1.3633      0.36  |Q        |         |         |     V   |
17+20       1.3658      0.36  |Q        |         |         |     V   |
17+25       1.3682      0.36  |Q        |         |         |      V  |
17+30       1.3707      0.36  |Q        |         |         |      V  |
17+35       1.3731      0.36  |Q        |         |         |      V  |
17+40       1.3756      0.36  |Q        |         |         |      V  |
17+45       1.3780      0.36  |Q        |         |         |      V  |
17+50       1.3802      0.31  |Q        |         |         |      V  |
17+55       1.3822      0.29  |Q        |         |         |      V  |
18+ 0       1.3841      0.28  |Q        |         |         |      V  |
18+ 5       1.3861      0.28  |Q        |         |         |      V  |
18+10       1.3880      0.28  |Q        |         |         |      V  |
18+15       1.3900      0.28  |Q        |         |         |      V  |
18+20       1.3920      0.28  |Q        |         |         |      V  |
18+25       1.3939      0.28  |Q        |         |         |      V  |
18+30       1.3959      0.28  |Q        |         |         |      V  |
18+35       1.3976      0.24  Q         |         |         |      V  |
18+40       1.3991      0.22  Q         |         |         |      V  |
18+45       1.4005      0.21  Q         |         |         |      V  |
18+50       1.4017      0.17  Q         |         |         |      V  |
18+55       1.4027      0.15  Q         |         |         |      V  |
19+ 0       1.4037      0.14  Q         |         |         |      V  |
19+ 5       1.4050      0.18  Q         |         |         |       V |
19+10       1.4064      0.21  Q         |         |         |       V |
19+15       1.4079      0.21  Q         |         |         |       V |
19+20       1.4096      0.26  |Q        |         |         |       V |
19+25       1.4116      0.28  |Q        |         |         |       V |
19+30       1.4135      0.28  |Q        |         |         |       V |
19+35       1.4152      0.24  Q         |         |         |       V |
19+40       1.4167      0.22  Q         |         |         |       V |
19+45       1.4182      0.21  Q         |         |         |       V |
19+50       1.4194      0.17  Q         |         |         |       V |
19+55       1.4204      0.15  Q         |         |         |       V |
20+ 0       1.4213      0.14  Q         |         |         |       V |
20+ 5       1.4226      0.18  Q         |         |         |       V |
20+10       1.4241      0.21  Q         |         |         |       V |
20+15       1.4255      0.21  Q         |         |         |       V |
20+20       1.4270      0.21  Q         |         |         |       V |
20+25       1.4285      0.21  Q         |         |         |       V |
20+30       1.4299      0.21  Q         |         |         |       V |
20+35       1.4314      0.21  Q         |         |         |       V |
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20+40	1.4329	0.21	Q	|	|	|	V |
20+45	1.4344	0.21	Q	|	|	|	V |
20+50	1.4355	0.17	Q	|	|	|	V |
20+55	1.4365	0.15	Q	|	|	|	V |
21+ 0	1.4375	0.14	Q	|	|	|	V |
21+ 5	1.4388	0.18	Q	|	|	|	V |
21+10	1.4402	0.21	Q	|	|	|	V |
21+15	1.4417	0.21	Q	|	|	|	V|
21+20	1.4429	0.17	Q	|	|	|	V|
21+25	1.4439	0.15	Q	|	|	|	V|
21+30	1.4449	0.14	Q	|	|	|	V|
21+35	1.4461	0.18	Q	|	|	|	V|
21+40	1.4476	0.21	Q	|	|	|	V|
21+45	1.4491	0.21	Q	|	|	|	V|
21+50	1.4502	0.17	Q	|	|	|	V|
21+55	1.4513	0.15	Q	|	|	|	V|
22+ 0	1.4522	0.14	Q	|	|	|	V|
22+ 5	1.4535	0.18	Q	|	|	|	V|
22+10	1.4549	0.21	Q	|	|	|	V|
22+15	1.4564	0.21	Q	|	|	|	V|
22+20	1.4576	0.17	Q	|	|	|	V|
22+25	1.4586	0.15	Q	|	|	|	V|
22+30	1.4596	0.14	Q	|	|	|	V|
22+35	1.4606	0.14	Q	|	|	|	V|
22+40	1.4615	0.14	Q	|	|	|	V|
22+45	1.4625	0.14	Q	|	|	|	V|
22+50	1.4635	0.14	Q	|	|	|	V|
22+55	1.4645	0.14	Q	|	|	|	V|
23+ 0	1.4655	0.14	Q	|	|	|	V|
23+ 5	1.4664	0.14	Q	|	|	|	V|
23+10	1.4674	0.14	Q	|	|	|	V|
23+15	1.4684	0.14	Q	|	|	|	V|
23+20	1.4694	0.14	Q	|	|	|	V|
23+25	1.4704	0.14	Q	|	|	|	V|
23+30	1.4713	0.14	Q	|	|	|	V|
23+35	1.4723	0.14	Q	|	|	|	V|
23+40	1.4733	0.14	Q	|	|	|	V|
23+45	1.4743	0.14	Q	|	|	|	V|
23+50	1.4753	0.14	Q	|	|	|	V|
23+55	1.4763	0.14	Q	|	|	|	V|
24+ 0	1.4772	0.14	Q	|	|	|	V|
24+ 5	1.4776	0.06	Q	|	|	|	V|
24+10	1.4777	0.01	Q	|	|	|	V|

100-YEAR STORM

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 10/24/24 File: THECOVE1100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
1-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	0.57	3.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.45	9.71

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 1.450(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.450(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

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	4.40	0.766	0.143 (0.199)	0.623
2	0.17	4.50	0.783	0.143 (0.204)	0.640
3	0.25	5.40	0.940	0.143 (0.244)	0.797
4	0.33	5.40	0.940	0.143 (0.244)	0.797
5	0.42	5.70	0.992	0.143 (0.258)	0.849
6	0.50	6.40	1.114	0.143 (0.290)	0.971
7	0.58	7.90	1.375	0.143 (0.357)	1.231
8	0.67	9.10	1.583	0.143 (0.412)	1.440
9	0.75	12.80	2.227	0.143 (0.579)	2.084
10	0.83	25.60	4.454	0.143 (1.158)	4.311
11	0.92	7.90	1.375	0.143 (0.357)	1.231
12	1.00	4.90	0.853	0.143 (0.222)	0.710

(Loss Rate Not Used)
Sum = 100.0 Sum = 15.7
Flood volume = Effective rainfall 1.31(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 0.14(In)
Total soil loss = 0.080(Ac.Ft)
Total rainfall = 1.45(In)
Flood volume = 31784.8 Cubic Feet
Total soil loss = 3478.5 Cubic Feet

Peak flow rate of this hydrograph = 19.439(CFS)

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1 - 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	0.0118	1.71	V Q				
0+10	0.0367	3.63	V Q				
0+15	0.0678	4.51	V Q				
0+20	0.1032	5.15	V Q				
0+25	0.1409	5.46	V Q				
0+30	0.1822	6.00	V Q				
0+35	0.2313	7.13	V Q				
0+40	0.2904	8.58	V Q				
0+45	0.3673	11.18	V Q				
0+50	0.5012	19.44	V				Q
0+55	0.6263	18.16	V Q				
1+ 0	0.6890	9.09	Q			V	
1+ 5	0.7183	4.26	Q			V	
1+10	0.7269	1.25	Q			V	
1+15	0.7291	0.32	Q			V	
1+20	0.7297	0.08	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
3-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.00	6.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	2.50	16.75

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

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	1.30	0.390	(0.143)		0.101	0.289
2	0.17	1.30	0.390	(0.143)		0.101	0.289
3	0.25	1.10	0.330	(0.143)		0.086	0.244
4	0.33	1.50	0.450	(0.143)		0.117	0.333
5	0.42	1.50	0.450	(0.143)		0.117	0.333
6	0.50	1.80	0.540	(0.143)		0.140	0.400
7	0.58	1.50	0.450	(0.143)		0.117	0.333
8	0.67	1.80	0.540	(0.143)		0.140	0.400
9	0.75	1.80	0.540	(0.143)		0.140	0.400
10	0.83	1.50	0.450	(0.143)		0.117	0.333
11	0.92	1.60	0.480	(0.143)		0.125	0.355
12	1.00	1.80	0.540	(0.143)		0.140	0.400
13	1.08	2.20	0.660	0.143	(	0.172)	0.517
14	1.17	2.20	0.660	0.143	(	0.172)	0.517

15	1.25	2.20	0.660	0.143	(0.172)		0.517
16	1.33	2.00	0.600	0.143	(0.156)		0.457
17	1.42	2.60	0.780	0.143	(0.203)		0.637
18	1.50	2.70	0.810	0.143	(0.211)		0.667
19	1.58	2.40	0.720	0.143	(0.187)		0.577
20	1.67	2.70	0.810	0.143	(0.211)		0.667
21	1.75	3.30	0.990	0.143	(0.257)		0.847
22	1.83	3.10	0.930	0.143	(0.242)		0.787
23	1.92	2.90	0.870	0.143	(0.226)		0.727
24	2.00	3.00	0.900	0.143	(0.234)		0.757
25	2.08	3.10	0.930	0.143	(0.242)		0.787
26	2.17	4.20	1.260	0.143	(0.328)		1.117
27	2.25	5.00	1.500	0.143	(0.390)		1.357
28	2.33	3.50	1.050	0.143	(0.273)		0.907
29	2.42	6.80	2.040	0.143	(0.530)		1.897
30	2.50	7.30	2.190	0.143	(0.569)		2.047
31	2.58	8.20	2.460	0.143	(0.640)		2.317
32	2.67	5.90	1.770	0.143	(0.460)		1.627
33	2.75	2.00	0.600	0.143	(0.156)		0.457
34	2.83	1.80	0.540	(0.143)	0.140		0.400
35	2.92	1.80	0.540	(0.143)	0.140		0.400
36	3.00	0.60	0.180	(0.143)	0.047		0.133

(Loss Rate Not Used)

Sum = 100.0 Sum = 25.2

Flood volume = Effective rainfall 2.10(In)
times area 6.7(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 0.40(In)
Total soil loss = 0.222(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 51124.9 Cubic Feet
Total soil loss = 9675.8 Cubic Feet

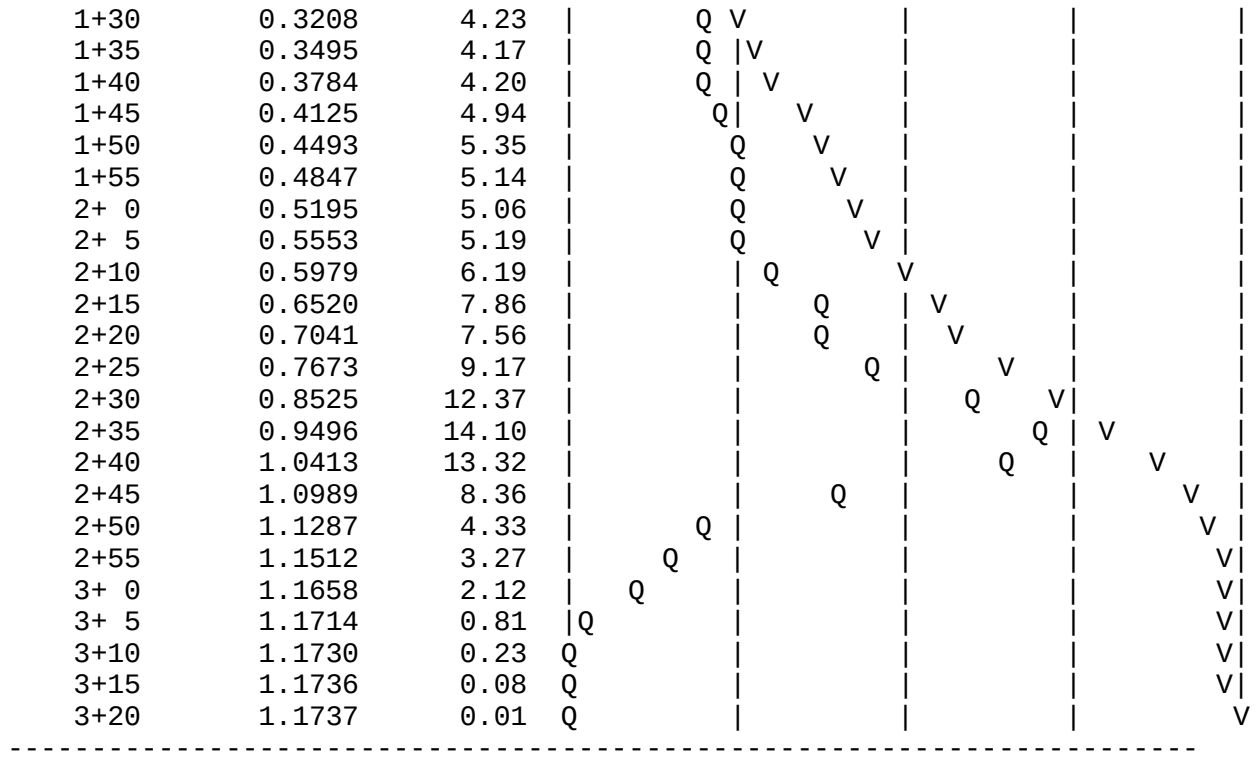
Peak flow rate of this hydrograph = 14.103(CFS)

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3 - 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	0.0055	0.79	VQ	|	|	|	|
0+10	0.0169	1.66	V Q	|	|	|	|
0+15	0.0287	1.72	V Q	|	|	|	|
0+20	0.0419	1.91	|V Q	|	|	|	|
0+25	0.0569	2.18	|V Q	|	|	|	|
0+30	0.0734	2.40	| V Q	|	|	|	|
0+35	0.0902	2.44	| VQ	|	|	|	|
0+40	0.1073	2.47	| VQ	|	|	|	|
0+45	0.1255	2.65	| VQ	|	|	|	|
0+50	0.1427	2.50	| Q	|	|	|	|
0+55	0.1590	2.37	| QV	|	|	|	|
1+ 0	0.1764	2.52	| QV	|	|	|	|
1+ 5	0.1969	2.98	| QV	|	|	|	|
1+10	0.2200	3.36	| QV	|	|	|	|
1+15	0.2438	3.44	| Q V	|	|	|	|
1+20	0.2666	3.31	| Q V|	|	|	|	|
1+25	0.2917	3.64	| Q V|	|	|	|	|



1+30	0.3208	4.23	
1+35	0.3495	4.17	
1+40	0.3784	4.20	
1+45	0.4125	4.94	
1+50	0.4493	5.35	
1+55	0.4847	5.14	
2+ 0	0.5195	5.06	
2+ 5	0.5553	5.19	
2+10	0.5979	6.19	
2+15	0.6520	7.86	
2+20	0.7041	7.56	
2+25	0.7673	9.17	
2+30	0.8525	12.37	
2+35	0.9496	14.10	
2+40	1.0413	13.32	
2+45	1.0989	8.36	
2+50	1.1287	4.33	
2+55	1.1512	3.27	
3+ 0	1.1658	2.12	
3+ 5	1.1714	0.81	
3+10	1.1730	0.23	
3+15	1.1736	0.08	
3+20	1.1737	0.01	

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 10/24/24 File: THECOVE6100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
6-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	1.40	9.38

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	3.50	23.45

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 3.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
			Sum = 100.000	Sum= 6.752

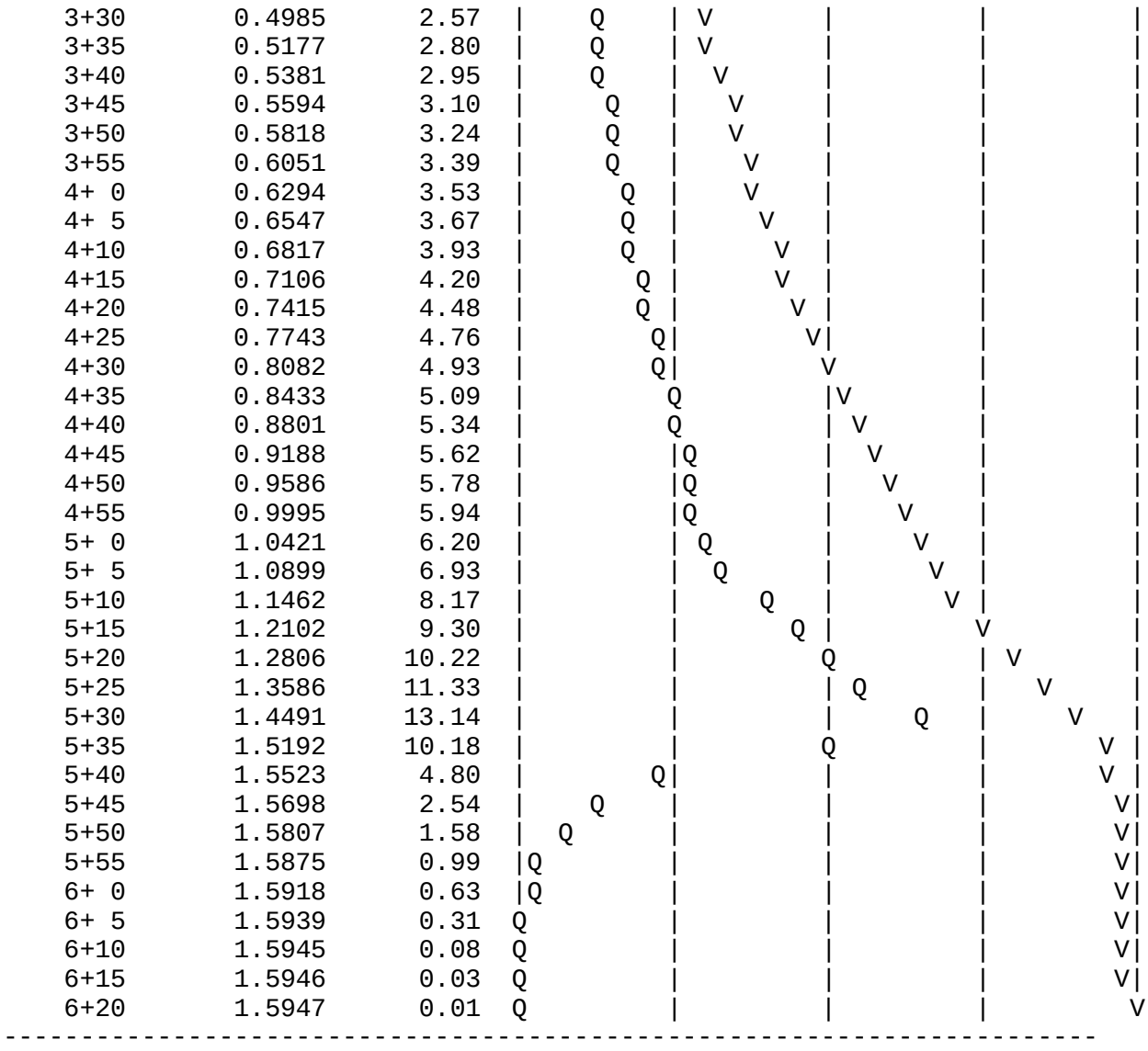
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.50	0.210	(0.143)		0.055	0.155
2	0.17	0.60	0.252	(0.143)		0.066	0.186
3	0.25	0.60	0.252	(0.143)		0.066	0.186
4	0.33	0.60	0.252	(0.143)		0.066	0.186
5	0.42	0.60	0.252	(0.143)		0.066	0.186
6	0.50	0.70	0.294	(0.143)		0.076	0.218
7	0.58	0.70	0.294	(0.143)		0.076	0.218
8	0.67	0.70	0.294	(0.143)		0.076	0.218
9	0.75	0.70	0.294	(0.143)		0.076	0.218
10	0.83	0.70	0.294	(0.143)		0.076	0.218
11	0.92	0.70	0.294	(0.143)		0.076	0.218
12	1.00	0.80	0.336	(0.143)		0.087	0.249
13	1.08	0.80	0.336	(0.143)		0.087	0.249
14	1.17	0.80	0.336	(0.143)		0.087	0.249

15	1.25	0.80	0.336	(0.143)	0.087	0.249
16	1.33	0.80	0.336	(0.143)	0.087	0.249
17	1.42	0.80	0.336	(0.143)	0.087	0.249
18	1.50	0.80	0.336	(0.143)	0.087	0.249
19	1.58	0.80	0.336	(0.143)	0.087	0.249
20	1.67	0.80	0.336	(0.143)	0.087	0.249
21	1.75	0.80	0.336	(0.143)	0.087	0.249
22	1.83	0.80	0.336	(0.143)	0.087	0.249
23	1.92	0.80	0.336	(0.143)	0.087	0.249
24	2.00	0.90	0.378	(0.143)	0.098	0.280
25	2.08	0.80	0.336	(0.143)	0.087	0.249
26	2.17	0.90	0.378	(0.143)	0.098	0.280
27	2.25	0.90	0.378	(0.143)	0.098	0.280
28	2.33	0.90	0.378	(0.143)	0.098	0.280
29	2.42	0.90	0.378	(0.143)	0.098	0.280
30	2.50	0.90	0.378	(0.143)	0.098	0.280
31	2.58	0.90	0.378	(0.143)	0.098	0.280
32	2.67	0.90	0.378	(0.143)	0.098	0.280
33	2.75	1.00	0.420	(0.143)	0.109	0.311
34	2.83	1.00	0.420	(0.143)	0.109	0.311
35	2.92	1.00	0.420	(0.143)	0.109	0.311
36	3.00	1.00	0.420	(0.143)	0.109	0.311
37	3.08	1.00	0.420	(0.143)	0.109	0.311
38	3.17	1.10	0.462	(0.143)	0.120	0.342
39	3.25	1.10	0.462	(0.143)	0.120	0.342
40	3.33	1.10	0.462	(0.143)	0.120	0.342
41	3.42	1.20	0.504	(0.143)	0.131	0.373
42	3.50	1.30	0.546	(0.143)	0.142	0.404
43	3.58	1.40	0.588	0.143	(0.153)	0.445
44	3.67	1.40	0.588	0.143	(0.153)	0.445
45	3.75	1.50	0.630	0.143	(0.164)	0.487
46	3.83	1.50	0.630	0.143	(0.164)	0.487
47	3.92	1.60	0.672	0.143	(0.175)	0.529
48	4.00	1.60	0.672	0.143	(0.175)	0.529
49	4.08	1.70	0.714	0.143	(0.186)	0.571
50	4.17	1.80	0.756	0.143	(0.197)	0.613
51	4.25	1.90	0.798	0.143	(0.207)	0.655
52	4.33	2.00	0.840	0.143	(0.218)	0.697
53	4.42	2.10	0.882	0.143	(0.229)	0.739
54	4.50	2.10	0.882	0.143	(0.229)	0.739
55	4.58	2.20	0.924	0.143	(0.240)	0.781
56	4.67	2.30	0.966	0.143	(0.251)	0.823
57	4.75	2.40	1.008	0.143	(0.262)	0.865
58	4.83	2.40	1.008	0.143	(0.262)	0.865
59	4.92	2.50	1.050	0.143	(0.273)	0.907
60	5.00	2.60	1.092	0.143	(0.284)	0.949
61	5.08	3.10	1.302	0.143	(0.339)	1.159
62	5.17	3.60	1.512	0.143	(0.393)	1.369
63	5.25	3.90	1.638	0.143	(0.426)	1.495
64	5.33	4.20	1.764	0.143	(0.459)	1.621
65	5.42	4.70	1.974	0.143	(0.513)	1.831
66	5.50	5.60	2.352	0.143	(0.612)	2.209
67	5.58	1.90	0.798	0.143	(0.207)	0.655
68	5.67	0.90	0.378	(0.143)	0.098	0.280
69	5.75	0.60	0.252	(0.143)	0.066	0.186
70	5.83	0.50	0.210	(0.143)	0.055	0.155
71	5.92	0.30	0.126	(0.143)	0.033	0.093
72	6.00	0.20	0.084	(0.143)	0.022	0.062
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	34.3

```
   Flood volume = Effective rainfall      2.86(In)
    times area       6.7(Ac.)/[(In)/(Ft.)] =       1.6(Ac.Ft)
   Total soil loss =      0.64(In)
   Total soil loss =     0.359(Ac.Ft)
   Total rainfall =      3.50(In)
   Flood volume =       69464.7 Cubic Feet
   Total soil loss =       15656.9 Cubic Feet
   ----------------------------------------------------------------------
    Peak flow rate of this hydrograph =     13.135(CFS)
   ----------------------------------------------------------------------
   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                       6 - 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       0.0029      0.43  Q         |          |          |          |
  0+10       0.0097      0.98  VQ        |          |          |          |
  0+15       0.0177      1.17  V Q       |          |          |          |
  0+20       0.0262      1.23  V Q       |          |          |          |
  0+25       0.0349      1.26  V Q       |          |          |          |
  0+30       0.0441      1.35  |VQ       |          |          |          |
  0+35       0.0540      1.44  |VQ       |          |          |          |
  0+40       0.0641      1.46  |VQ       |          |          |          |
  0+45       0.0742      1.47  |VQ       |          |          |          |
  0+50       0.0843      1.47  | Q       |          |          |          |
  0+55       0.0944      1.47  | Q       |          |          |          |
  1+ 0       0.1051      1.56  | VQ      |          |          |          |
  1+ 5       0.1165      1.65  | VQ      |          |          |          |
  1+10       0.1280      1.67  |  Q      |          |          |          |
  1+15       0.1395      1.68  |  Q      |          |          |          |
  1+20       0.1511      1.68  |  Q      |          |          |          |
  1+25       0.1627      1.68  |  QV     |          |          |          |
  1+30       0.1742      1.68  |  QV     |          |          |          |
  1+35       0.1858      1.68  |  QV     |          |          |          |
  1+40       0.1974      1.68  |  QV     |          |          |          |
  1+45       0.2089      1.68  |  Q V    |          |          |          |
  1+50       0.2205      1.68  |  Q V    |          |          |          |
  1+55       0.2321      1.68  |  Q V    |          |          |          |
  2+ 0       0.2442      1.77  |  Q  V   |          |          |          |
  2+ 5       0.2564      1.77  |  Q  V   |          |          |          |
  2+10       0.2687      1.78  |  Q  V   |          |          |          |
  2+15       0.2816      1.87  |  Q   V  |          |          |          |
  2+20       0.2945      1.88  |  Q   V  |          |          |          |
  2+25       0.3075      1.89  |  Q   V  |          |          |          |
  2+30       0.3206      1.89  |  Q    V |          |          |          |
  2+35       0.3336      1.89  |  Q    V |          |          |          |
  2+40       0.3466      1.89  |  Q    V |          |          |          |
  2+45       0.3602      1.98  |  Q     V|          |          |          |
  2+50       0.3744      2.07  |   Q    V|          |          |          |
  2+55       0.3888      2.09  |   Q    V|          |          |          |
  3+ 0       0.4032      2.10  |   Q     V          |          |          |
  3+ 5       0.4177      2.10  |   Q     V          |          |          |
  3+10       0.4328      2.19  |   Q     V          |          |          |
  3+15       0.4484      2.28  |   Q     |V         |          |          |
  3+20       0.4643      2.30  |   Q     |V         |          |          |
  3+25       0.4807      2.39  |   Q     | V        |          |          |
```


3+30 0.4985 2.57
3+35 0.5177 2.80
3+40 0.5381 2.95
3+45 0.5594 3.10
3+50 0.5818 3.24
3+55 0.6051 3.39
4+ 0 0.6294 3.53
4+ 5 0.6547 3.67
4+10 0.6817 3.93
4+15 0.7106 4.20
4+20 0.7415 4.48
4+25 0.7743 4.76
4+30 0.8082 4.93
4+35 0.8433 5.09
4+40 0.8801 5.34
4+45 0.9188 5.62
4+50 0.9586 5.78
4+55 0.9995 5.94
5+ 0 1.0421 6.20
5+ 5 1.0899 6.93
5+10 1.1462 8.17
5+15 1.2102 9.30
5+20 1.2806 10.22
5+25 1.3586 11.33
5+30 1.4491 13.14
5+35 1.5192 10.18
5+40 1.5523 4.80
5+45 1.5698 2.54
5+50 1.5807 1.58
5+55 1.5875 0.99
6+ 0 1.5918 0.63
6+ 5 1.5939 0.31
6+10 1.5945 0.08
6+15 1.5946 0.03
6+20 1.5947 0.01

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 10/24/24 File: THECOVE24100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
24-HR

Drainage Area = 6.70(Ac.) = 0.010 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 6.70(Ac.) = 0.010 Sq. Mi.
Length along longest watercourse = 1308.00(Ft.)
Length along longest watercourse measured to centroid = 701.00(Ft.)
Length along longest watercourse = 0.248 Mi.
Length along longest watercourse measured to centroid = 0.133 Mi.
Difference in elevation = 15.00(Ft.)
Slope along watercourse = 60.5505 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.045 Hr.
Lag time = 2.71 Min.
25% of lag time = 0.68 Min.
40% of lag time = 1.08 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]
6.70	2.50	16.75

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
6.70	6.00	40.20

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
6.700	56.00	0.800

Total Area Entered = 6.70(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

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	184.772	40.643	2.744
2	0.167	369.544	44.443	3.001
3	0.250	554.317	9.443	0.638
4	0.333	739.089	3.817	0.258
5	0.417	923.861	1.655	0.112
		Sum =	100.000 Sum=	6.752

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	0.048	(0.254)		0.012	0.036
2	0.17	0.07	0.048	(0.253)		0.012	0.036
3	0.25	0.07	0.048	(0.252)		0.012	0.036
4	0.33	0.10	0.072	(0.251)		0.019	0.053
5	0.42	0.10	0.072	(0.250)		0.019	0.053
6	0.50	0.10	0.072	(0.249)		0.019	0.053
7	0.58	0.10	0.072	(0.248)		0.019	0.053
8	0.67	0.10	0.072	(0.247)		0.019	0.053
9	0.75	0.10	0.072	(0.246)		0.019	0.053
10	0.83	0.13	0.096	(0.245)		0.025	0.071
11	0.92	0.13	0.096	(0.244)		0.025	0.071
12	1.00	0.13	0.096	(0.243)		0.025	0.071
13	1.08	0.10	0.072	(0.242)		0.019	0.053
14	1.17	0.10	0.072	(0.241)		0.019	0.053

15	1.25	0.10	0.072	(0.240)	0.019	0.053
16	1.33	0.10	0.072	(0.239)	0.019	0.053
17	1.42	0.10	0.072	(0.238)	0.019	0.053
18	1.50	0.10	0.072	(0.237)	0.019	0.053
19	1.58	0.10	0.072	(0.236)	0.019	0.053
20	1.67	0.10	0.072	(0.235)	0.019	0.053
21	1.75	0.10	0.072	(0.234)	0.019	0.053
22	1.83	0.13	0.096	(0.233)	0.025	0.071
23	1.92	0.13	0.096	(0.232)	0.025	0.071
24	2.00	0.13	0.096	(0.231)	0.025	0.071
25	2.08	0.13	0.096	(0.231)	0.025	0.071
26	2.17	0.13	0.096	(0.230)	0.025	0.071
27	2.25	0.13	0.096	(0.229)	0.025	0.071
28	2.33	0.13	0.096	(0.228)	0.025	0.071
29	2.42	0.13	0.096	(0.227)	0.025	0.071
30	2.50	0.13	0.096	(0.226)	0.025	0.071
31	2.58	0.17	0.120	(0.225)	0.031	0.089
32	2.67	0.17	0.120	(0.224)	0.031	0.089
33	2.75	0.17	0.120	(0.223)	0.031	0.089
34	2.83	0.17	0.120	(0.222)	0.031	0.089
35	2.92	0.17	0.120	(0.221)	0.031	0.089
36	3.00	0.17	0.120	(0.220)	0.031	0.089
37	3.08	0.17	0.120	(0.219)	0.031	0.089
38	3.17	0.17	0.120	(0.219)	0.031	0.089
39	3.25	0.17	0.120	(0.218)	0.031	0.089
40	3.33	0.17	0.120	(0.217)	0.031	0.089
41	3.42	0.17	0.120	(0.216)	0.031	0.089
42	3.50	0.17	0.120	(0.215)	0.031	0.089
43	3.58	0.17	0.120	(0.214)	0.031	0.089
44	3.67	0.17	0.120	(0.213)	0.031	0.089
45	3.75	0.17	0.120	(0.212)	0.031	0.089
46	3.83	0.20	0.144	(0.211)	0.037	0.107
47	3.92	0.20	0.144	(0.210)	0.037	0.107
48	4.00	0.20	0.144	(0.210)	0.037	0.107
49	4.08	0.20	0.144	(0.209)	0.037	0.107
50	4.17	0.20	0.144	(0.208)	0.037	0.107
51	4.25	0.20	0.144	(0.207)	0.037	0.107
52	4.33	0.23	0.168	(0.206)	0.044	0.124
53	4.42	0.23	0.168	(0.205)	0.044	0.124
54	4.50	0.23	0.168	(0.204)	0.044	0.124
55	4.58	0.23	0.168	(0.203)	0.044	0.124
56	4.67	0.23	0.168	(0.202)	0.044	0.124
57	4.75	0.23	0.168	(0.202)	0.044	0.124
58	4.83	0.27	0.192	(0.201)	0.050	0.142
59	4.92	0.27	0.192	(0.200)	0.050	0.142
60	5.00	0.27	0.192	(0.199)	0.050	0.142
61	5.08	0.20	0.144	(0.198)	0.037	0.107
62	5.17	0.20	0.144	(0.197)	0.037	0.107
63	5.25	0.20	0.144	(0.196)	0.037	0.107
64	5.33	0.23	0.168	(0.196)	0.044	0.124
65	5.42	0.23	0.168	(0.195)	0.044	0.124
66	5.50	0.23	0.168	(0.194)	0.044	0.124
67	5.58	0.27	0.192	(0.193)	0.050	0.142
68	5.67	0.27	0.192	(0.192)	0.050	0.142
69	5.75	0.27	0.192	(0.191)	0.050	0.142
70	5.83	0.27	0.192	(0.190)	0.050	0.142
71	5.92	0.27	0.192	(0.190)	0.050	0.142
72	6.00	0.27	0.192	(0.189)	0.050	0.142
73	6.08	0.30	0.216	(0.188)	0.056	0.160
74	6.17	0.30	0.216	(0.187)	0.056	0.160

75	6.25	0.30	0.216	(0.186)	0.056	0.160
76	6.33	0.30	0.216	(0.185)	0.056	0.160
77	6.42	0.30	0.216	(0.185)	0.056	0.160
78	6.50	0.30	0.216	(0.184)	0.056	0.160
79	6.58	0.33	0.240	(0.183)	0.062	0.178
80	6.67	0.33	0.240	(0.182)	0.062	0.178
81	6.75	0.33	0.240	(0.181)	0.062	0.178
82	6.83	0.33	0.240	(0.181)	0.062	0.178
83	6.92	0.33	0.240	(0.180)	0.062	0.178
84	7.00	0.33	0.240	(0.179)	0.062	0.178
85	7.08	0.33	0.240	(0.178)	0.062	0.178
86	7.17	0.33	0.240	(0.177)	0.062	0.178
87	7.25	0.33	0.240	(0.176)	0.062	0.178
88	7.33	0.37	0.264	(0.176)	0.069	0.195
89	7.42	0.37	0.264	(0.175)	0.069	0.195
90	7.50	0.37	0.264	(0.174)	0.069	0.195
91	7.58	0.40	0.288	(0.173)	0.075	0.213
92	7.67	0.40	0.288	(0.172)	0.075	0.213
93	7.75	0.40	0.288	(0.172)	0.075	0.213
94	7.83	0.43	0.312	(0.171)	0.081	0.231
95	7.92	0.43	0.312	(0.170)	0.081	0.231
96	8.00	0.43	0.312	(0.169)	0.081	0.231
97	8.08	0.50	0.360	(0.168)	0.094	0.266
98	8.17	0.50	0.360	(0.168)	0.094	0.266
99	8.25	0.50	0.360	(0.167)	0.094	0.266
100	8.33	0.50	0.360	(0.166)	0.094	0.266
101	8.42	0.50	0.360	(0.165)	0.094	0.266
102	8.50	0.50	0.360	(0.165)	0.094	0.266
103	8.58	0.53	0.384	(0.164)	0.100	0.284
104	8.67	0.53	0.384	(0.163)	0.100	0.284
105	8.75	0.53	0.384	(0.162)	0.100	0.284
106	8.83	0.57	0.408	(0.162)	0.106	0.302
107	8.92	0.57	0.408	(0.161)	0.106	0.302
108	9.00	0.57	0.408	(0.160)	0.106	0.302
109	9.08	0.63	0.456	(0.159)	0.119	0.337
110	9.17	0.63	0.456	(0.158)	0.119	0.337
111	9.25	0.63	0.456	(0.158)	0.119	0.337
112	9.33	0.67	0.480	(0.157)	0.125	0.355
113	9.42	0.67	0.480	(0.156)	0.125	0.355
114	9.50	0.67	0.480	(0.155)	0.125	0.355
115	9.58	0.70	0.504	(0.155)	0.131	0.373
116	9.67	0.70	0.504	(0.154)	0.131	0.373
117	9.75	0.70	0.504	(0.153)	0.131	0.373
118	9.83	0.73	0.528	(0.153)	0.137	0.391
119	9.92	0.73	0.528	(0.152)	0.137	0.391
120	10.00	0.73	0.528	(0.151)	0.137	0.391
121	10.08	0.50	0.360	(0.150)	0.094	0.266
122	10.17	0.50	0.360	(0.150)	0.094	0.266
123	10.25	0.50	0.360	(0.149)	0.094	0.266
124	10.33	0.50	0.360	(0.148)	0.094	0.266
125	10.42	0.50	0.360	(0.147)	0.094	0.266
126	10.50	0.50	0.360	(0.147)	0.094	0.266
127	10.58	0.67	0.480	(0.146)	0.125	0.355
128	10.67	0.67	0.480	(0.145)	0.125	0.355
129	10.75	0.67	0.480	(0.145)	0.125	0.355
130	10.83	0.67	0.480	(0.144)	0.125	0.355
131	10.92	0.67	0.480	(0.143)	0.125	0.355
132	11.00	0.67	0.480	(0.142)	0.125	0.355
133	11.08	0.63	0.456	(0.142)	0.119	0.337
134	11.17	0.63	0.456	(0.141)	0.119	0.337

135	11.25	0.63	0.456	(0.140)	0.119	0.337
136	11.33	0.63	0.456	(0.140)	0.119	0.337
137	11.42	0.63	0.456	(0.139)	0.119	0.337
138	11.50	0.63	0.456	(0.138)	0.119	0.337
139	11.58	0.57	0.408	(0.138)	0.106	0.302
140	11.67	0.57	0.408	(0.137)	0.106	0.302
141	11.75	0.57	0.408	(0.136)	0.106	0.302
142	11.83	0.60	0.432	(0.136)	0.112	0.320
143	11.92	0.60	0.432	(0.135)	0.112	0.320
144	12.00	0.60	0.432	(0.134)	0.112	0.320
145	12.08	0.83	0.600	0.134	(0.156)	0.466
146	12.17	0.83	0.600	0.133	(0.156)	0.467
147	12.25	0.83	0.600	0.132	(0.156)	0.468
148	12.33	0.87	0.624	0.132	(0.162)	0.492
149	12.42	0.87	0.624	0.131	(0.162)	0.493
150	12.50	0.87	0.624	0.130	(0.162)	0.494
151	12.58	0.93	0.672	0.130	(0.175)	0.542
152	12.67	0.93	0.672	0.129	(0.175)	0.543
153	12.75	0.93	0.672	0.128	(0.175)	0.544
154	12.83	0.97	0.696	0.128	(0.181)	0.568
155	12.92	0.97	0.696	0.127	(0.181)	0.569
156	13.00	0.97	0.696	0.126	(0.181)	0.570
157	13.08	1.13	0.816	0.126	(0.212)	0.690
158	13.17	1.13	0.816	0.125	(0.212)	0.691
159	13.25	1.13	0.816	0.124	(0.212)	0.692
160	13.33	1.13	0.816	0.124	(0.212)	0.692
161	13.42	1.13	0.816	0.123	(0.212)	0.693
162	13.50	1.13	0.816	0.123	(0.212)	0.693
163	13.58	0.77	0.552	0.122	(0.144)	0.430
164	13.67	0.77	0.552	0.121	(0.144)	0.431
165	13.75	0.77	0.552	0.121	(0.144)	0.431
166	13.83	0.77	0.552	0.120	(0.144)	0.432
167	13.92	0.77	0.552	0.119	(0.144)	0.433
168	14.00	0.77	0.552	0.119	(0.144)	0.433
169	14.08	0.90	0.648	0.118	(0.168)	0.530
170	14.17	0.90	0.648	0.118	(0.168)	0.530
171	14.25	0.90	0.648	0.117	(0.168)	0.531
172	14.33	0.87	0.624	0.116	(0.162)	0.508
173	14.42	0.87	0.624	0.116	(0.162)	0.508
174	14.50	0.87	0.624	0.115	(0.162)	0.509
175	14.58	0.87	0.624	0.115	(0.162)	0.509
176	14.67	0.87	0.624	0.114	(0.162)	0.510
177	14.75	0.87	0.624	0.113	(0.162)	0.511
178	14.83	0.83	0.600	0.113	(0.156)	0.487
179	14.92	0.83	0.600	0.112	(0.156)	0.488
180	15.00	0.83	0.600	0.112	(0.156)	0.488
181	15.08	0.80	0.576	0.111	(0.150)	0.465
182	15.17	0.80	0.576	0.111	(0.150)	0.465
183	15.25	0.80	0.576	0.110	(0.150)	0.466
184	15.33	0.77	0.552	0.109	(0.144)	0.443
185	15.42	0.77	0.552	0.109	(0.144)	0.443
186	15.50	0.77	0.552	0.108	(0.144)	0.444
187	15.58	0.63	0.456	0.108	(0.119)	0.348
188	15.67	0.63	0.456	0.107	(0.119)	0.349
189	15.75	0.63	0.456	0.107	(0.119)	0.349
190	15.83	0.63	0.456	0.106	(0.119)	0.350
191	15.92	0.63	0.456	0.106	(0.119)	0.350
192	16.00	0.63	0.456	0.105	(0.119)	0.351
193	16.08	0.13	0.096	(0.104)	0.025	0.071
194	16.17	0.13	0.096	(0.104)	0.025	0.071

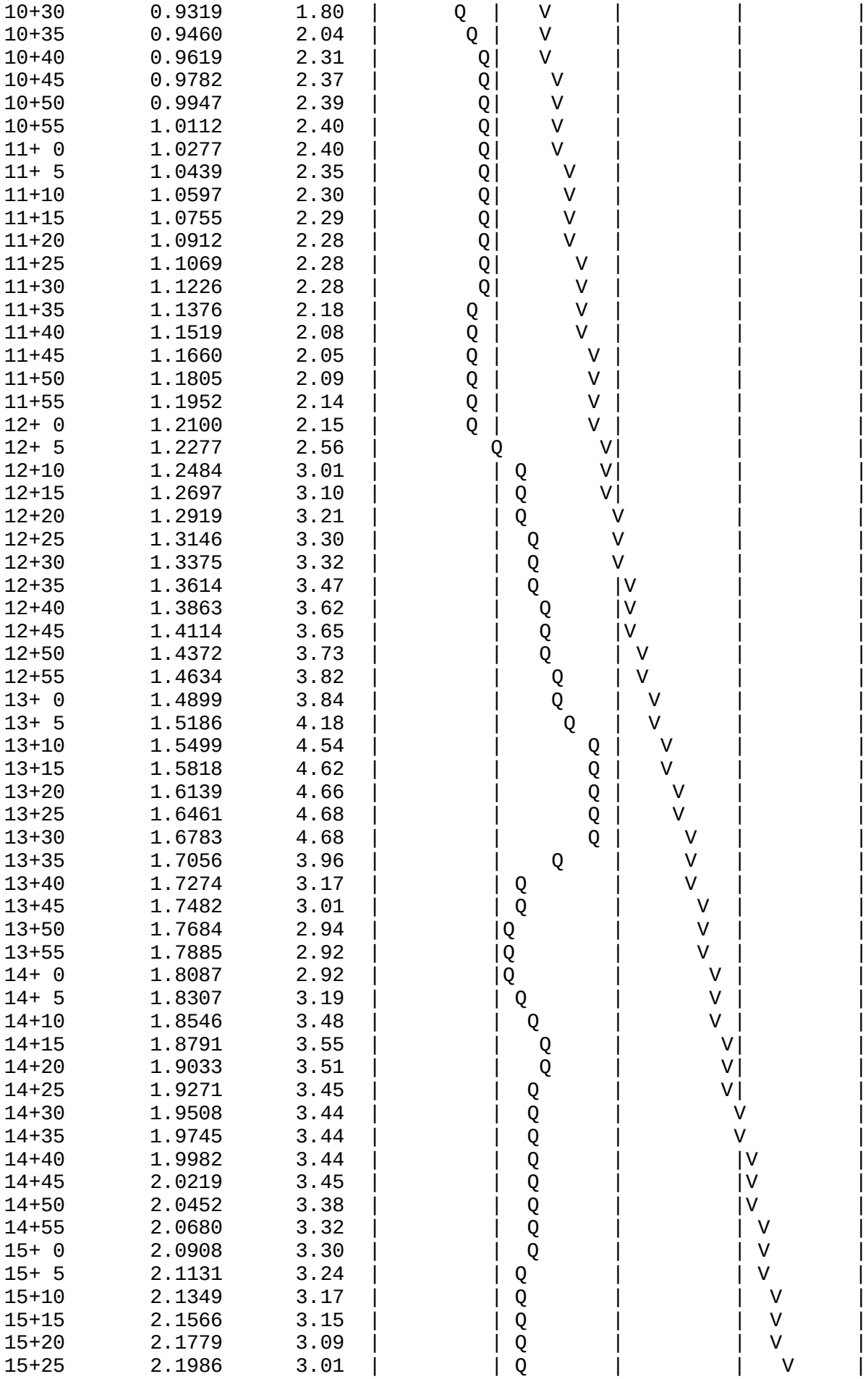
195	16.25	0.13	0.096	(0.103)	0.025	0.071
196	16.33	0.13	0.096	(0.103)	0.025	0.071
197	16.42	0.13	0.096	(0.102)	0.025	0.071
198	16.50	0.13	0.096	(0.102)	0.025	0.071
199	16.58	0.10	0.072	(0.101)	0.019	0.053
200	16.67	0.10	0.072	(0.101)	0.019	0.053
201	16.75	0.10	0.072	(0.100)	0.019	0.053
202	16.83	0.10	0.072	(0.100)	0.019	0.053
203	16.92	0.10	0.072	(0.099)	0.019	0.053
204	17.00	0.10	0.072	(0.099)	0.019	0.053
205	17.08	0.17	0.120	(0.098)	0.031	0.089
206	17.17	0.17	0.120	(0.098)	0.031	0.089
207	17.25	0.17	0.120	(0.097)	0.031	0.089
208	17.33	0.17	0.120	(0.097)	0.031	0.089
209	17.42	0.17	0.120	(0.096)	0.031	0.089
210	17.50	0.17	0.120	(0.096)	0.031	0.089
211	17.58	0.17	0.120	(0.095)	0.031	0.089
212	17.67	0.17	0.120	(0.095)	0.031	0.089
213	17.75	0.17	0.120	(0.094)	0.031	0.089
214	17.83	0.13	0.096	(0.094)	0.025	0.071
215	17.92	0.13	0.096	(0.093)	0.025	0.071
216	18.00	0.13	0.096	(0.093)	0.025	0.071
217	18.08	0.13	0.096	(0.093)	0.025	0.071
218	18.17	0.13	0.096	(0.092)	0.025	0.071
219	18.25	0.13	0.096	(0.092)	0.025	0.071
220	18.33	0.13	0.096	(0.091)	0.025	0.071
221	18.42	0.13	0.096	(0.091)	0.025	0.071
222	18.50	0.13	0.096	(0.090)	0.025	0.071
223	18.58	0.10	0.072	(0.090)	0.019	0.053
224	18.67	0.10	0.072	(0.089)	0.019	0.053
225	18.75	0.10	0.072	(0.089)	0.019	0.053
226	18.83	0.07	0.048	(0.089)	0.012	0.036
227	18.92	0.07	0.048	(0.088)	0.012	0.036
228	19.00	0.07	0.048	(0.088)	0.012	0.036
229	19.08	0.10	0.072	(0.087)	0.019	0.053
230	19.17	0.10	0.072	(0.087)	0.019	0.053
231	19.25	0.10	0.072	(0.087)	0.019	0.053
232	19.33	0.13	0.096	(0.086)	0.025	0.071
233	19.42	0.13	0.096	(0.086)	0.025	0.071
234	19.50	0.13	0.096	(0.085)	0.025	0.071
235	19.58	0.10	0.072	(0.085)	0.019	0.053
236	19.67	0.10	0.072	(0.085)	0.019	0.053
237	19.75	0.10	0.072	(0.084)	0.019	0.053
238	19.83	0.07	0.048	(0.084)	0.012	0.036
239	19.92	0.07	0.048	(0.083)	0.012	0.036
240	20.00	0.07	0.048	(0.083)	0.012	0.036
241	20.08	0.10	0.072	(0.083)	0.019	0.053
242	20.17	0.10	0.072	(0.082)	0.019	0.053
243	20.25	0.10	0.072	(0.082)	0.019	0.053
244	20.33	0.10	0.072	(0.082)	0.019	0.053
245	20.42	0.10	0.072	(0.081)	0.019	0.053
246	20.50	0.10	0.072	(0.081)	0.019	0.053
247	20.58	0.10	0.072	(0.081)	0.019	0.053
248	20.67	0.10	0.072	(0.080)	0.019	0.053
249	20.75	0.10	0.072	(0.080)	0.019	0.053
250	20.83	0.07	0.048	(0.080)	0.012	0.036
251	20.92	0.07	0.048	(0.079)	0.012	0.036
252	21.00	0.07	0.048	(0.079)	0.012	0.036
253	21.08	0.10	0.072	(0.079)	0.019	0.053
254	21.17	0.10	0.072	(0.078)	0.019	0.053

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255  21.25     0.10      0.072       (  0.078)       0.019        0.053
256  21.33     0.07      0.048       (  0.078)       0.012        0.036
257  21.42     0.07      0.048       (  0.077)       0.012        0.036
258  21.50     0.07      0.048       (  0.077)       0.012        0.036
259  21.58     0.10      0.072       (  0.077)       0.019        0.053
260  21.67     0.10      0.072       (  0.077)       0.019        0.053
261  21.75     0.10      0.072       (  0.076)       0.019        0.053
262  21.83     0.07      0.048       (  0.076)       0.012        0.036
263  21.92     0.07      0.048       (  0.076)       0.012        0.036
264  22.00     0.07      0.048       (  0.076)       0.012        0.036
265  22.08     0.10      0.072       (  0.075)       0.019        0.053
266  22.17     0.10      0.072       (  0.075)       0.019        0.053
267  22.25     0.10      0.072       (  0.075)       0.019        0.053
268  22.33     0.07      0.048       (  0.075)       0.012        0.036
269  22.42     0.07      0.048       (  0.074)       0.012        0.036
270  22.50     0.07      0.048       (  0.074)       0.012        0.036
271  22.58     0.07      0.048       (  0.074)       0.012        0.036
272  22.67     0.07      0.048       (  0.074)       0.012        0.036
273  22.75     0.07      0.048       (  0.073)       0.012        0.036
274  22.83     0.07      0.048       (  0.073)       0.012        0.036
275  22.92     0.07      0.048       (  0.073)       0.012        0.036
276  23.00     0.07      0.048       (  0.073)       0.012        0.036
277  23.08     0.07      0.048       (  0.073)       0.012        0.036
278  23.17     0.07      0.048       (  0.073)       0.012        0.036
279  23.25     0.07      0.048       (  0.072)       0.012        0.036
280  23.33     0.07      0.048       (  0.072)       0.012        0.036
281  23.42     0.07      0.048       (  0.072)       0.012        0.036
282  23.50     0.07      0.048       (  0.072)       0.012        0.036
283  23.58     0.07      0.048       (  0.072)       0.012        0.036
284  23.67     0.07      0.048       (  0.072)       0.012        0.036
285  23.75     0.07      0.048       (  0.072)       0.012        0.036
286  23.83     0.07      0.048       (  0.072)       0.012        0.036
287  23.92     0.07      0.048       (  0.072)       0.012        0.036
288  24.00     0.07      0.048       (  0.072)       0.012        0.036
          (Loss Rate Not Used)
    Sum =     100.0                                    Sum =    55.3
     Flood volume = Effective rainfall      4.61(In)
      times area       6.7(Ac.)/[(In)/(Ft.)] =       2.6(Ac.Ft)
     Total soil loss =      1.39(In)
     Total soil loss =     0.778(Ac.Ft)
     Total rainfall =      6.00(In)
     Flood volume =      112023.1 Cubic Feet
     Total soil loss =       33901.0 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      4.682(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       0.0007      0.10  Q         |         |         |         |
   0+10       0.0021      0.20  Q         |         |         |         |
   0+15       0.0036      0.23  Q         |         |         |         |
   0+20       0.0056      0.28  VQ        |         |         |         |
   0+25       0.0080      0.34  VQ        |         |         |         |
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0+30      0.0104      0.35  VQ       |          |          |          |
0+35      0.0129      0.36  VQ       |          |          |          |
0+40      0.0153      0.36  VQ       |          |          |          |
0+45      0.0178      0.36  VQ       |          |          |          |
0+50      0.0206      0.41  VQ       |          |          |          |
0+55      0.0238      0.46  VQ       |          |          |          |
1+ 0      0.0271      0.47  VQ       |          |          |          |
1+ 5      0.0300      0.43  VQ       |          |          |          |
1+10      0.0326      0.38  VQ       |          |          |          |
1+15      0.0352      0.37  VQ       |          |          |          |
1+20      0.0376      0.36  VQ       |          |          |          |
1+25      0.0401      0.36  VQ       |          |          |          |
1+30      0.0426      0.36  VQ       |          |          |          |
1+35      0.0451      0.36  VQ       |          |          |          |
1+40      0.0476      0.36  VQ       |          |          |          |
1+45      0.0500      0.36  VQ       |          |          |          |
1+50      0.0529      0.41  VQ       |          |          |          |
1+55      0.0560      0.46  VQ       |          |          |          |
2+ 0      0.0593      0.47  VQ       |          |          |          |
2+ 5      0.0626      0.48  VQ       |          |          |          |
2+10      0.0659      0.48  |Q       |          |          |          |
2+15      0.0692      0.48  |Q       |          |          |          |
2+20      0.0725      0.48  |Q       |          |          |          |
2+25      0.0758      0.48  |Q       |          |          |          |
2+30      0.0791      0.48  |Q       |          |          |          |
2+35      0.0828      0.53  |VQ      |          |          |          |
2+40      0.0868      0.58  |VQ      |          |          |          |
2+45      0.0909      0.59  |VQ      |          |          |          |
2+50      0.0950      0.60  |VQ      |          |          |          |
2+55      0.0991      0.60  |VQ      |          |          |          |
3+ 0      0.1032      0.60  |VQ      |          |          |          |
3+ 5      0.1074      0.60  |VQ      |          |          |          |
3+10      0.1115      0.60  |VQ      |          |          |          |
3+15      0.1156      0.60  |VQ      |          |          |          |
3+20      0.1198      0.60  |VQ      |          |          |          |
3+25      0.1239      0.60  |VQ      |          |          |          |
3+30      0.1280      0.60  |VQ      |          |          |          |
3+35      0.1322      0.60  | Q      |          |          |          |
3+40      0.1363      0.60  | Q      |          |          |          |
3+45      0.1404      0.60  | Q      |          |          |          |
3+50      0.1449      0.65  | Q      |          |          |          |
3+55      0.1497      0.70  | Q      |          |          |          |
4+ 0      0.1546      0.71  | Q      |          |          |          |
4+ 5      0.1596      0.72  | Q      |          |          |          |
4+10      0.1645      0.72  | Q      |          |          |          |
4+15      0.1695      0.72  | Q      |          |          |          |
4+20      0.1748      0.77  | VQ     |          |          |          |
4+25      0.1804      0.82  | VQ     |          |          |          |
4+30      0.1862      0.83  | VQ     |          |          |          |
4+35      0.1920      0.84  | VQ     |          |          |          |
4+40      0.1977      0.84  |  Q     |          |          |          |
4+45      0.2035      0.84  |  Q     |          |          |          |
4+50      0.2096      0.89  |  Q     |          |          |          |
4+55      0.2161      0.94  |  Q     |          |          |          |
5+ 0      0.2227      0.95  |  Q     |          |          |          |
5+ 5      0.2286      0.86  |  Q     |          |          |          |
5+10      0.2338      0.76  |  Q     |          |          |          |
5+15      0.2389      0.73  | QV     |          |          |          |
5+20      0.2442      0.77  |  Q     |          |          |          |
5+25      0.2499      0.82  |  Q     |          |          |          |
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5+30	0.2556	0.83	Q				
5+35	0.2617	0.89	QV				
5+40	0.2682	0.94	QV				
5+45	0.2748	0.95	QV				
5+50	0.2814	0.96	QV				
5+55	0.2880	0.96	QV				
6+ 0	0.2946	0.96	QV				
6+ 5	0.3015	1.01	Q				
6+10	0.3088	1.06	Q				
6+15	0.3162	1.07	Q				
6+20	0.3236	1.08	QV				
6+25	0.3311	1.08	QV				
6+30	0.3385	1.08	QV				
6+35	0.3463	1.13	QV				
6+40	0.3544	1.18	QV				
6+45	0.3627	1.19	QV				
6+50	0.3709	1.20	QV				
6+55	0.3792	1.20	QV				
7+ 0	0.3874	1.20	Q V				
7+ 5	0.3957	1.20	Q V				
7+10	0.4040	1.20	Q V				
7+15	0.4122	1.20	Q V				
7+20	0.4208	1.25	Q V				
7+25	0.4298	1.30	QV				
7+30	0.4388	1.31	QV				
7+35	0.4482	1.37	QV				
7+40	0.4580	1.42	Q V				
7+45	0.4679	1.43	Q V				
7+50	0.4781	1.49	Q V				
7+55	0.4888	1.54	QV				
8+ 0	0.4995	1.55	QV				
8+ 5	0.5109	1.66	QV				
8+10	0.5230	1.76	QV				
8+15	0.5353	1.79	QV				
8+20	0.5477	1.80	QV				
8+25	0.5601	1.80	QV				
8+30	0.5725	1.80	QV				
8+35	0.5852	1.85	Q V				
8+40	0.5983	1.90	Q V				
8+45	0.6115	1.91	Q V				
8+50	0.6250	1.97	Q V				
8+55	0.6389	2.02	QV				
9+ 0	0.6529	2.03	Q V				
9+ 5	0.6676	2.14	Q V				
9+10	0.6831	2.24	Q V				
9+15	0.6987	2.27	QV				
9+20	0.7147	2.32	Q|V				
9+25	0.7311	2.38	Q|V				
9+30	0.7476	2.39	Q|V				
9+35	0.7645	2.45	Q|V				
9+40	0.7817	2.50	Q V				
9+45	0.7990	2.51	Q V				
9+50	0.8167	2.57	Q V				
9+55	0.8347	2.62	Q V				
10+ 0	0.8529	2.63	Q V				
10+ 5	0.8687	2.30	Q| V				
10+10	0.8819	1.92	Q | V				
10+15	0.8946	1.85	Q | V				
10+20	0.9071	1.81	Q | V				
10+25	0.9195	1.80	Q | V				



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15+30       2.2193      3.00  |          | Q       |          |   V      |
15+35       2.2382      2.74  |          Q         |          |   V      |
15+40       2.2550      2.45  |         Q|         |          |    V     |
15+45       2.2715      2.39  |         Q|         |          |    V     |
15+50       2.2878      2.37  |         Q|         |          |    V     |
15+55       2.3041      2.36  |         Q|         |          |    V     |
16+ 0       2.3204      2.37  |         Q|         |          |     V    |
16+ 5       2.3315      1.60  |      Q   |         |          |     V    |
16+10       2.3367      0.76  |   Q      |         |          |     V    |
16+15       2.3407      0.58  |  Q       |         |          |     V    |
16+20       2.3442      0.51  |  Q       |         |          |     V    |
16+25       2.3476      0.48  |Q         |         |          |     V    |
16+30       2.3509      0.48  |Q         |         |          |     V    |
16+35       2.3538      0.43  |Q         |         |          |     V    |
16+40       2.3564      0.38  |Q         |         |          |     V    |
16+45       2.3590      0.37  |Q         |         |          |     V    |
16+50       2.3614      0.36  |Q         |         |          |     V    |
16+55       2.3639      0.36  |Q         |         |          |     V    |
17+ 0       2.3664      0.36  |Q         |         |          |     V    |
17+ 5       2.3696      0.46  |Q         |         |          |     V    |
17+10       2.3734      0.56  |  Q       |         |          |     V    |
17+15       2.3775      0.59  |  Q       |         |          |     V    |
17+20       2.3816      0.60  |  Q       |         |          |      V   |
17+25       2.3857      0.60  |  Q       |         |          |      V   |
17+30       2.3898      0.60  |  Q       |         |          |      V   |
17+35       2.3940      0.60  |  Q       |         |          |      V   |
17+40       2.3981      0.60  |  Q       |         |          |      V   |
17+45       2.4022      0.60  |  Q       |         |          |      V   |
17+50       2.4060      0.55  |  Q       |         |          |      V   |
17+55       2.4095      0.50  |Q         |         |          |      V   |
18+ 0       2.4128      0.49  |Q         |         |          |      V   |
18+ 5       2.4161      0.48  |Q         |         |          |      V   |
18+10       2.4194      0.48  |Q         |         |          |      V   |
18+15       2.4227      0.48  |Q         |         |          |      V   |
18+20       2.4261      0.48  |Q         |         |          |      V   |
18+25       2.4294      0.48  |Q         |         |          |      V   |
18+30       2.4327      0.48  |Q         |         |          |      V   |
18+35       2.4356      0.43  |Q         |         |          |      V   |
18+40       2.4382      0.38  |Q         |         |          |      V   |
18+45       2.4408      0.37  |Q         |         |          |      V   |
18+50       2.4429      0.31  |Q         |         |          |      V   |
18+55       2.4447      0.26  |Q         |         |          |       V  |
19+ 0       2.4464      0.25  Q          |         |          |       V  |
19+ 5       2.4484      0.29  |Q         |         |          |       V  |
19+10       2.4507      0.34  |Q         |         |          |       V  |
19+15       2.4532      0.35  |Q         |         |          |       V  |
19+20       2.4560      0.41  |Q         |         |          |       V  |
19+25       2.4592      0.46  |Q         |         |          |       V  |
19+30       2.4624      0.47  |Q         |         |          |       V  |
19+35       2.4654      0.43  |Q         |         |          |       V  |
19+40       2.4680      0.38  |Q         |         |          |       V  |
19+45       2.4705      0.37  |Q         |         |          |       V  |
19+50       2.4727      0.31  |Q         |         |          |       V  |
19+55       2.4744      0.26  |Q         |         |          |       V  |
20+ 0       2.4761      0.25  Q          |         |          |       V  |
20+ 5       2.4781      0.29  |Q         |         |          |       V  |
20+10       2.4805      0.34  |Q         |         |          |       V  |
20+15       2.4829      0.35  |Q         |         |          |       V  |
20+20       2.4854      0.36  |Q         |         |          |       V  |
20+25       2.4879      0.36  |Q         |         |          |       V  |
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  20+30       2.4904      0.36  |Q        |         |         |       V |
  20+35       2.4928      0.36  |Q        |         |         |       V |
  20+40       2.4953      0.36  |Q        |         |         |       V |
  20+45       2.4978      0.36  |Q        |         |         |       V |
  20+50       2.4999      0.31  |Q        |         |         |       V |
  20+55       2.5017      0.26  |Q        |         |         |       V |
  21+ 0       2.5034      0.25  Q         |         |         |       V |
  21+ 5       2.5054      0.29  |Q        |         |         |       V |
  21+10       2.5078      0.34  |Q        |         |         |        V|
  21+15       2.5102      0.35  |Q        |         |         |        V|
  21+20       2.5123      0.31  |Q        |         |         |        V|
  21+25       2.5141      0.26  |Q        |         |         |        V|
  21+30       2.5158      0.25  Q         |         |         |        V|
  21+35       2.5178      0.29  |Q        |         |         |        V|
  21+40       2.5202      0.34  |Q        |         |         |        V|
  21+45       2.5226      0.35  |Q        |         |         |        V|
  21+50       2.5247      0.31  |Q        |         |         |        V|
  21+55       2.5265      0.26  |Q        |         |         |        V|
  22+ 0       2.5282      0.25  Q         |         |         |        V|
  22+ 5       2.5302      0.29  |Q        |         |         |        V|
  22+10       2.5326      0.34  |Q        |         |         |        V|
  22+15       2.5350      0.35  |Q        |         |         |        V|
  22+20       2.5371      0.31  |Q        |         |         |        V|
  22+25       2.5389      0.26  |Q        |         |         |        V|
  22+30       2.5406      0.25  Q         |         |         |        V|
  22+35       2.5423      0.24  Q         |         |         |        V|
  22+40       2.5439      0.24  Q         |         |         |        V|
  22+45       2.5456      0.24  Q         |         |         |        V|
  22+50       2.5472      0.24  Q         |         |         |        V|
  22+55       2.5489      0.24  Q         |         |         |        V|
  23+ 0       2.5505      0.24  Q         |         |         |        V|
  23+ 5       2.5522      0.24  Q         |         |         |        V|
  23+10       2.5538      0.24  Q         |         |         |        V|
  23+15       2.5555      0.24  Q         |         |         |        V|
  23+20       2.5571      0.24  Q         |         |         |        V|
  23+25       2.5588      0.24  Q         |         |         |        V|
  23+30       2.5604      0.24  Q         |         |         |        V|
  23+35       2.5621      0.24  Q         |         |         |        V|
  23+40       2.5637      0.24  Q         |         |         |        V|
  23+45       2.5654      0.24  Q         |         |         |        V|
  23+50       2.5670      0.24  Q         |         |         |        V|
  23+55       2.5687      0.24  Q         |         |         |        V|
  24+ 0       2.5704      0.24  Q         |         |         |        V|
  24+ 5       2.5713      0.14  Q         |         |         |        V|
  24+10       2.5716      0.04  Q         |         |         |        V|
  24+15       2.5717      0.01  Q         |         |         |        V|
  24+20       2.5717      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 10/24/24 File: THECOVE1100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
1-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	0.57	5.66

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.45	14.40

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.570(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 1.450(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.450(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
		Sum = 100.000	Sum=	10.008

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	4.40	0.766	0.189	(0.260)	0.577
2	0.17	4.50	0.783	0.189	(0.266)	0.594
3	0.25	5.40	0.940	0.189	(0.319)	0.751
4	0.33	5.40	0.940	0.189	(0.319)	0.751
5	0.42	5.70	0.992	0.189	(0.337)	0.803
6	0.50	6.40	1.113	0.189	(0.379)	0.925
7	0.58	7.90	1.374	0.189	(0.467)	1.185
8	0.67	9.10	1.583	0.189	(0.538)	1.394
9	0.75	12.80	2.227	0.189	(0.757)	2.038
10	0.83	25.60	4.454	0.189	(1.514)	4.265
11	0.92	7.90	1.374	0.189	(0.467)	1.185
12	1.00	4.90	0.853	0.189	(0.290)	0.664
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	15.1

```
    Flood volume = Effective rainfall      1.26(In)
     times area       9.9(Ac.)/[(In)/(Ft.)] =       1.0(Ac.Ft)
    Total soil loss =      0.19(In)
    Total soil loss =     0.156(Ac.Ft)
    Total rainfall =      1.45(In)
    Flood volume =       45449.3 Cubic Feet
    Total soil loss =        6812.5 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     31.719(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
  Time(h+m) Volume Ac.Ft   Q(CFS)  0       10.0      20.0      30.0      40.0
  ---------------------------------------------------------------------------
    0+ 5       0.0211      3.06  V  Q      |         |         |         |
    0+10       0.0583      5.41  | V  Q    |         |         |         |
    0+15       0.1049      6.76  |   V Q   |         |         |         |
    0+20       0.1558      7.39  |    V Q  |         |         |         |
    0+25       0.2095      7.79  |      QV |         |         |         |
    0+30       0.2690      8.64  |       Q V         |         |         |
    0+35       0.3416     10.55  |         Q  V      |         |         |
    0+40       0.4296     12.77  |         | Q   V   |         |         |
    0+45       0.5481     17.21  |         |      Q  |V        |         |
    0+50       0.7666     31.72  |         |         |        V|Q        |
    0+55       0.9358     24.58  |         |         |   Q     |    V    |
    1+ 0       1.0154     11.55  |         |Q        |         |       V |
    1+ 5       1.0397      3.54  |  Q      |         |         |        V|
    1+10       1.0434      0.53  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 10/24/24 File: THECOVE3100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
3-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.00	9.93

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	2.50	24.82

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	1.30	0.390	(0.189)		0.133	0.257
2	0.17	1.30	0.390	(0.189)		0.133	0.257
3	0.25	1.10	0.330	(0.189)		0.112	0.218
4	0.33	1.50	0.450	(0.189)		0.153	0.297
5	0.42	1.50	0.450	(0.189)		0.153	0.297
6	0.50	1.80	0.540	(0.189)		0.184	0.356
7	0.58	1.50	0.450	(0.189)		0.153	0.297
8	0.67	1.80	0.540	(0.189)		0.184	0.356
9	0.75	1.80	0.540	(0.189)		0.184	0.356
10	0.83	1.50	0.450	(0.189)		0.153	0.297
11	0.92	1.60	0.480	(0.189)		0.163	0.317
12	1.00	1.80	0.540	(0.189)		0.184	0.356
13	1.08	2.20	0.660	0.189	(	0.224)	0.471
14	1.17	2.20	0.660	0.189	(	0.224)	0.471
15	1.25	2.20	0.660	0.189	(	0.224)	0.471
16	1.33	2.00	0.600	0.189	(	0.204)	0.411

17	1.42	2.60	0.780	0.189	(0.265)	0.591	
18	1.50	2.70	0.810	0.189	(0.275)	0.621	
19	1.58	2.40	0.720	0.189	(0.245)	0.531	
20	1.67	2.70	0.810	0.189	(0.275)	0.621	
21	1.75	3.30	0.990	0.189	(0.337)	0.801	
22	1.83	3.10	0.930	0.189	(0.316)	0.741	
23	1.92	2.90	0.870	0.189	(0.296)	0.681	
24	2.00	3.00	0.900	0.189	(0.306)	0.711	
25	2.08	3.10	0.930	0.189	(0.316)	0.741	
26	2.17	4.20	1.260	0.189	(0.428)	1.071	
27	2.25	5.00	1.500	0.189	(0.510)	1.311	
28	2.33	3.50	1.050	0.189	(0.357)	0.861	
29	2.42	6.80	2.040	0.189	(0.694)	1.851	
30	2.50	7.30	2.190	0.189	(0.745)	2.001	
31	2.58	8.20	2.460	0.189	(0.836)	2.271	
32	2.67	5.90	1.770	0.189	(0.602)	1.581	
33	2.75	2.00	0.600	0.189	(0.204)	0.411	
34	2.83	1.80	0.540	(0.189)	0.184	0.356	
35	2.92	1.80	0.540	(0.189)	0.184	0.356	
36	3.00	0.60	0.180	(0.189)	0.061	0.119	

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.7

Flood volume = Effective rainfall 1.98(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 1.6(Ac.Ft)
Total soil loss = 0.52(In)
Total soil loss = 0.433(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 71234.2 Cubic Feet
Total soil loss = 18876.7 Cubic Feet

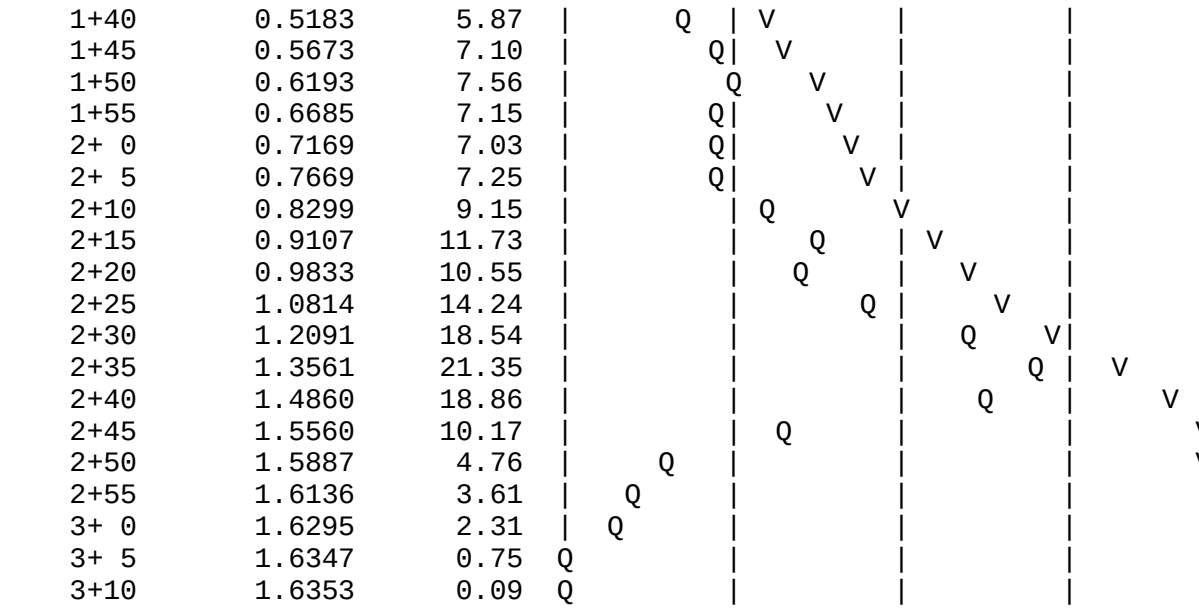
Peak flow rate of this hydrograph = 21.349(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0094	1.37	VQ	|	|	|	|
0+10	0.0258	2.37	V Q	|	|	|	|
0+15	0.0421	2.37	|V Q	|	|	|	|
0+20	0.0602	2.63	|V Q	|	|	|	|
0+25	0.0802	2.91	|V Q	|	|	|	|
0+30	0.1029	3.29	| V Q	|	|	|	|
0+35	0.1250	3.21	| VQ	|	|	|	|
0+40	0.1479	3.34	| VQ	|	|	|	|
0+45	0.1722	3.52	| Q	|	|	|	|
0+50	0.1946	3.25	| Q	|	|	|	|
0+55	0.2161	3.13	| QV	|	|	|	|
1+ 0	0.2393	3.37	| QV	|	|	|	|
1+ 5	0.2679	4.15	| QV	|	|	|	|
1+10	0.2997	4.62	| QV	|	|	|	|
1+15	0.3322	4.72	| Q V	|	|	|	|
1+20	0.3625	4.40	| Q V	|	|	|	|
1+25	0.3977	5.12	| Q V|	|	|	|	|
1+30	0.4386	5.93	| Q V	|	|	|	|
1+35	0.4779	5.72	| Q |V	|	|	|	|


1+40 0.5183 5.87
1+45 0.5673 7.10
1+50 0.6193 7.56
1+55 0.6685 7.15
2+ 0 0.7169 7.03
2+ 5 0.7669 7.25
2+10 0.8299 9.15
2+15 0.9107 11.73
2+20 0.9833 10.55
2+25 1.0814 14.24
2+30 1.2091 18.54
2+35 1.3561 21.35
2+40 1.4860 18.86
2+45 1.5560 10.17
2+50 1.5887 4.76
2+55 1.6136 3.61
3+ 0 1.6295 2.31
3+ 5 1.6347 0.75
3+10 1.6353 0.09

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 10/24/24 File: THECOVE6100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
6-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	1.40	13.90

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	3.50	34.75

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 3.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
			Sum = 100.000	Sum= 10.008

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	0.50	0.210	(0.189)		0.071	0.139
2	0.17	0.60	0.252	(0.189)		0.086	0.166
3	0.25	0.60	0.252	(0.189)		0.086	0.166
4	0.33	0.60	0.252	(0.189)		0.086	0.166
5	0.42	0.60	0.252	(0.189)		0.086	0.166
6	0.50	0.70	0.294	(0.189)		0.100	0.194
7	0.58	0.70	0.294	(0.189)		0.100	0.194
8	0.67	0.70	0.294	(0.189)		0.100	0.194
9	0.75	0.70	0.294	(0.189)		0.100	0.194
10	0.83	0.70	0.294	(0.189)		0.100	0.194
11	0.92	0.70	0.294	(0.189)		0.100	0.194
12	1.00	0.80	0.336	(0.189)		0.114	0.222
13	1.08	0.80	0.336	(0.189)		0.114	0.222
14	1.17	0.80	0.336	(0.189)		0.114	0.222
15	1.25	0.80	0.336	(0.189)		0.114	0.222
16	1.33	0.80	0.336	(0.189)		0.114	0.222

17	1.42	0.80	0.336	(0.189)	0.114	0.222
18	1.50	0.80	0.336	(0.189)	0.114	0.222
19	1.58	0.80	0.336	(0.189)	0.114	0.222
20	1.67	0.80	0.336	(0.189)	0.114	0.222
21	1.75	0.80	0.336	(0.189)	0.114	0.222
22	1.83	0.80	0.336	(0.189)	0.114	0.222
23	1.92	0.80	0.336	(0.189)	0.114	0.222
24	2.00	0.90	0.378	(0.189)	0.129	0.249
25	2.08	0.80	0.336	(0.189)	0.114	0.222
26	2.17	0.90	0.378	(0.189)	0.129	0.249
27	2.25	0.90	0.378	(0.189)	0.129	0.249
28	2.33	0.90	0.378	(0.189)	0.129	0.249
29	2.42	0.90	0.378	(0.189)	0.129	0.249
30	2.50	0.90	0.378	(0.189)	0.129	0.249
31	2.58	0.90	0.378	(0.189)	0.129	0.249
32	2.67	0.90	0.378	(0.189)	0.129	0.249
33	2.75	1.00	0.420	(0.189)	0.143	0.277
34	2.83	1.00	0.420	(0.189)	0.143	0.277
35	2.92	1.00	0.420	(0.189)	0.143	0.277
36	3.00	1.00	0.420	(0.189)	0.143	0.277
37	3.08	1.00	0.420	(0.189)	0.143	0.277
38	3.17	1.10	0.462	(0.189)	0.157	0.305
39	3.25	1.10	0.462	(0.189)	0.157	0.305
40	3.33	1.10	0.462	(0.189)	0.157	0.305
41	3.42	1.20	0.504	(0.189)	0.171	0.333
42	3.50	1.30	0.546	(0.189)	0.186	0.360
43	3.58	1.40	0.588	0.189	(0.200)	0.399
44	3.67	1.40	0.588	0.189	(0.200)	0.399
45	3.75	1.50	0.630	0.189	(0.214)	0.441
46	3.83	1.50	0.630	0.189	(0.214)	0.441
47	3.92	1.60	0.672	0.189	(0.228)	0.483
48	4.00	1.60	0.672	0.189	(0.228)	0.483
49	4.08	1.70	0.714	0.189	(0.243)	0.525
50	4.17	1.80	0.756	0.189	(0.257)	0.567
51	4.25	1.90	0.798	0.189	(0.271)	0.609
52	4.33	2.00	0.840	0.189	(0.286)	0.651
53	4.42	2.10	0.882	0.189	(0.300)	0.693
54	4.50	2.10	0.882	0.189	(0.300)	0.693
55	4.58	2.20	0.924	0.189	(0.314)	0.735
56	4.67	2.30	0.966	0.189	(0.328)	0.777
57	4.75	2.40	1.008	0.189	(0.343)	0.819
58	4.83	2.40	1.008	0.189	(0.343)	0.819
59	4.92	2.50	1.050	0.189	(0.357)	0.861
60	5.00	2.60	1.092	0.189	(0.371)	0.903
61	5.08	3.10	1.302	0.189	(0.443)	1.113
62	5.17	3.60	1.512	0.189	(0.514)	1.323
63	5.25	3.90	1.638	0.189	(0.557)	1.449
64	5.33	4.20	1.764	0.189	(0.600)	1.575
65	5.42	4.70	1.974	0.189	(0.671)	1.785
66	5.50	5.60	2.352	0.189	(0.800)	2.163
67	5.58	1.90	0.798	0.189	(0.271)	0.609
68	5.67	0.90	0.378	(0.189)	0.129	0.249
69	5.75	0.60	0.252	(0.189)	0.086	0.166
70	5.83	0.50	0.210	(0.189)	0.071	0.139
71	5.92	0.30	0.126	(0.189)	0.043	0.083
72	6.00	0.20	0.084	(0.189)	0.029	0.055

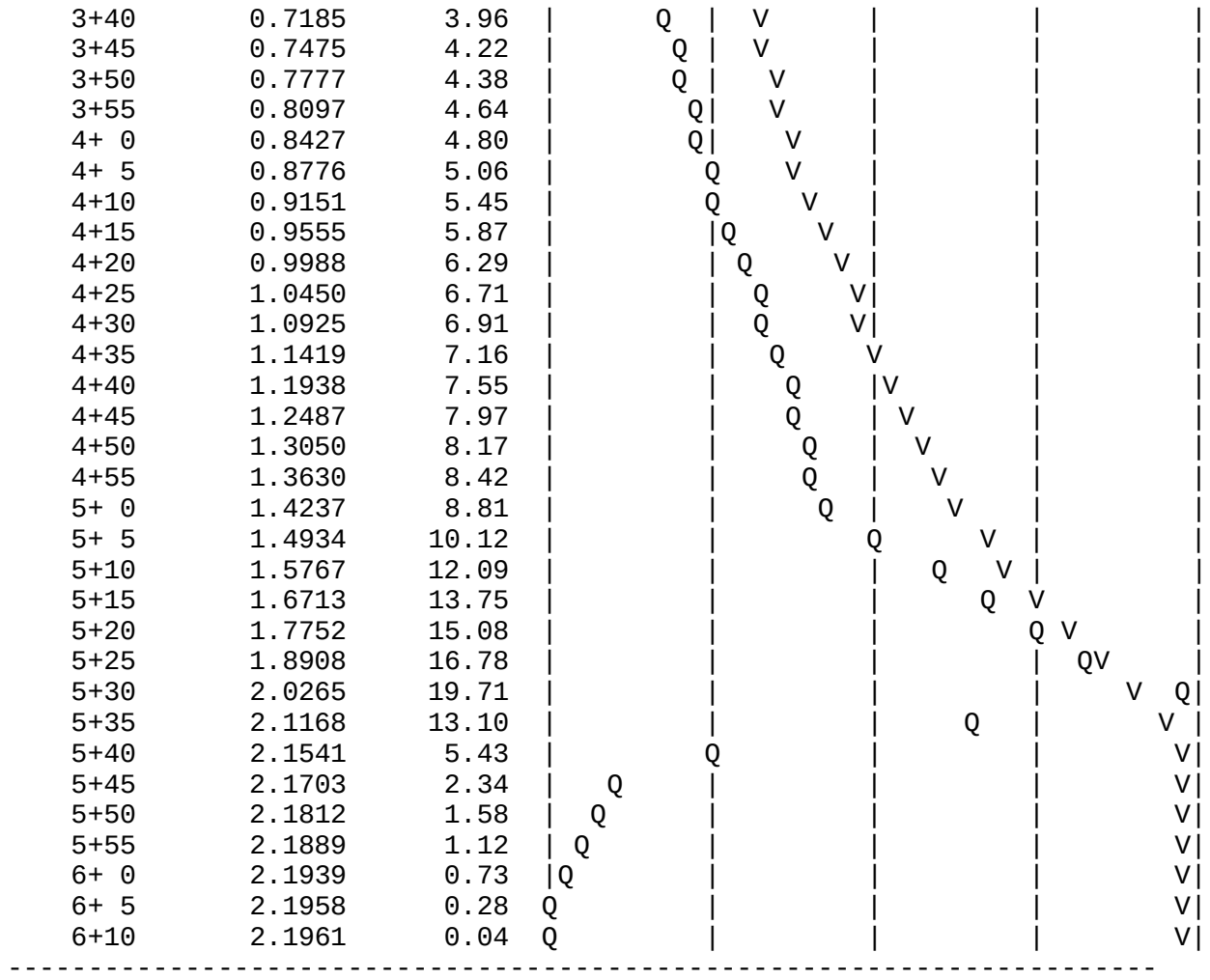
(Loss Rate Not Used)

Sum = 100.0 Sum = 31.8

Flood volume = Effective rainfall 2.65(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 2.2(Ac.Ft)

```
   Total soil loss =      0.85(In)
   Total soil loss =     0.700(Ac.Ft)
   Total rainfall =      3.50(In)
   Flood volume =       95664.2 Cubic Feet
   Total soil loss =       30492.2 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =     19.712(CFS)
   ---------------------------------------------------------------------
   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0051      0.74  VQ        |          |          |          |
  0+10       0.0149      1.42  V Q       |          |          |          |
  0+15       0.0262      1.64  V  Q      |          |          |          |
  0+20       0.0377      1.67  V  Q      |          |          |          |
  0+25       0.0491      1.67  V  Q      |          |          |          |
  0+30       0.0616      1.81  |V Q      |          |          |          |
  0+35       0.0748      1.92  |V Q      |          |          |          |
  0+40       0.0882      1.94  |V Q      |          |          |          |
  0+45       0.1016      1.94  |V Q      |          |          |          |
  0+50       0.1150      1.94  | VQ      |          |          |          |
  0+55       0.1284      1.94  | VQ      |          |          |          |
  1+ 0       0.1428      2.09  | V Q     |          |          |          |
  1+ 5       0.1579      2.20  | V Q     |          |          |          |
  1+10       0.1732      2.22  |  VQ     |          |          |          |
  1+15       0.1885      2.22  |  VQ     |          |          |          |
  1+20       0.2038      2.22  |  VQ     |          |          |          |
  1+25       0.2191      2.22  |  VQ     |          |          |          |
  1+30       0.2344      2.22  |   Q     |          |          |          |
  1+35       0.2496      2.22  |   Q     |          |          |          |
  1+40       0.2649      2.22  |   Q     |          |          |          |
  1+45       0.2802      2.22  |   QV    |          |          |          |
  1+50       0.2955      2.22  |   QV    |          |          |          |
  1+55       0.3108      2.22  |   QV    |          |          |          |
  2+ 0       0.3271      2.37  |   QV    |          |          |          |
  2+ 5       0.3432      2.33  |   Q V   |          |          |          |
  2+10       0.3596      2.39  |   Q V   |          |          |          |
  2+15       0.3767      2.48  |   Q V   |          |          |          |
  2+20       0.3939      2.50  |   Q  V  |          |          |          |
  2+25       0.4111      2.50  |   Q  V  |          |          |          |
  2+30       0.4283      2.50  |   Q  V  |          |          |          |
  2+35       0.4455      2.50  |   Q   V |          |          |          |
  2+40       0.4627      2.50  |   Q   V |          |          |          |
  2+45       0.4809      2.65  |    Q  V |          |          |          |
  2+50       0.4999      2.75  |    Q   V|          |          |          |
  2+55       0.5190      2.78  |    Q   V|          |          |          |
  3+ 0       0.5381      2.78  |    Q   V|          |          |          |
  3+ 5       0.5572      2.78  |    Q    V          |          |          |
  3+10       0.5773      2.92  |    Q    V          |          |          |
  3+15       0.5982      3.03  |     Q   V          |          |          |
  3+20       0.6192      3.05  |     Q   |V         |          |          |
  3+25       0.6413      3.20  |     Q   |V         |          |          |
  3+30       0.6651      3.46  |     Q   | V        |          |          |
  3+35       0.6912      3.79  |      Q  | V        |          |          |
```


3+40 0.7185 3.96
3+45 0.7475 4.22
3+50 0.7777 4.38
3+55 0.8097 4.64
4+ 0 0.8427 4.80
4+ 5 0.8776 5.06
4+10 0.9151 5.45
4+15 0.9555 5.87
4+20 0.9988 6.29
4+25 1.0450 6.71
4+30 1.0925 6.91
4+35 1.1419 7.16
4+40 1.1938 7.55
4+45 1.2487 7.97
4+50 1.3050 8.17
4+55 1.3630 8.42
5+ 0 1.4237 8.81
5+ 5 1.4934 10.12
5+10 1.5767 12.09
5+15 1.6713 13.75
5+20 1.7752 15.08
5+25 1.8908 16.78
5+30 2.0265 19.71
5+35 2.1168 13.10
5+40 2.1541 5.43
5+45 2.1703 2.34
5+50 2.1812 1.58
5+55 2.1889 1.12
6+ 0 2.1939 0.73
6+ 5 2.1958 0.28
6+10 2.1961 0.04

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 10/24/24 File: THECOVE24100.out

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

Program License Serial Number 6094

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

English Units used in output format

THE COVE
100-YR
24-HR

Drainage Area = 9.93(Ac.) = 0.016 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 9.93(Ac.) = 0.016 Sq. Mi.
Length along longest watercourse = 1079.00(Ft.)
Length along longest watercourse measured to centroid = 505.00(Ft.)
Length along longest watercourse = 0.204 Mi.
Length along longest watercourse measured to centroid = 0.096 Mi.
Difference in elevation = 30.40(Ft.)
Slope along watercourse = 148.7600 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.87 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.75 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]
9.93	2.50	24.82

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
9.93	6.00	59.58

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
9.930	56.00	0.700

Total Area Entered = 9.93(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.700	0.189	1.000	0.189
					Sum (F) =	0.189

Area averaged mean soil loss (F) (In/Hr) = 0.189
Minimum soil loss rate ((In/Hr)) = 0.094
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.340

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	267.111	53.033	5.307
2	0.167	534.222	39.016	3.905
3	0.250	801.333	7.951	0.796
		Sum = 100.000	Sum=	10.008

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	0.048	(0.335)		0.016	0.032
2	0.17	0.07	0.048	(0.334)		0.016	0.032
3	0.25	0.07	0.048	(0.332)		0.016	0.032
4	0.33	0.10	0.072	(0.331)		0.024	0.048
5	0.42	0.10	0.072	(0.330)		0.024	0.048
6	0.50	0.10	0.072	(0.329)		0.024	0.048
7	0.58	0.10	0.072	(0.327)		0.024	0.048
8	0.67	0.10	0.072	(0.326)		0.024	0.048
9	0.75	0.10	0.072	(0.325)		0.024	0.048
10	0.83	0.13	0.096	(0.323)		0.033	0.063
11	0.92	0.13	0.096	(0.322)		0.033	0.063
12	1.00	0.13	0.096	(0.321)		0.033	0.063
13	1.08	0.10	0.072	(0.320)		0.024	0.048
14	1.17	0.10	0.072	(0.318)		0.024	0.048
15	1.25	0.10	0.072	(0.317)		0.024	0.048
16	1.33	0.10	0.072	(0.316)		0.024	0.048

17	1.42	0.10	0.072	(0.315)	0.024	0.048
18	1.50	0.10	0.072	(0.313)	0.024	0.048
19	1.58	0.10	0.072	(0.312)	0.024	0.048
20	1.67	0.10	0.072	(0.311)	0.024	0.048
21	1.75	0.10	0.072	(0.310)	0.024	0.048
22	1.83	0.13	0.096	(0.308)	0.033	0.063
23	1.92	0.13	0.096	(0.307)	0.033	0.063
24	2.00	0.13	0.096	(0.306)	0.033	0.063
25	2.08	0.13	0.096	(0.305)	0.033	0.063
26	2.17	0.13	0.096	(0.303)	0.033	0.063
27	2.25	0.13	0.096	(0.302)	0.033	0.063
28	2.33	0.13	0.096	(0.301)	0.033	0.063
29	2.42	0.13	0.096	(0.300)	0.033	0.063
30	2.50	0.13	0.096	(0.298)	0.033	0.063
31	2.58	0.17	0.120	(0.297)	0.041	0.079
32	2.67	0.17	0.120	(0.296)	0.041	0.079
33	2.75	0.17	0.120	(0.295)	0.041	0.079
34	2.83	0.17	0.120	(0.294)	0.041	0.079
35	2.92	0.17	0.120	(0.292)	0.041	0.079
36	3.00	0.17	0.120	(0.291)	0.041	0.079
37	3.08	0.17	0.120	(0.290)	0.041	0.079
38	3.17	0.17	0.120	(0.289)	0.041	0.079
39	3.25	0.17	0.120	(0.288)	0.041	0.079
40	3.33	0.17	0.120	(0.286)	0.041	0.079
41	3.42	0.17	0.120	(0.285)	0.041	0.079
42	3.50	0.17	0.120	(0.284)	0.041	0.079
43	3.58	0.17	0.120	(0.283)	0.041	0.079
44	3.67	0.17	0.120	(0.282)	0.041	0.079
45	3.75	0.17	0.120	(0.280)	0.041	0.079
46	3.83	0.20	0.144	(0.279)	0.049	0.095
47	3.92	0.20	0.144	(0.278)	0.049	0.095
48	4.00	0.20	0.144	(0.277)	0.049	0.095
49	4.08	0.20	0.144	(0.276)	0.049	0.095
50	4.17	0.20	0.144	(0.275)	0.049	0.095
51	4.25	0.20	0.144	(0.273)	0.049	0.095
52	4.33	0.23	0.168	(0.272)	0.057	0.111
53	4.42	0.23	0.168	(0.271)	0.057	0.111
54	4.50	0.23	0.168	(0.270)	0.057	0.111
55	4.58	0.23	0.168	(0.269)	0.057	0.111
56	4.67	0.23	0.168	(0.268)	0.057	0.111
57	4.75	0.23	0.168	(0.266)	0.057	0.111
58	4.83	0.27	0.192	(0.265)	0.065	0.127
59	4.92	0.27	0.192	(0.264)	0.065	0.127
60	5.00	0.27	0.192	(0.263)	0.065	0.127
61	5.08	0.20	0.144	(0.262)	0.049	0.095
62	5.17	0.20	0.144	(0.261)	0.049	0.095
63	5.25	0.20	0.144	(0.260)	0.049	0.095
64	5.33	0.23	0.168	(0.258)	0.057	0.111
65	5.42	0.23	0.168	(0.257)	0.057	0.111
66	5.50	0.23	0.168	(0.256)	0.057	0.111
67	5.58	0.27	0.192	(0.255)	0.065	0.127
68	5.67	0.27	0.192	(0.254)	0.065	0.127
69	5.75	0.27	0.192	(0.253)	0.065	0.127
70	5.83	0.27	0.192	(0.252)	0.065	0.127
71	5.92	0.27	0.192	(0.251)	0.065	0.127
72	6.00	0.27	0.192	(0.249)	0.065	0.127
73	6.08	0.30	0.216	(0.248)	0.073	0.143
74	6.17	0.30	0.216	(0.247)	0.073	0.143
75	6.25	0.30	0.216	(0.246)	0.073	0.143
76	6.33	0.30	0.216	(0.245)	0.073	0.143

77	6.42	0.30	0.216	(0.244)	0.073	0.143
78	6.50	0.30	0.216	(0.243)	0.073	0.143
79	6.58	0.33	0.240	(0.242)	0.082	0.158
80	6.67	0.33	0.240	(0.241)	0.082	0.158
81	6.75	0.33	0.240	(0.240)	0.082	0.158
82	6.83	0.33	0.240	(0.239)	0.082	0.158
83	6.92	0.33	0.240	(0.237)	0.082	0.158
84	7.00	0.33	0.240	(0.236)	0.082	0.158
85	7.08	0.33	0.240	(0.235)	0.082	0.158
86	7.17	0.33	0.240	(0.234)	0.082	0.158
87	7.25	0.33	0.240	(0.233)	0.082	0.158
88	7.33	0.37	0.264	(0.232)	0.090	0.174
89	7.42	0.37	0.264	(0.231)	0.090	0.174
90	7.50	0.37	0.264	(0.230)	0.090	0.174
91	7.58	0.40	0.288	(0.229)	0.098	0.190
92	7.67	0.40	0.288	(0.228)	0.098	0.190
93	7.75	0.40	0.288	(0.227)	0.098	0.190
94	7.83	0.43	0.312	(0.226)	0.106	0.206
95	7.92	0.43	0.312	(0.225)	0.106	0.206
96	8.00	0.43	0.312	(0.224)	0.106	0.206
97	8.08	0.50	0.360	(0.223)	0.122	0.238
98	8.17	0.50	0.360	(0.222)	0.122	0.238
99	8.25	0.50	0.360	(0.221)	0.122	0.238
100	8.33	0.50	0.360	(0.220)	0.122	0.238
101	8.42	0.50	0.360	(0.219)	0.122	0.238
102	8.50	0.50	0.360	(0.217)	0.122	0.238
103	8.58	0.53	0.384	(0.216)	0.131	0.253
104	8.67	0.53	0.384	(0.215)	0.131	0.253
105	8.75	0.53	0.384	(0.214)	0.131	0.253
106	8.83	0.57	0.408	(0.213)	0.139	0.269
107	8.92	0.57	0.408	(0.212)	0.139	0.269
108	9.00	0.57	0.408	(0.211)	0.139	0.269
109	9.08	0.63	0.456	(0.210)	0.155	0.301
110	9.17	0.63	0.456	(0.209)	0.155	0.301
111	9.25	0.63	0.456	(0.208)	0.155	0.301
112	9.33	0.67	0.480	(0.207)	0.163	0.317
113	9.42	0.67	0.480	(0.206)	0.163	0.317
114	9.50	0.67	0.480	(0.205)	0.163	0.317
115	9.58	0.70	0.504	(0.204)	0.171	0.333
116	9.67	0.70	0.504	(0.203)	0.171	0.333
117	9.75	0.70	0.504	(0.202)	0.171	0.333
118	9.83	0.73	0.528	(0.202)	0.180	0.348
119	9.92	0.73	0.528	(0.201)	0.180	0.348
120	10.00	0.73	0.528	(0.200)	0.180	0.348
121	10.08	0.50	0.360	(0.199)	0.122	0.238
122	10.17	0.50	0.360	(0.198)	0.122	0.238
123	10.25	0.50	0.360	(0.197)	0.122	0.238
124	10.33	0.50	0.360	(0.196)	0.122	0.238
125	10.42	0.50	0.360	(0.195)	0.122	0.238
126	10.50	0.50	0.360	(0.194)	0.122	0.238
127	10.58	0.67	0.480	(0.193)	0.163	0.317
128	10.67	0.67	0.480	(0.192)	0.163	0.317
129	10.75	0.67	0.480	(0.191)	0.163	0.317
130	10.83	0.67	0.480	(0.190)	0.163	0.317
131	10.92	0.67	0.480	(0.189)	0.163	0.317
132	11.00	0.67	0.480	(0.188)	0.163	0.317
133	11.08	0.63	0.456	(0.187)	0.155	0.301
134	11.17	0.63	0.456	(0.186)	0.155	0.301
135	11.25	0.63	0.456	(0.185)	0.155	0.301
136	11.33	0.63	0.456	(0.185)	0.155	0.301

137	11.42	0.63	0.456	(0.184)	0.155	0.301
138	11.50	0.63	0.456	(0.183)	0.155	0.301
139	11.58	0.57	0.408	(0.182)	0.139	0.269
140	11.67	0.57	0.408	(0.181)	0.139	0.269
141	11.75	0.57	0.408	(0.180)	0.139	0.269
142	11.83	0.60	0.432	(0.179)	0.147	0.285
143	11.92	0.60	0.432	(0.178)	0.147	0.285
144	12.00	0.60	0.432	(0.177)	0.147	0.285
145	12.08	0.83	0.600	0.176	(0.204)	0.424
146	12.17	0.83	0.600	0.176	(0.204)	0.424
147	12.25	0.83	0.600	0.175	(0.204)	0.425
148	12.33	0.87	0.624	0.174	(0.212)	0.450
149	12.42	0.87	0.624	0.173	(0.212)	0.451
150	12.50	0.87	0.624	0.172	(0.212)	0.452
151	12.58	0.93	0.672	0.171	(0.228)	0.501
152	12.67	0.93	0.672	0.170	(0.228)	0.502
153	12.75	0.93	0.672	0.169	(0.228)	0.503
154	12.83	0.97	0.696	0.169	(0.237)	0.527
155	12.92	0.97	0.696	0.168	(0.237)	0.528
156	13.00	0.97	0.696	0.167	(0.237)	0.529
157	13.08	1.13	0.816	0.166	(0.277)	0.650
158	13.17	1.13	0.816	0.165	(0.277)	0.651
159	13.25	1.13	0.816	0.164	(0.277)	0.652
160	13.33	1.13	0.816	0.164	(0.277)	0.652
161	13.42	1.13	0.816	0.163	(0.277)	0.653
162	13.50	1.13	0.816	0.162	(0.277)	0.654
163	13.58	0.77	0.552	0.161	(0.188)	0.391
164	13.67	0.77	0.552	0.160	(0.188)	0.392
165	13.75	0.77	0.552	0.159	(0.188)	0.393
166	13.83	0.77	0.552	0.159	(0.188)	0.393
167	13.92	0.77	0.552	0.158	(0.188)	0.394
168	14.00	0.77	0.552	0.157	(0.188)	0.395
169	14.08	0.90	0.648	0.156	(0.220)	0.492
170	14.17	0.90	0.648	0.155	(0.220)	0.493
171	14.25	0.90	0.648	0.155	(0.220)	0.493
172	14.33	0.87	0.624	0.154	(0.212)	0.470
173	14.42	0.87	0.624	0.153	(0.212)	0.471
174	14.50	0.87	0.624	0.152	(0.212)	0.472
175	14.58	0.87	0.624	0.151	(0.212)	0.473
176	14.67	0.87	0.624	0.151	(0.212)	0.473
177	14.75	0.87	0.624	0.150	(0.212)	0.474
178	14.83	0.83	0.600	0.149	(0.204)	0.451
179	14.92	0.83	0.600	0.148	(0.204)	0.452
180	15.00	0.83	0.600	0.148	(0.204)	0.452
181	15.08	0.80	0.576	0.147	(0.196)	0.429
182	15.17	0.80	0.576	0.146	(0.196)	0.430
183	15.25	0.80	0.576	0.145	(0.196)	0.431
184	15.33	0.77	0.552	0.145	(0.188)	0.407
185	15.42	0.77	0.552	0.144	(0.188)	0.408
186	15.50	0.77	0.552	0.143	(0.188)	0.409
187	15.58	0.63	0.456	0.142	(0.155)	0.314
188	15.67	0.63	0.456	0.142	(0.155)	0.314
189	15.75	0.63	0.456	0.141	(0.155)	0.315
190	15.83	0.63	0.456	0.140	(0.155)	0.316
191	15.92	0.63	0.456	0.140	(0.155)	0.316
192	16.00	0.63	0.456	0.139	(0.155)	0.317
193	16.08	0.13	0.096	(0.138)	0.033	0.063
194	16.17	0.13	0.096	(0.137)	0.033	0.063
195	16.25	0.13	0.096	(0.137)	0.033	0.063
196	16.33	0.13	0.096	(0.136)	0.033	0.063

197	16.42	0.13	0.096	(0.135)	0.033	0.063
198	16.50	0.13	0.096	(0.135)	0.033	0.063
199	16.58	0.10	0.072	(0.134)	0.024	0.048
200	16.67	0.10	0.072	(0.133)	0.024	0.048
201	16.75	0.10	0.072	(0.133)	0.024	0.048
202	16.83	0.10	0.072	(0.132)	0.024	0.048
203	16.92	0.10	0.072	(0.131)	0.024	0.048
204	17.00	0.10	0.072	(0.131)	0.024	0.048
205	17.08	0.17	0.120	(0.130)	0.041	0.079
206	17.17	0.17	0.120	(0.129)	0.041	0.079
207	17.25	0.17	0.120	(0.129)	0.041	0.079
208	17.33	0.17	0.120	(0.128)	0.041	0.079
209	17.42	0.17	0.120	(0.127)	0.041	0.079
210	17.50	0.17	0.120	(0.127)	0.041	0.079
211	17.58	0.17	0.120	(0.126)	0.041	0.079
212	17.67	0.17	0.120	(0.125)	0.041	0.079
213	17.75	0.17	0.120	(0.125)	0.041	0.079
214	17.83	0.13	0.096	(0.124)	0.033	0.063
215	17.92	0.13	0.096	(0.124)	0.033	0.063
216	18.00	0.13	0.096	(0.123)	0.033	0.063
217	18.08	0.13	0.096	(0.122)	0.033	0.063
218	18.17	0.13	0.096	(0.122)	0.033	0.063
219	18.25	0.13	0.096	(0.121)	0.033	0.063
220	18.33	0.13	0.096	(0.121)	0.033	0.063
221	18.42	0.13	0.096	(0.120)	0.033	0.063
222	18.50	0.13	0.096	(0.119)	0.033	0.063
223	18.58	0.10	0.072	(0.119)	0.024	0.048
224	18.67	0.10	0.072	(0.118)	0.024	0.048
225	18.75	0.10	0.072	(0.118)	0.024	0.048
226	18.83	0.07	0.048	(0.117)	0.016	0.032
227	18.92	0.07	0.048	(0.117)	0.016	0.032
228	19.00	0.07	0.048	(0.116)	0.016	0.032
229	19.08	0.10	0.072	(0.115)	0.024	0.048
230	19.17	0.10	0.072	(0.115)	0.024	0.048
231	19.25	0.10	0.072	(0.114)	0.024	0.048
232	19.33	0.13	0.096	(0.114)	0.033	0.063
233	19.42	0.13	0.096	(0.113)	0.033	0.063
234	19.50	0.13	0.096	(0.113)	0.033	0.063
235	19.58	0.10	0.072	(0.112)	0.024	0.048
236	19.67	0.10	0.072	(0.112)	0.024	0.048
237	19.75	0.10	0.072	(0.111)	0.024	0.048
238	19.83	0.07	0.048	(0.111)	0.016	0.032
239	19.92	0.07	0.048	(0.110)	0.016	0.032
240	20.00	0.07	0.048	(0.110)	0.016	0.032
241	20.08	0.10	0.072	(0.109)	0.024	0.048
242	20.17	0.10	0.072	(0.109)	0.024	0.048
243	20.25	0.10	0.072	(0.108)	0.024	0.048
244	20.33	0.10	0.072	(0.108)	0.024	0.048
245	20.42	0.10	0.072	(0.107)	0.024	0.048
246	20.50	0.10	0.072	(0.107)	0.024	0.048
247	20.58	0.10	0.072	(0.106)	0.024	0.048
248	20.67	0.10	0.072	(0.106)	0.024	0.048
249	20.75	0.10	0.072	(0.106)	0.024	0.048
250	20.83	0.07	0.048	(0.105)	0.016	0.032
251	20.92	0.07	0.048	(0.105)	0.016	0.032
252	21.00	0.07	0.048	(0.104)	0.016	0.032
253	21.08	0.10	0.072	(0.104)	0.024	0.048
254	21.17	0.10	0.072	(0.103)	0.024	0.048
255	21.25	0.10	0.072	(0.103)	0.024	0.048
256	21.33	0.07	0.048	(0.103)	0.016	0.032

257	21.42	0.07	0.048	(0.102)	0.016	0.032
258	21.50	0.07	0.048	(0.102)	0.016	0.032
259	21.58	0.10	0.072	(0.102)	0.024	0.048
260	21.67	0.10	0.072	(0.101)	0.024	0.048
261	21.75	0.10	0.072	(0.101)	0.024	0.048
262	21.83	0.07	0.048	(0.100)	0.016	0.032
263	21.92	0.07	0.048	(0.100)	0.016	0.032
264	22.00	0.07	0.048	(0.100)	0.016	0.032
265	22.08	0.10	0.072	(0.099)	0.024	0.048
266	22.17	0.10	0.072	(0.099)	0.024	0.048
267	22.25	0.10	0.072	(0.099)	0.024	0.048
268	22.33	0.07	0.048	(0.099)	0.016	0.032
269	22.42	0.07	0.048	(0.098)	0.016	0.032
270	22.50	0.07	0.048	(0.098)	0.016	0.032
271	22.58	0.07	0.048	(0.098)	0.016	0.032
272	22.67	0.07	0.048	(0.097)	0.016	0.032
273	22.75	0.07	0.048	(0.097)	0.016	0.032
274	22.83	0.07	0.048	(0.097)	0.016	0.032
275	22.92	0.07	0.048	(0.097)	0.016	0.032
276	23.00	0.07	0.048	(0.096)	0.016	0.032
277	23.08	0.07	0.048	(0.096)	0.016	0.032
278	23.17	0.07	0.048	(0.096)	0.016	0.032
279	23.25	0.07	0.048	(0.096)	0.016	0.032
280	23.33	0.07	0.048	(0.096)	0.016	0.032
281	23.42	0.07	0.048	(0.095)	0.016	0.032
282	23.50	0.07	0.048	(0.095)	0.016	0.032
283	23.58	0.07	0.048	(0.095)	0.016	0.032
284	23.67	0.07	0.048	(0.095)	0.016	0.032
285	23.75	0.07	0.048	(0.095)	0.016	0.032
286	23.83	0.07	0.048	(0.095)	0.016	0.032
287	23.92	0.07	0.048	(0.095)	0.016	0.032
288	24.00	0.07	0.048	(0.095)	0.016	0.032

(Loss Rate Not Used)

Sum = 100.0 Sum = 50.0

Flood volume = Effective rainfall 4.17(In)
times area 9.9(Ac.)/[(In)/(Ft.)] = 3.5(Ac.Ft)
Total soil loss = 1.83(In)
Total soil loss = 1.514(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 150332.2 Cubic Feet
Total soil loss = 65939.0 Cubic Feet

Peak flow rate of this hydrograph = 6.545(CFS)

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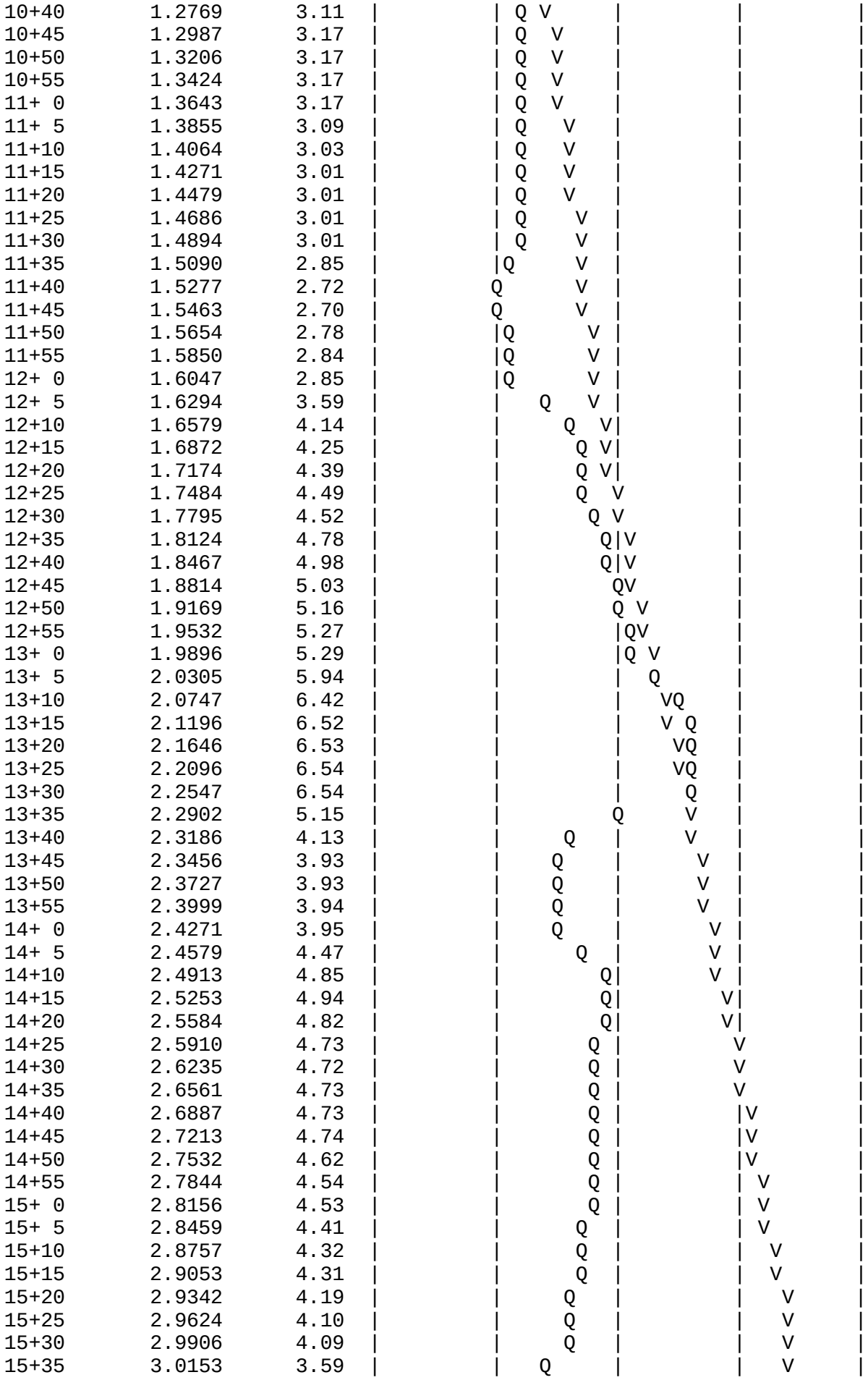
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0012	0.17	Q	|	|	|	|
0+10	0.0032	0.29	VQ	|	|	|	|
0+15	0.0054	0.32	VQ	|	|	|	|
0+20	0.0081	0.40	VQ	|	|	|	|
0+25	0.0113	0.46	VQ	|	|	|	|
0+30	0.0146	0.48	VQ	|	|	|	|
0+35	0.0179	0.48	VQ	|	|	|	|

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0+40       0.0211      0.48  VQ        |         |         |         |
0+45       0.0244      0.48  VQ        |         |         |         |
0+50       0.0283      0.56  V Q       |         |         |         |
0+55       0.0326      0.62  V Q       |         |         |         |
1+ 0       0.0369      0.63  V Q       |         |         |         |
1+ 5       0.0407      0.55  V Q       |         |         |         |
1+10       0.0441      0.49  VQ        |         |         |         |
1+15       0.0474      0.48  VQ        |         |         |         |
1+20       0.0506      0.48  VQ        |         |         |         |
1+25       0.0539      0.48  VQ        |         |         |         |
1+30       0.0572      0.48  VQ        |         |         |         |
1+35       0.0605      0.48  VQ        |         |         |         |
1+40       0.0637      0.48  VQ        |         |         |         |
1+45       0.0670      0.48  VQ        |         |         |         |
1+50       0.0709      0.56  V Q       |         |         |         |
1+55       0.0752      0.62  V Q       |         |         |         |
2+ 0       0.0795      0.63  V Q       |         |         |         |
2+ 5       0.0839      0.63  V Q       |         |         |         |
2+10       0.0883      0.63  |VQ       |         |         |         |
2+15       0.0926      0.63  |VQ       |         |         |         |
2+20       0.0970      0.63  |VQ       |         |         |         |
2+25       0.1014      0.63  |VQ       |         |         |         |
2+30       0.1057      0.63  |VQ       |         |         |         |
2+35       0.1107      0.72  |VQ       |         |         |         |
2+40       0.1161      0.78  |V Q      |         |         |         |
2+45       0.1215      0.79  |V Q      |         |         |         |
2+50       0.1270      0.79  |V Q      |         |         |         |
2+55       0.1324      0.79  |V Q      |         |         |         |
3+ 0       0.1379      0.79  |V Q      |         |         |         |
3+ 5       0.1434      0.79  |V Q      |         |         |         |
3+10       0.1488      0.79  |V Q      |         |         |         |
3+15       0.1543      0.79  |V Q      |         |         |         |
3+20       0.1598      0.79  |V Q      |         |         |         |
3+25       0.1652      0.79  |V Q      |         |         |         |
3+30       0.1707      0.79  |V Q      |         |         |         |
3+35       0.1761      0.79  | VQ      |         |         |         |
3+40       0.1816      0.79  | VQ      |         |         |         |
3+45       0.1871      0.79  | VQ      |         |         |         |
3+50       0.1931      0.88  | VQ      |         |         |         |
3+55       0.1996      0.94  | VQ      |         |         |         |
4+ 0       0.2061      0.95  | VQ      |         |         |         |
4+ 5       0.2127      0.95  | VQ      |         |         |         |
4+10       0.2192      0.95  | VQ      |         |         |         |
4+15       0.2258      0.95  | VQ      |         |         |         |
4+20       0.2329      1.04  | V Q     |         |         |         |
4+25       0.2405      1.10  | V Q     |         |         |         |
4+30       0.2481      1.11  | V Q     |         |         |         |
4+35       0.2558      1.11  | V Q     |         |         |         |
4+40       0.2634      1.11  |  VQ     |         |         |         |
4+45       0.2711      1.11  |  VQ     |         |         |         |
4+50       0.2793      1.19  |  VQ     |         |         |         |
4+55       0.2879      1.26  |  V Q    |         |         |         |
5+ 0       0.2967      1.27  |  V Q    |         |         |         |
5+ 5       0.3042      1.10  |  VQ     |         |         |         |
5+10       0.3110      0.98  |  Q      |         |         |         |
5+15       0.3175      0.95  |  Q      |         |         |         |
5+20       0.3247      1.04  |  VQ     |         |         |         |
5+25       0.3322      1.10  |  VQ     |         |         |         |
5+30       0.3399      1.11  |  VQ     |         |         |         |
5+35       0.3481      1.19  |   Q     |         |         |         |
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5+40	0.3567	1.26	VQ				
5+45	0.3655	1.27	VQ				
5+50	0.3742	1.27	VQ				
5+55	0.3830	1.27	VQ				
6+ 0	0.3917	1.27	VQ				
6+ 5	0.4010	1.35	VQ				
6+10	0.4108	1.41	VQ				
6+15	0.4206	1.43	VQ				
6+20	0.4304	1.43	VQ				
6+25	0.4403	1.43	Q				
6+30	0.4501	1.43	Q				
6+35	0.4605	1.51	VQ				
6+40	0.4713	1.57	VQ				
6+45	0.4822	1.59	VQ				
6+50	0.4932	1.59	VQ				
6+55	0.5041	1.59	VQ				
7+ 0	0.5150	1.59	VQ				
7+ 5	0.5259	1.59	Q				
7+10	0.5369	1.59	Q				
7+15	0.5478	1.59	Q				
7+20	0.5593	1.67	Q				
7+25	0.5712	1.73	Q				
7+30	0.5832	1.74	Q				
7+35	0.5958	1.83	VQ				
7+40	0.6088	1.89	Q				
7+45	0.6220	1.90	Q				
7+50	0.6356	1.99	Q				
7+55	0.6498	2.05	VQ				
8+ 0	0.6640	2.06	VQ				
8+ 5	0.6793	2.23	VQ				
8+10	0.6955	2.35	VQ				
8+15	0.7119	2.38	VQ				
8+20	0.7283	2.38	VQ				
8+25	0.7447	2.38	VQ				
8+30	0.7611	2.38	VQ				
8+35	0.7780	2.46	Q				
8+40	0.7954	2.52	VQ				
8+45	0.8129	2.54	VQ				
8+50	0.8309	2.62	VQ				
8+55	0.8494	2.68	VQ				
9+ 0	0.8680	2.70	Q				
9+ 5	0.8877	2.86	VQ				
9+10	0.9083	2.99	VQ				
9+15	0.9291	3.01	V Q				
9+20	0.9504	3.10	VQ				
9+25	0.9721	3.16	VQ				
9+30	0.9940	3.17	VQ				
9+35	1.0164	3.26	V Q				
9+40	1.0393	3.32	VQ				
9+45	1.0622	3.33	VQ				
9+50	1.0857	3.41	VQ				
9+55	1.1097	3.48	VQ				
10+ 0	1.1337	3.49	Q				
10+ 5	1.1537	2.90	Q V				
10+10	1.1707	2.47	Q V				
10+15	1.1870	2.38	Q V				
10+20	1.2034	2.38	Q V				
10+25	1.2198	2.38	Q V				
10+30	1.2362	2.38	Q V				
10+35	1.2555	2.80	Q V				



```
15+40       3.0375      3.22  |          | Q        |          |     V    |
15+45       3.0592      3.15  |          | Q        |          |     V    |
15+50       3.0809      3.16  |          | Q        |          |     V    |
15+55       3.1027      3.16  |          | Q        |          |     V    |
16+ 0       3.1246      3.17  |          | Q        |          |      V   |
16+ 5       3.1372      1.83  |       Q  |          |          |      V   |
16+10       3.1429      0.84  |  Q       |          |          |      V   |
16+15       3.1473      0.63  | Q        |          |          |      V   |
16+20       3.1517      0.63  | Q        |          |          |      V   |
16+25       3.1560      0.63  | Q        |          |          |      V   |
16+30       3.1604      0.63  | Q        |          |          |      V   |
16+35       3.1642      0.55  | Q        |          |          |      V   |
16+40       3.1675      0.49  |Q         |          |          |      V   |
16+45       3.1708      0.48  |Q         |          |          |      V   |
16+50       3.1741      0.48  |Q         |          |          |      V   |
16+55       3.1774      0.48  |Q         |          |          |      V   |
17+ 0       3.1807      0.48  |Q         |          |          |      V   |
17+ 5       3.1851      0.64  | Q        |          |          |      V   |
17+10       3.1904      0.77  |  Q       |          |          |      V   |
17+15       3.1958      0.79  |  Q       |          |          |       V  |
17+20       3.2013      0.79  |  Q       |          |          |       V  |
17+25       3.2068      0.79  |  Q       |          |          |       V  |
17+30       3.2122      0.79  |  Q       |          |          |       V  |
17+35       3.2177      0.79  |  Q       |          |          |       V  |
17+40       3.2231      0.79  |  Q       |          |          |       V  |
17+45       3.2286      0.79  |  Q       |          |          |       V  |
17+50       3.2335      0.71  | Q        |          |          |       V  |
17+55       3.2379      0.65  | Q        |          |          |       V  |
18+ 0       3.2423      0.63  | Q        |          |          |       V  |
18+ 5       3.2467      0.63  | Q        |          |          |       V  |
18+10       3.2511      0.63  | Q        |          |          |       V  |
18+15       3.2554      0.63  | Q        |          |          |       V  |
18+20       3.2598      0.63  | Q        |          |          |       V  |
18+25       3.2642      0.63  | Q        |          |          |       V  |
18+30       3.2685      0.63  | Q        |          |          |       V  |
18+35       3.2723      0.55  | Q        |          |          |       V  |
18+40       3.2757      0.49  |Q         |          |          |       V  |
18+45       3.2790      0.48  |Q         |          |          |        V |
18+50       3.2817      0.39  |Q         |          |          |        V |
18+55       3.2839      0.33  |Q         |          |          |        V |
19+ 0       3.2861      0.32  |Q         |          |          |        V |
19+ 5       3.2889      0.40  |Q         |          |          |        V |
19+10       3.2921      0.46  |Q         |          |          |        V |
19+15       3.2953      0.48  |Q         |          |          |        V |
19+20       3.2992      0.56  | Q        |          |          |        V |
19+25       3.3035      0.62  | Q        |          |          |        V |
19+30       3.3078      0.63  | Q        |          |          |        V |
19+35       3.3116      0.55  | Q        |          |          |        V |
19+40       3.3150      0.49  |Q         |          |          |        V |
19+45       3.3183      0.48  |Q         |          |          |        V |
19+50       3.3210      0.39  |Q         |          |          |        V |
19+55       3.3232      0.33  |Q         |          |          |        V |
20+ 0       3.3254      0.32  |Q         |          |          |        V |
20+ 5       3.3282      0.40  |Q         |          |          |        V |
20+10       3.3314      0.46  |Q         |          |          |        V |
20+15       3.3347      0.48  |Q         |          |          |        V |
20+20       3.3379      0.48  |Q         |          |          |        V |
20+25       3.3412      0.48  |Q         |          |          |        V |
20+30       3.3445      0.48  |Q         |          |          |        V |
20+35       3.3478      0.48  |Q         |          |          |        V |
```

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  20+40       3.3510      0.48  |Q        |          |          |        V |
  20+45       3.3543      0.48  |Q        |          |          |        V |
  20+50       3.3570      0.39  |Q        |          |          |        V |
  20+55       3.3593      0.33  |Q        |          |          |        V |
  21+ 0       3.3615      0.32  |Q        |          |          |        V |
  21+ 5       3.3642      0.40  |Q        |          |          |        V |
  21+10       3.3674      0.46  |Q        |          |          |         V|
  21+15       3.3707      0.48  |Q        |          |          |         V|
  21+20       3.3734      0.39  |Q        |          |          |         V|
  21+25       3.3757      0.33  |Q        |          |          |         V|
  21+30       3.3779      0.32  |Q        |          |          |         V|
  21+35       3.3806      0.40  |Q        |          |          |         V|
  21+40       3.3838      0.46  |Q        |          |          |         V|
  21+45       3.3871      0.48  |Q        |          |          |         V|
  21+50       3.3898      0.39  |Q        |          |          |         V|
  21+55       3.3921      0.33  |Q        |          |          |         V|
  22+ 0       3.3942      0.32  |Q        |          |          |         V|
  22+ 5       3.3970      0.40  |Q        |          |          |         V|
  22+10       3.4002      0.46  |Q        |          |          |         V|
  22+15       3.4035      0.48  |Q        |          |          |         V|
  22+20       3.4062      0.39  |Q        |          |          |         V|
  22+25       3.4084      0.33  |Q        |          |          |         V|
  22+30       3.4106      0.32  |Q        |          |          |         V|
  22+35       3.4128      0.32  |Q        |          |          |         V|
  22+40       3.4150      0.32  |Q        |          |          |         V|
  22+45       3.4172      0.32  |Q        |          |          |         V|
  22+50       3.4194      0.32  |Q        |          |          |         V|
  22+55       3.4216      0.32  |Q        |          |          |         V|
  23+ 0       3.4237      0.32  |Q        |          |          |         V|
  23+ 5       3.4259      0.32  |Q        |          |          |         V|
  23+10       3.4281      0.32  |Q        |          |          |         V|
  23+15       3.4303      0.32  |Q        |          |          |         V|
  23+20       3.4325      0.32  |Q        |          |          |         V|
  23+25       3.4347      0.32  |Q        |          |          |         V|
  23+30       3.4368      0.32  |Q        |          |          |         V|
  23+35       3.4390      0.32  |Q        |          |          |         V|
  23+40       3.4412      0.32  |Q        |          |          |         V|
  23+45       3.4434      0.32  |Q        |          |          |         V|
  23+50       3.4456      0.32  |Q        |          |          |         V|
  23+55       3.4478      0.32  |Q        |          |          |         V|
  24+ 0       3.4500      0.32  |Q        |          |          |         V|
  24+ 5       3.4510      0.15  Q         |          |          |         V|
  24+10       3.4512      0.03  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 10/24/24 File: AREAC1100.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
100-YR
1-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	0.59	4.19

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.45	10.31

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.590(In)
Area Averaged 100-Year Rainfall = 1.450(In)

Point rain (area averaged) = 1.450(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.450(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

Slope of intensity-duration curve for a 1 hour storm =0.4800

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
		Sum = 100.000	Sum=	7.166

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	4.40	0.766	0.201	(0.283)	0.564
2	0.17	4.50	0.783	0.201	(0.290)	0.582
3	0.25	5.40	0.940	0.201	(0.348)	0.738
4	0.33	5.40	0.940	0.201	(0.348)	0.738
5	0.42	5.70	0.992	0.201	(0.367)	0.791
6	0.50	6.40	1.114	0.201	(0.412)	0.912
7	0.58	7.90	1.375	0.201	(0.509)	1.173
8	0.67	9.10	1.583	0.201	(0.586)	1.382
9	0.75	12.80	2.227	0.201	(0.824)	2.026
10	0.83	25.60	4.454	0.201	(1.648)	4.253
11	0.92	7.90	1.375	0.201	(0.509)	1.173
12	1.00	4.90	0.853	0.201	(0.315)	0.651
	(Loss Rate Not Used)					
Sum =	100.0				Sum =	15.0

```
    Flood volume = Effective rainfall      1.25(In)
     times area       7.1(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
    Total soil loss =      0.20(In)
    Total soil loss =     0.119(Ac.Ft)
    Total rainfall =      1.45(In)
    Flood volume =       32228.9 Cubic Feet
    Total soil loss =        5192.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     23.680(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        1 - H O U R    S T O R M
                   R u n o f f      H y d r o g r a p h
    ---------------------------------------------------------------------
                Hydrograph in   5   Minute intervals ((CFS))

    ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ---------------------------------------------------------------------------
   0+ 5       0.0164      2.38  V  Q      |          |          |          |
   0+10       0.0433      3.91  | V  Q    |          |          |          |
   0+15       0.0765      4.83  |   V Q   |          |          |          |
   0+20       0.1126      5.24  |     Q   |          |          |          |
   0+25       0.1506      5.51  |      QV |          |          |          |
   0+30       0.1930      6.16  |       Q V          |          |          |
   0+35       0.2453      7.60  |         Q  V       |          |          |
   0+40       0.3087      9.20  |          | Q   V   |          |          |
   0+45       0.3951     12.55  |          |     Q   |V         |          |
   0+50       0.5582     23.68  |          |         |          VQ         |
   0+55       0.6729     16.67  |          |         | Q        |     V    |
   1+ 0       0.7236      7.36  |        Q |         |          |        V |
   1+ 5       0.7382      2.12  | Q        |         |          |        V |
   1+10       0.7399      0.24  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 10/24/24 File: AREAC3100.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
100-YR
3-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.00	7.11

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	2.50	17.78

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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

Unit Hydrograph Data

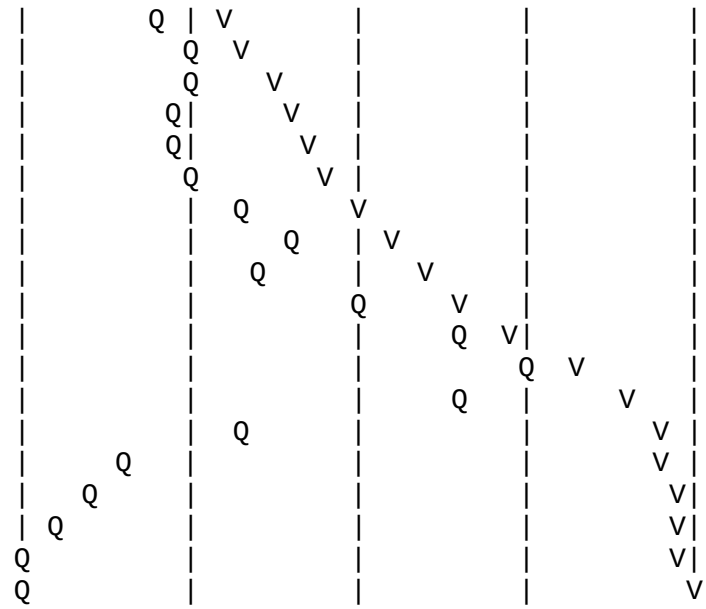
Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	1.30	0.390	(0.201)		0.144	0.246
2	0.17	1.30	0.390	(0.201)		0.144	0.246
3	0.25	1.10	0.330	(0.201)		0.122	0.208
4	0.33	1.50	0.450	(0.201)		0.166	0.283
5	0.42	1.50	0.450	(0.201)		0.166	0.283
6	0.50	1.80	0.540	(0.201)		0.200	0.340
7	0.58	1.50	0.450	(0.201)		0.166	0.283
8	0.67	1.80	0.540	(0.201)		0.200	0.340
9	0.75	1.80	0.540	(0.201)		0.200	0.340
10	0.83	1.50	0.450	(0.201)		0.166	0.283
11	0.92	1.60	0.480	(0.201)		0.178	0.302
12	1.00	1.80	0.540	(0.201)		0.200	0.340
13	1.08	2.20	0.660	0.201	(	0.244)	0.459
14	1.17	2.20	0.660	0.201	(	0.244)	0.459
15	1.25	2.20	0.660	0.201	(	0.244)	0.459
16	1.33	2.00	0.600	0.201	(	0.222)	0.399

```
17   1.42     2.60      0.780          0.201    (  0.289)        0.579
18   1.50     2.70      0.810          0.201    (  0.300)        0.609
19   1.58     2.40      0.720          0.201    (  0.266)        0.519
20   1.67     2.70      0.810          0.201    (  0.300)        0.609
21   1.75     3.30      0.990          0.201    (  0.366)        0.789
22   1.83     3.10      0.930          0.201    (  0.344)        0.729
23   1.92     2.90      0.870          0.201    (  0.322)        0.669
24   2.00     3.00      0.900          0.201    (  0.333)        0.699
25   2.08     3.10      0.930          0.201    (  0.344)        0.729
26   2.17     4.20      1.260          0.201    (  0.466)        1.059
27   2.25     5.00      1.500          0.201    (  0.555)        1.299
28   2.33     3.50      1.050          0.201    (  0.388)        0.849
29   2.42     6.80      2.040          0.201    (  0.755)        1.839
30   2.50     7.30      2.190          0.201    (  0.810)        1.989
31   2.58     8.20      2.460          0.201    (  0.910)        2.259
32   2.67     5.90      1.770          0.201    (  0.655)        1.569
33   2.75     2.00      0.600          0.201    (  0.222)        0.399
34   2.83     1.80      0.540       (  0.201)       0.200        0.340
35   2.92     1.80      0.540       (  0.201)       0.200        0.340
36   3.00     0.60      0.180       (  0.201)       0.067        0.113
          (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    23.3
    Flood volume = Effective rainfall      1.94(In)
     times area       7.1(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
    Total soil loss =      0.56(In)
    Total soil loss =     0.333(Ac.Ft)
    Total rainfall =      2.50(In)
    Flood volume =       50015.9 Cubic Feet
    Total soil loss =       14505.4 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     15.341(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                        3 - 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       0.0071      1.04  V Q       |         |         |         |
  0+10       0.0186      1.67  V  Q      |         |         |         |
  0+15       0.0297      1.60  |V Q      |         |         |         |
  0+20       0.0422      1.82  |V Q      |         |         |         |
  0+25       0.0560      2.00  |V  Q     |         |         |         |
  0+30       0.0717      2.27  | V Q     |         |         |         |
  0+35       0.0867      2.18  |  VQ     |         |         |         |
  0+40       0.1025      2.29  |  VQ     |         |         |         |
  0+45       0.1191      2.42  |   Q     |         |         |         |
  0+50       0.1343      2.20  |   Q     |         |         |         |
  0+55       0.1490      2.13  |   QV    |         |         |         |
  1+ 0       0.1649      2.32  |   QV    |         |         |         |
  1+ 5       0.1851      2.93  |    QV   |         |         |         |
  1+10       0.2074      3.24  |     QV  |         |         |         |
  1+15       0.2301      3.29  |     Q V |         |         |         |
  1+20       0.2510      3.04  |     Q V |         |         |         |
  1+25       0.2761      3.64  |      Q V|         |         |         |
  1+30       0.3051      4.21  |       Q V         |         |         |
  1+35       0.3324      3.97  |      Q  |V        |         |         |
```

1+40	0.3609	4.13	
1+45	0.3960	5.09	
1+50	0.4327	5.33	
1+55	0.4671	4.99	
2+ 0	0.5011	4.94	
2+ 5	0.5364	5.13	
2+10	0.5819	6.61	
2+15	0.6403	8.48	
2+20	0.6908	7.32	
2+25	0.7626	10.43	
2+30	0.8552	13.45	
2+35	0.9609	15.34	
2+40	1.0516	13.18	
2+45	1.0969	6.57	
2+50	1.1179	3.05	
2+55	1.1348	2.46	
3+ 0	1.1450	1.48	
3+ 5	1.1479	0.42	
3+10	1.1482	0.04	

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 10/24/24 File: AREAC6100.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
100-YR
6-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	1.40	9.95

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	3.50	24.89

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.400(In)
Area Averaged 100-Year Rainfall = 3.500(In)

Point rain (area averaged) = 3.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.50	0.210	(0.201)		0.078	0.132
2	0.17	0.60	0.252	(0.201)		0.093	0.159
3	0.25	0.60	0.252	(0.201)		0.093	0.159
4	0.33	0.60	0.252	(0.201)		0.093	0.159
5	0.42	0.60	0.252	(0.201)		0.093	0.159
6	0.50	0.70	0.294	(0.201)		0.109	0.185
7	0.58	0.70	0.294	(0.201)		0.109	0.185
8	0.67	0.70	0.294	(0.201)		0.109	0.185
9	0.75	0.70	0.294	(0.201)		0.109	0.185
10	0.83	0.70	0.294	(0.201)		0.109	0.185
11	0.92	0.70	0.294	(0.201)		0.109	0.185
12	1.00	0.80	0.336	(0.201)		0.124	0.212
13	1.08	0.80	0.336	(0.201)		0.124	0.212
14	1.17	0.80	0.336	(0.201)		0.124	0.212
15	1.25	0.80	0.336	(0.201)		0.124	0.212
16	1.33	0.80	0.336	(0.201)		0.124	0.212

17	1.42	0.80	0.336	(	0.201)	0.124	0.212
18	1.50	0.80	0.336	(	0.201)	0.124	0.212
19	1.58	0.80	0.336	(	0.201)	0.124	0.212
20	1.67	0.80	0.336	(	0.201)	0.124	0.212
21	1.75	0.80	0.336	(	0.201)	0.124	0.212
22	1.83	0.80	0.336	(	0.201)	0.124	0.212
23	1.92	0.80	0.336	(	0.201)	0.124	0.212
24	2.00	0.90	0.378	(	0.201)	0.140	0.238
25	2.08	0.80	0.336	(	0.201)	0.124	0.212
26	2.17	0.90	0.378	(	0.201)	0.140	0.238
27	2.25	0.90	0.378	(	0.201)	0.140	0.238
28	2.33	0.90	0.378	(	0.201)	0.140	0.238
29	2.42	0.90	0.378	(	0.201)	0.140	0.238
30	2.50	0.90	0.378	(	0.201)	0.140	0.238
31	2.58	0.90	0.378	(	0.201)	0.140	0.238
32	2.67	0.90	0.378	(	0.201)	0.140	0.238
33	2.75	1.00	0.420	(	0.201)	0.155	0.265
34	2.83	1.00	0.420	(	0.201)	0.155	0.265
35	2.92	1.00	0.420	(	0.201)	0.155	0.265
36	3.00	1.00	0.420	(	0.201)	0.155	0.265
37	3.08	1.00	0.420	(	0.201)	0.155	0.265
38	3.17	1.10	0.462	(	0.201)	0.171	0.291
39	3.25	1.10	0.462	(	0.201)	0.171	0.291
40	3.33	1.10	0.462	(	0.201)	0.171	0.291
41	3.42	1.20	0.504	(	0.201)	0.186	0.318
42	3.50	1.30	0.546		0.201	(0.202)	0.345
43	3.58	1.40	0.588		0.201	(0.218)	0.387
44	3.67	1.40	0.588		0.201	(0.218)	0.387
45	3.75	1.50	0.630		0.201	(0.233)	0.429
46	3.83	1.50	0.630		0.201	(0.233)	0.429
47	3.92	1.60	0.672		0.201	(0.249)	0.471
48	4.00	1.60	0.672		0.201	(0.249)	0.471
49	4.08	1.70	0.714		0.201	(0.264)	0.513
50	4.17	1.80	0.756		0.201	(0.280)	0.555
51	4.25	1.90	0.798		0.201	(0.295)	0.597
52	4.33	2.00	0.840		0.201	(0.311)	0.639
53	4.42	2.10	0.882		0.201	(0.326)	0.681
54	4.50	2.10	0.882		0.201	(0.326)	0.681
55	4.58	2.20	0.924		0.201	(0.342)	0.723
56	4.67	2.30	0.966		0.201	(0.357)	0.765
57	4.75	2.40	1.008		0.201	(0.373)	0.807
58	4.83	2.40	1.008		0.201	(0.373)	0.807
59	4.92	2.50	1.050		0.201	(0.388)	0.849
60	5.00	2.60	1.092		0.201	(0.404)	0.891
61	5.08	3.10	1.302		0.201	(0.482)	1.101
62	5.17	3.60	1.512		0.201	(0.559)	1.311
63	5.25	3.90	1.638		0.201	(0.606)	1.437
64	5.33	4.20	1.764		0.201	(0.653)	1.563
65	5.42	4.70	1.974		0.201	(0.730)	1.773
66	5.50	5.60	2.352		0.201	(0.870)	2.151
67	5.58	1.90	0.798		0.201	(0.295)	0.597
68	5.67	0.90	0.378	(	0.201)	0.140	0.238
69	5.75	0.60	0.252	(	0.201)	0.093	0.159
70	5.83	0.50	0.210	(	0.201)	0.078	0.132
71	5.92	0.30	0.126	(	0.201)	0.047	0.079
72	6.00	0.20	0.084	(	0.201)	0.031	0.053

(Loss Rate Not Used)

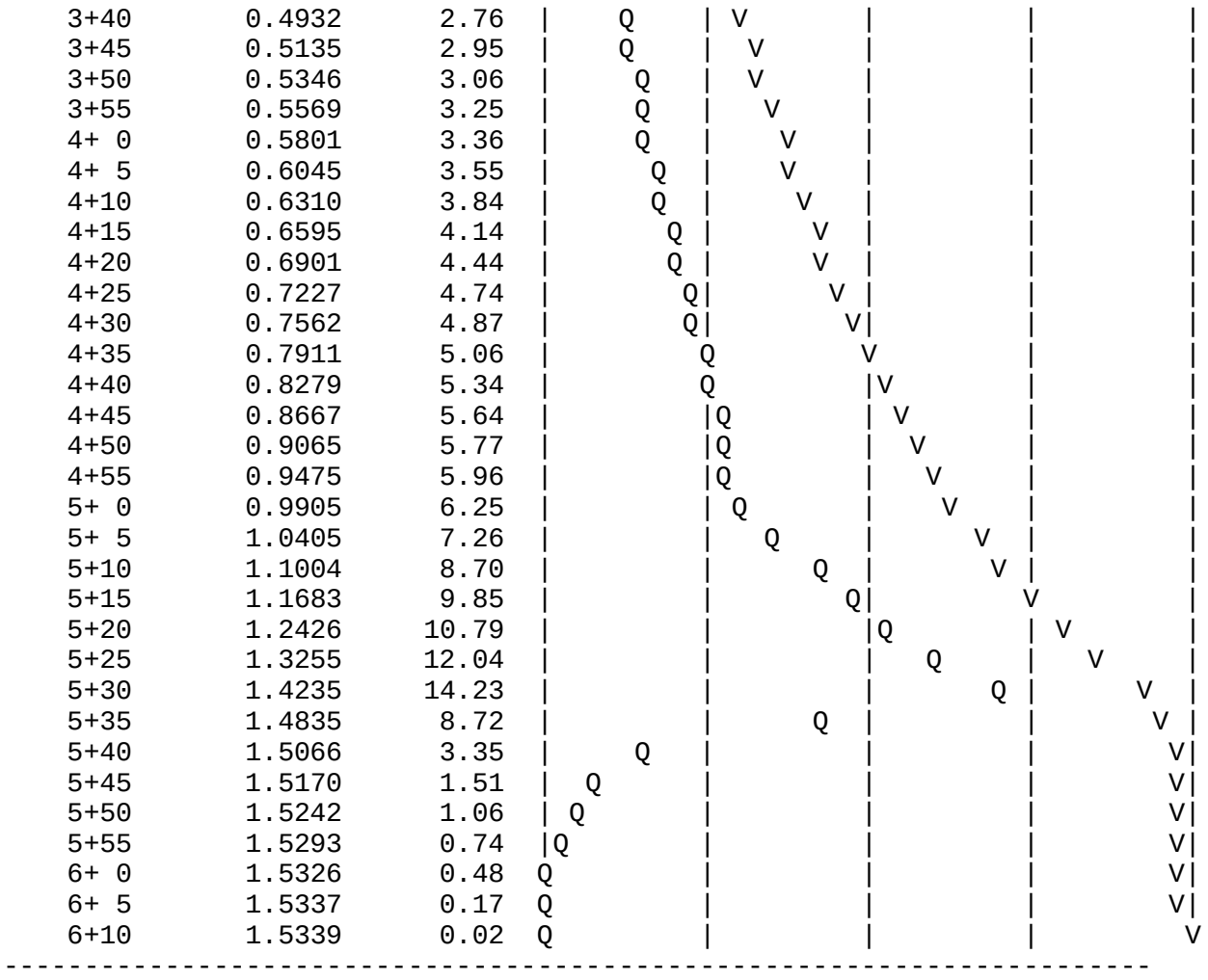
Sum = 100.0 Sum = 31.1

Flood volume = Effective rainfall 2.59(In)

times area 7.1(Ac.)/[(In)/(Ft.)] = 1.5(Ac.Ft)

```
   Total soil loss =      0.91(In)
   Total soil loss =     0.540(Ac.Ft)
   Total rainfall =      3.50(In)
   Flood volume =       66814.8 Cubic Feet
   Total soil loss =       23515.6 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =     14.226(CFS)
   ---------------------------------------------------------------------
   +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                      6 - 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       0.0038      0.56  VQ        |          |          |          |
  0+10       0.0108      1.01  V Q       |          |          |          |
  0+15       0.0186      1.13  V Q       |          |          |          |
  0+20       0.0264      1.14  V Q       |          |          |          |
  0+25       0.0343      1.14  V Q       |          |          |          |
  0+30       0.0429      1.25  |VQ       |          |          |          |
  0+35       0.0519      1.32  |VQ       |          |          |          |
  0+40       0.0611      1.33  |VQ       |          |          |          |
  0+45       0.0702      1.33  |VQ       |          |          |          |
  0+50       0.0794      1.33  | Q       |          |          |          |
  0+55       0.0885      1.33  | Q       |          |          |          |
  1+ 0       0.0984      1.44  | Q       |          |          |          |
  1+ 5       0.1088      1.51  | VQ      |          |          |          |
  1+10       0.1193      1.52  |  Q      |          |          |          |
  1+15       0.1297      1.52  |  Q      |          |          |          |
  1+20       0.1402      1.52  |  Q      |          |          |          |
  1+25       0.1506      1.52  |  Q      |          |          |          |
  1+30       0.1611      1.52  |  QV     |          |          |          |
  1+35       0.1715      1.52  |  QV     |          |          |          |
  1+40       0.1820      1.52  |  QV     |          |          |          |
  1+45       0.1924      1.52  |  Q V    |          |          |          |
  1+50       0.2029      1.52  |  Q V    |          |          |          |
  1+55       0.2133      1.52  |  Q V    |          |          |          |
  2+ 0       0.2245      1.63  |  Q V    |          |          |          |
  2+ 5       0.2355      1.59  |  Q  V   |          |          |          |
  2+10       0.2468      1.64  |  Q  V   |          |          |          |
  2+15       0.2584      1.70  |  Q  V   |          |          |          |
  2+20       0.2702      1.71  |  Q   V  |          |          |          |
  2+25       0.2820      1.71  |  Q   V  |          |          |          |
  2+30       0.2937      1.71  |  Q   V  |          |          |          |
  2+35       0.3055      1.71  |  Q   V  |          |          |          |
  2+40       0.3172      1.71  |  Q    V |          |          |          |
  2+45       0.3298      1.82  |  Q    V |          |          |          |
  2+50       0.3428      1.89  |  Q    V |          |          |          |
  2+55       0.3558      1.90  |  Q     V|          |          |          |
  3+ 0       0.3689      1.90  |  Q     V|          |          |          |
  3+ 5       0.3820      1.90  |  Q     V|          |          |          |
  3+10       0.3958      2.01  |   Q     V          |          |          |
  3+15       0.4101      2.08  |   Q     V          |          |          |
  3+20       0.4245      2.09  |   Q     |V         |          |          |
  3+25       0.4396      2.20  |   Q     |V         |          |          |
  3+30       0.4560      2.38  |   Q     |V         |          |          |
  3+35       0.4742      2.64  |    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 10/24/24 File: AREAC24100.out

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

Program License Serial Number 6094

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

English Units used in output format

AREA C
DEVELOPED CONDITION
100-YR
24-HR

Drainage Area = 7.11(Ac.) = 0.011 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 7.11(Ac.) = 0.011 Sq. Mi.
Length along longest watercourse = 721.00(Ft.)
Length along longest watercourse measured to centroid = 556.00(Ft.)
Length along longest watercourse = 0.137 Mi.
Length along longest watercourse measured to centroid = 0.105 Mi.
Difference in elevation = 29.50(Ft.)
Slope along watercourse = 216.0333 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.026 Hr.
Lag time = 1.55 Min.
25% of lag time = 0.39 Min.
40% of lag time = 0.62 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]
7.11	2.50	17.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
7.11	6.00	42.66

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 6.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
7.110	57.50	0.660

Total Area Entered = 7.11(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
57.5	57.5	0.495	0.660	0.201	1.000	0.201
					Sum (F) =	0.201

Area averaged mean soil loss (F) (In/Hr) = 0.201
Minimum soil loss rate ((In/Hr)) = 0.101
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.370

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	322.206	58.850	4.217
2	0.167	644.411	35.940	2.575
3	0.250	966.617	5.210	0.373
			Sum = 100.000 Sum=	7.166

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	0.048	(0.357)	0.018	0.030
2	0.17	0.07	0.048	(0.355)	0.018	0.030
3	0.25	0.07	0.048	(0.354)	0.018	0.030
4	0.33	0.10	0.072	(0.352)	0.027	0.045
5	0.42	0.10	0.072	(0.351)	0.027	0.045
6	0.50	0.10	0.072	(0.350)	0.027	0.045
7	0.58	0.10	0.072	(0.348)	0.027	0.045
8	0.67	0.10	0.072	(0.347)	0.027	0.045
9	0.75	0.10	0.072	(0.346)	0.027	0.045
10	0.83	0.13	0.096	(0.344)	0.036	0.060
11	0.92	0.13	0.096	(0.343)	0.036	0.060
12	1.00	0.13	0.096	(0.342)	0.036	0.060
13	1.08	0.10	0.072	(0.340)	0.027	0.045
14	1.17	0.10	0.072	(0.339)	0.027	0.045
15	1.25	0.10	0.072	(0.338)	0.027	0.045
16	1.33	0.10	0.072	(0.336)	0.027	0.045

17	1.42	0.10	0.072	(0.335)	0.027	0.045
18	1.50	0.10	0.072	(0.334)	0.027	0.045
19	1.58	0.10	0.072	(0.332)	0.027	0.045
20	1.67	0.10	0.072	(0.331)	0.027	0.045
21	1.75	0.10	0.072	(0.330)	0.027	0.045
22	1.83	0.13	0.096	(0.328)	0.036	0.060
23	1.92	0.13	0.096	(0.327)	0.036	0.060
24	2.00	0.13	0.096	(0.326)	0.036	0.060
25	2.08	0.13	0.096	(0.324)	0.036	0.060
26	2.17	0.13	0.096	(0.323)	0.036	0.060
27	2.25	0.13	0.096	(0.322)	0.036	0.060
28	2.33	0.13	0.096	(0.320)	0.036	0.060
29	2.42	0.13	0.096	(0.319)	0.036	0.060
30	2.50	0.13	0.096	(0.318)	0.036	0.060
31	2.58	0.17	0.120	(0.316)	0.044	0.076
32	2.67	0.17	0.120	(0.315)	0.044	0.076
33	2.75	0.17	0.120	(0.314)	0.044	0.076
34	2.83	0.17	0.120	(0.313)	0.044	0.076
35	2.92	0.17	0.120	(0.311)	0.044	0.076
36	3.00	0.17	0.120	(0.310)	0.044	0.076
37	3.08	0.17	0.120	(0.309)	0.044	0.076
38	3.17	0.17	0.120	(0.307)	0.044	0.076
39	3.25	0.17	0.120	(0.306)	0.044	0.076
40	3.33	0.17	0.120	(0.305)	0.044	0.076
41	3.42	0.17	0.120	(0.304)	0.044	0.076
42	3.50	0.17	0.120	(0.302)	0.044	0.076
43	3.58	0.17	0.120	(0.301)	0.044	0.076
44	3.67	0.17	0.120	(0.300)	0.044	0.076
45	3.75	0.17	0.120	(0.299)	0.044	0.076
46	3.83	0.20	0.144	(0.297)	0.053	0.091
47	3.92	0.20	0.144	(0.296)	0.053	0.091
48	4.00	0.20	0.144	(0.295)	0.053	0.091
49	4.08	0.20	0.144	(0.293)	0.053	0.091
50	4.17	0.20	0.144	(0.292)	0.053	0.091
51	4.25	0.20	0.144	(0.291)	0.053	0.091
52	4.33	0.23	0.168	(0.290)	0.062	0.106
53	4.42	0.23	0.168	(0.289)	0.062	0.106
54	4.50	0.23	0.168	(0.287)	0.062	0.106
55	4.58	0.23	0.168	(0.286)	0.062	0.106
56	4.67	0.23	0.168	(0.285)	0.062	0.106
57	4.75	0.23	0.168	(0.284)	0.062	0.106
58	4.83	0.27	0.192	(0.282)	0.071	0.121
59	4.92	0.27	0.192	(0.281)	0.071	0.121
60	5.00	0.27	0.192	(0.280)	0.071	0.121
61	5.08	0.20	0.144	(0.279)	0.053	0.091
62	5.17	0.20	0.144	(0.278)	0.053	0.091
63	5.25	0.20	0.144	(0.276)	0.053	0.091
64	5.33	0.23	0.168	(0.275)	0.062	0.106
65	5.42	0.23	0.168	(0.274)	0.062	0.106
66	5.50	0.23	0.168	(0.273)	0.062	0.106
67	5.58	0.27	0.192	(0.271)	0.071	0.121
68	5.67	0.27	0.192	(0.270)	0.071	0.121
69	5.75	0.27	0.192	(0.269)	0.071	0.121
70	5.83	0.27	0.192	(0.268)	0.071	0.121
71	5.92	0.27	0.192	(0.267)	0.071	0.121
72	6.00	0.27	0.192	(0.266)	0.071	0.121
73	6.08	0.30	0.216	(0.264)	0.080	0.136
74	6.17	0.30	0.216	(0.263)	0.080	0.136
75	6.25	0.30	0.216	(0.262)	0.080	0.136
76	6.33	0.30	0.216	(0.261)	0.080	0.136

77	6.42	0.30	0.216	(0.260)	0.080	0.136
78	6.50	0.30	0.216	(0.259)	0.080	0.136
79	6.58	0.33	0.240	(0.257)	0.089	0.151
80	6.67	0.33	0.240	(0.256)	0.089	0.151
81	6.75	0.33	0.240	(0.255)	0.089	0.151
82	6.83	0.33	0.240	(0.254)	0.089	0.151
83	6.92	0.33	0.240	(0.253)	0.089	0.151
84	7.00	0.33	0.240	(0.252)	0.089	0.151
85	7.08	0.33	0.240	(0.250)	0.089	0.151
86	7.17	0.33	0.240	(0.249)	0.089	0.151
87	7.25	0.33	0.240	(0.248)	0.089	0.151
88	7.33	0.37	0.264	(0.247)	0.098	0.166
89	7.42	0.37	0.264	(0.246)	0.098	0.166
90	7.50	0.37	0.264	(0.245)	0.098	0.166
91	7.58	0.40	0.288	(0.244)	0.107	0.181
92	7.67	0.40	0.288	(0.243)	0.107	0.181
93	7.75	0.40	0.288	(0.241)	0.107	0.181
94	7.83	0.43	0.312	(0.240)	0.115	0.197
95	7.92	0.43	0.312	(0.239)	0.115	0.197
96	8.00	0.43	0.312	(0.238)	0.115	0.197
97	8.08	0.50	0.360	(0.237)	0.133	0.227
98	8.17	0.50	0.360	(0.236)	0.133	0.227
99	8.25	0.50	0.360	(0.235)	0.133	0.227
100	8.33	0.50	0.360	(0.234)	0.133	0.227
101	8.42	0.50	0.360	(0.233)	0.133	0.227
102	8.50	0.50	0.360	(0.231)	0.133	0.227
103	8.58	0.53	0.384	(0.230)	0.142	0.242
104	8.67	0.53	0.384	(0.229)	0.142	0.242
105	8.75	0.53	0.384	(0.228)	0.142	0.242
106	8.83	0.57	0.408	(0.227)	0.151	0.257
107	8.92	0.57	0.408	(0.226)	0.151	0.257
108	9.00	0.57	0.408	(0.225)	0.151	0.257
109	9.08	0.63	0.456	(0.224)	0.169	0.287
110	9.17	0.63	0.456	(0.223)	0.169	0.287
111	9.25	0.63	0.456	(0.222)	0.169	0.287
112	9.33	0.67	0.480	(0.221)	0.178	0.302
113	9.42	0.67	0.480	(0.220)	0.178	0.302
114	9.50	0.67	0.480	(0.219)	0.178	0.302
115	9.58	0.70	0.504	(0.218)	0.186	0.318
116	9.67	0.70	0.504	(0.217)	0.186	0.318
117	9.75	0.70	0.504	(0.216)	0.186	0.318
118	9.83	0.73	0.528	(0.215)	0.195	0.333
119	9.92	0.73	0.528	(0.213)	0.195	0.333
120	10.00	0.73	0.528	(0.212)	0.195	0.333
121	10.08	0.50	0.360	(0.211)	0.133	0.227
122	10.17	0.50	0.360	(0.210)	0.133	0.227
123	10.25	0.50	0.360	(0.209)	0.133	0.227
124	10.33	0.50	0.360	(0.208)	0.133	0.227
125	10.42	0.50	0.360	(0.207)	0.133	0.227
126	10.50	0.50	0.360	(0.206)	0.133	0.227
127	10.58	0.67	0.480	(0.205)	0.178	0.302
128	10.67	0.67	0.480	(0.204)	0.178	0.302
129	10.75	0.67	0.480	(0.203)	0.178	0.302
130	10.83	0.67	0.480	(0.202)	0.178	0.302
131	10.92	0.67	0.480	(0.201)	0.178	0.302
132	11.00	0.67	0.480	(0.200)	0.178	0.302
133	11.08	0.63	0.456	(0.199)	0.169	0.287
134	11.17	0.63	0.456	(0.198)	0.169	0.287
135	11.25	0.63	0.456	(0.197)	0.169	0.287
136	11.33	0.63	0.456	(0.196)	0.169	0.287

137	11.42	0.63	0.456	(0.195)	0.169	0.287
138	11.50	0.63	0.456	(0.194)	0.169	0.287
139	11.58	0.57	0.408	(0.194)	0.151	0.257
140	11.67	0.57	0.408	(0.193)	0.151	0.257
141	11.75	0.57	0.408	(0.192)	0.151	0.257
142	11.83	0.60	0.432	(0.191)	0.160	0.272
143	11.92	0.60	0.432	(0.190)	0.160	0.272
144	12.00	0.60	0.432	(0.189)	0.160	0.272
145	12.08	0.83	0.600	0.188	(0.222)	0.412
146	12.17	0.83	0.600	0.187	(0.222)	0.413
147	12.25	0.83	0.600	0.186	(0.222)	0.414
148	12.33	0.87	0.624	0.185	(0.231)	0.439
149	12.42	0.87	0.624	0.184	(0.231)	0.440
150	12.50	0.87	0.624	0.183	(0.231)	0.441
151	12.58	0.93	0.672	0.182	(0.249)	0.490
152	12.67	0.93	0.672	0.181	(0.249)	0.491
153	12.75	0.93	0.672	0.180	(0.249)	0.492
154	12.83	0.97	0.696	0.179	(0.258)	0.517
155	12.92	0.97	0.696	0.179	(0.258)	0.517
156	13.00	0.97	0.696	0.178	(0.258)	0.518
157	13.08	1.13	0.816	0.177	(0.302)	0.639
158	13.17	1.13	0.816	0.176	(0.302)	0.640
159	13.25	1.13	0.816	0.175	(0.302)	0.641
160	13.33	1.13	0.816	0.174	(0.302)	0.642
161	13.42	1.13	0.816	0.173	(0.302)	0.643
162	13.50	1.13	0.816	0.172	(0.302)	0.644
163	13.58	0.77	0.552	0.171	(0.204)	0.381
164	13.67	0.77	0.552	0.171	(0.204)	0.381
165	13.75	0.77	0.552	0.170	(0.204)	0.382
166	13.83	0.77	0.552	0.169	(0.204)	0.383
167	13.92	0.77	0.552	0.168	(0.204)	0.384
168	14.00	0.77	0.552	0.167	(0.204)	0.385
169	14.08	0.90	0.648	0.166	(0.240)	0.482
170	14.17	0.90	0.648	0.165	(0.240)	0.483
171	14.25	0.90	0.648	0.165	(0.240)	0.483
172	14.33	0.87	0.624	0.164	(0.231)	0.460
173	14.42	0.87	0.624	0.163	(0.231)	0.461
174	14.50	0.87	0.624	0.162	(0.231)	0.462
175	14.58	0.87	0.624	0.161	(0.231)	0.463
176	14.67	0.87	0.624	0.160	(0.231)	0.464
177	14.75	0.87	0.624	0.160	(0.231)	0.464
178	14.83	0.83	0.600	0.159	(0.222)	0.441
179	14.92	0.83	0.600	0.158	(0.222)	0.442
180	15.00	0.83	0.600	0.157	(0.222)	0.443
181	15.08	0.80	0.576	0.156	(0.213)	0.420
182	15.17	0.80	0.576	0.156	(0.213)	0.420
183	15.25	0.80	0.576	0.155	(0.213)	0.421
184	15.33	0.77	0.552	0.154	(0.204)	0.398
185	15.42	0.77	0.552	0.153	(0.204)	0.399
186	15.50	0.77	0.552	0.152	(0.204)	0.400
187	15.58	0.63	0.456	0.152	(0.169)	0.304
188	15.67	0.63	0.456	0.151	(0.169)	0.305
189	15.75	0.63	0.456	0.150	(0.169)	0.306
190	15.83	0.63	0.456	0.149	(0.169)	0.307
191	15.92	0.63	0.456	0.148	(0.169)	0.308
192	16.00	0.63	0.456	0.148	(0.169)	0.308
193	16.08	0.13	0.096	(0.147)	0.036	0.060
194	16.17	0.13	0.096	(0.146)	0.036	0.060
195	16.25	0.13	0.096	(0.145)	0.036	0.060
196	16.33	0.13	0.096	(0.145)	0.036	0.060

197	16.42	0.13	0.096	(0.144)	0.036	0.060
198	16.50	0.13	0.096	(0.143)	0.036	0.060
199	16.58	0.10	0.072	(0.143)	0.027	0.045
200	16.67	0.10	0.072	(0.142)	0.027	0.045
201	16.75	0.10	0.072	(0.141)	0.027	0.045
202	16.83	0.10	0.072	(0.140)	0.027	0.045
203	16.92	0.10	0.072	(0.140)	0.027	0.045
204	17.00	0.10	0.072	(0.139)	0.027	0.045
205	17.08	0.17	0.120	(0.138)	0.044	0.076
206	17.17	0.17	0.120	(0.138)	0.044	0.076
207	17.25	0.17	0.120	(0.137)	0.044	0.076
208	17.33	0.17	0.120	(0.136)	0.044	0.076
209	17.42	0.17	0.120	(0.135)	0.044	0.076
210	17.50	0.17	0.120	(0.135)	0.044	0.076
211	17.58	0.17	0.120	(0.134)	0.044	0.076
212	17.67	0.17	0.120	(0.133)	0.044	0.076
213	17.75	0.17	0.120	(0.133)	0.044	0.076
214	17.83	0.13	0.096	(0.132)	0.036	0.060
215	17.92	0.13	0.096	(0.132)	0.036	0.060
216	18.00	0.13	0.096	(0.131)	0.036	0.060
217	18.08	0.13	0.096	(0.130)	0.036	0.060
218	18.17	0.13	0.096	(0.130)	0.036	0.060
219	18.25	0.13	0.096	(0.129)	0.036	0.060
220	18.33	0.13	0.096	(0.128)	0.036	0.060
221	18.42	0.13	0.096	(0.128)	0.036	0.060
222	18.50	0.13	0.096	(0.127)	0.036	0.060
223	18.58	0.10	0.072	(0.126)	0.027	0.045
224	18.67	0.10	0.072	(0.126)	0.027	0.045
225	18.75	0.10	0.072	(0.125)	0.027	0.045
226	18.83	0.07	0.048	(0.125)	0.018	0.030
227	18.92	0.07	0.048	(0.124)	0.018	0.030
228	19.00	0.07	0.048	(0.123)	0.018	0.030
229	19.08	0.10	0.072	(0.123)	0.027	0.045
230	19.17	0.10	0.072	(0.122)	0.027	0.045
231	19.25	0.10	0.072	(0.122)	0.027	0.045
232	19.33	0.13	0.096	(0.121)	0.036	0.060
233	19.42	0.13	0.096	(0.121)	0.036	0.060
234	19.50	0.13	0.096	(0.120)	0.036	0.060
235	19.58	0.10	0.072	(0.119)	0.027	0.045
236	19.67	0.10	0.072	(0.119)	0.027	0.045
237	19.75	0.10	0.072	(0.118)	0.027	0.045
238	19.83	0.07	0.048	(0.118)	0.018	0.030
239	19.92	0.07	0.048	(0.117)	0.018	0.030
240	20.00	0.07	0.048	(0.117)	0.018	0.030
241	20.08	0.10	0.072	(0.116)	0.027	0.045
242	20.17	0.10	0.072	(0.116)	0.027	0.045
243	20.25	0.10	0.072	(0.115)	0.027	0.045
244	20.33	0.10	0.072	(0.115)	0.027	0.045
245	20.42	0.10	0.072	(0.114)	0.027	0.045
246	20.50	0.10	0.072	(0.114)	0.027	0.045
247	20.58	0.10	0.072	(0.113)	0.027	0.045
248	20.67	0.10	0.072	(0.113)	0.027	0.045
249	20.75	0.10	0.072	(0.112)	0.027	0.045
250	20.83	0.07	0.048	(0.112)	0.018	0.030
251	20.92	0.07	0.048	(0.111)	0.018	0.030
252	21.00	0.07	0.048	(0.111)	0.018	0.030
253	21.08	0.10	0.072	(0.111)	0.027	0.045
254	21.17	0.10	0.072	(0.110)	0.027	0.045
255	21.25	0.10	0.072	(0.110)	0.027	0.045
256	21.33	0.07	0.048	(0.109)	0.018	0.030

257	21.42	0.07	0.048	(0.109)	0.018	0.030
258	21.50	0.07	0.048	(0.108)	0.018	0.030
259	21.58	0.10	0.072	(0.108)	0.027	0.045
260	21.67	0.10	0.072	(0.108)	0.027	0.045
261	21.75	0.10	0.072	(0.107)	0.027	0.045
262	21.83	0.07	0.048	(0.107)	0.018	0.030
263	21.92	0.07	0.048	(0.107)	0.018	0.030
264	22.00	0.07	0.048	(0.106)	0.018	0.030
265	22.08	0.10	0.072	(0.106)	0.027	0.045
266	22.17	0.10	0.072	(0.106)	0.027	0.045
267	22.25	0.10	0.072	(0.105)	0.027	0.045
268	22.33	0.07	0.048	(0.105)	0.018	0.030
269	22.42	0.07	0.048	(0.105)	0.018	0.030
270	22.50	0.07	0.048	(0.104)	0.018	0.030
271	22.58	0.07	0.048	(0.104)	0.018	0.030
272	22.67	0.07	0.048	(0.104)	0.018	0.030
273	22.75	0.07	0.048	(0.103)	0.018	0.030
274	22.83	0.07	0.048	(0.103)	0.018	0.030
275	22.92	0.07	0.048	(0.103)	0.018	0.030
276	23.00	0.07	0.048	(0.103)	0.018	0.030
277	23.08	0.07	0.048	(0.102)	0.018	0.030
278	23.17	0.07	0.048	(0.102)	0.018	0.030
279	23.25	0.07	0.048	(0.102)	0.018	0.030
280	23.33	0.07	0.048	(0.102)	0.018	0.030
281	23.42	0.07	0.048	(0.101)	0.018	0.030
282	23.50	0.07	0.048	(0.101)	0.018	0.030
283	23.58	0.07	0.048	(0.101)	0.018	0.030
284	23.67	0.07	0.048	(0.101)	0.018	0.030
285	23.75	0.07	0.048	(0.101)	0.018	0.030
286	23.83	0.07	0.048	(0.101)	0.018	0.030
287	23.92	0.07	0.048	(0.101)	0.018	0.030
288	24.00	0.07	0.048	(0.101)	0.018	0.030

(Loss Rate Not Used)

Sum = 100.0 Sum = 48.3

Flood volume = Effective rainfall 4.02(In)
times area 7.1(Ac.)/[(In)/(Ft.)] = 2.4(Ac.Ft)
Total soil loss = 1.98(In)
Total soil loss = 1.171(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 103860.2 Cubic Feet
Total soil loss = 50993.4 Cubic Feet

Peak flow rate of this hydrograph = 4.612(CFS)

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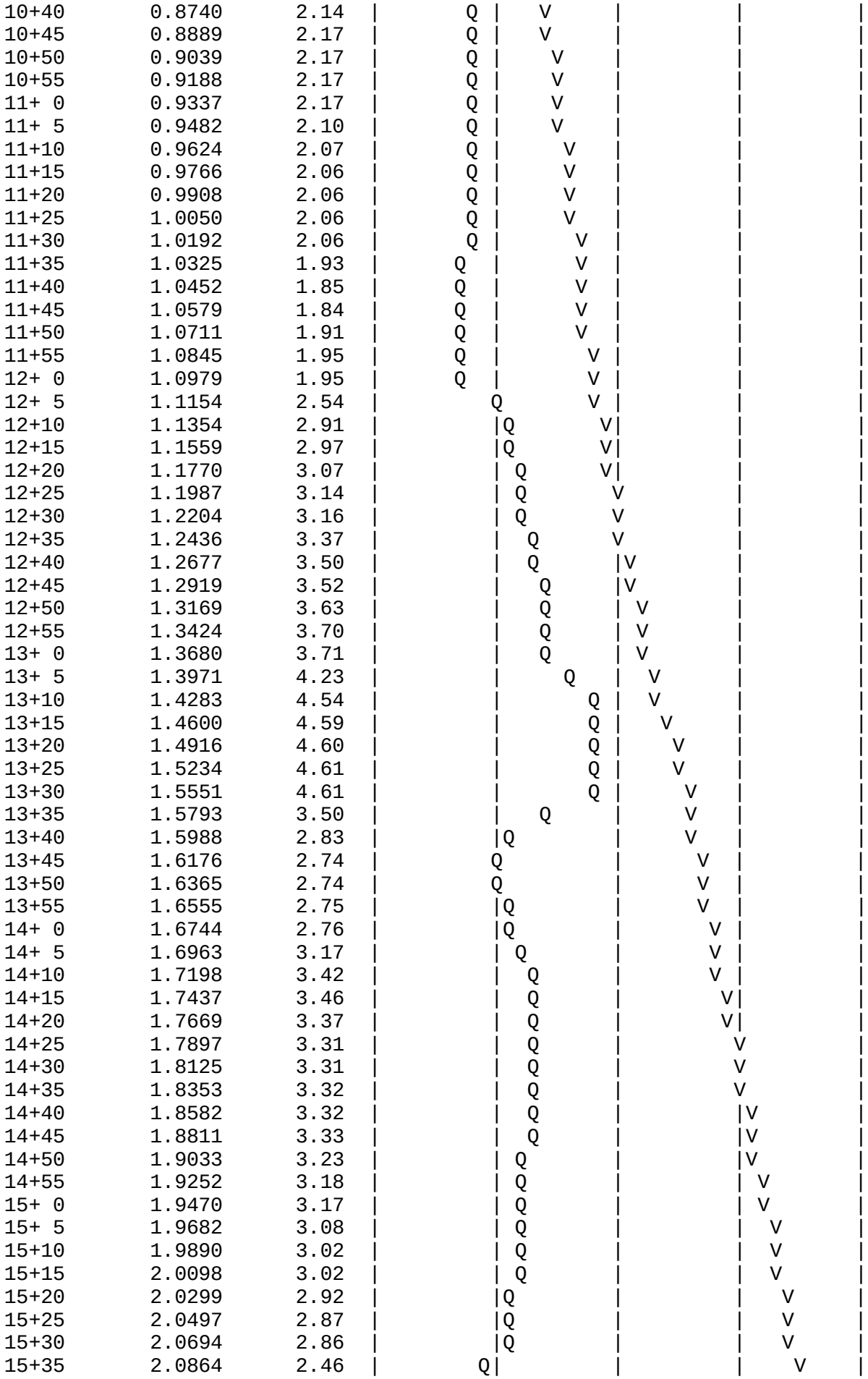
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0009	0.13	Q	|	|	|	|
0+10	0.0023	0.21	Q	|	|	|	|
0+15	0.0038	0.22	Q	|	|	|	|
0+20	0.0057	0.28	VQ	|	|	|	|
0+25	0.0079	0.32	VQ	|	|	|	|
0+30	0.0102	0.33	VQ	|	|	|	|
0+35	0.0124	0.33	VQ	|	|	|	|

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0+40       0.0146      0.33  VQ       |          |          |          |
0+45       0.0169      0.33  VQ       |          |          |          |
0+50       0.0196      0.39  VQ       |          |          |          |
0+55       0.0225      0.43  VQ       |          |          |          |
1+ 0       0.0255      0.43  VQ       |          |          |          |
1+ 5       0.0280      0.37  VQ       |          |          |          |
1+10       0.0303      0.33  VQ       |          |          |          |
1+15       0.0326      0.33  VQ       |          |          |          |
1+20       0.0348      0.33  VQ       |          |          |          |
1+25       0.0370      0.33  VQ       |          |          |          |
1+30       0.0393      0.33  VQ       |          |          |          |
1+35       0.0415      0.33  VQ       |          |          |          |
1+40       0.0438      0.33  VQ       |          |          |          |
1+45       0.0460      0.33  VQ       |          |          |          |
1+50       0.0487      0.39  VQ       |          |          |          |
1+55       0.0516      0.43  VQ       |          |          |          |
2+ 0       0.0546      0.43  VQ       |          |          |          |
2+ 5       0.0576      0.43  VQ       |          |          |          |
2+10       0.0606      0.43  |Q       |          |          |          |
2+15       0.0636      0.43  |Q       |          |          |          |
2+20       0.0666      0.43  |Q       |          |          |          |
2+25       0.0695      0.43  |Q       |          |          |          |
2+30       0.0725      0.43  |Q       |          |          |          |
2+35       0.0759      0.50  |Q       |          |          |          |
2+40       0.0796      0.54  |VQ      |          |          |          |
2+45       0.0834      0.54  |VQ      |          |          |          |
2+50       0.0871      0.54  |VQ      |          |          |          |
2+55       0.0908      0.54  |VQ      |          |          |          |
3+ 0       0.0946      0.54  |VQ      |          |          |          |
3+ 5       0.0983      0.54  |VQ      |          |          |          |
3+10       0.1020      0.54  |VQ      |          |          |          |
3+15       0.1058      0.54  |VQ      |          |          |          |
3+20       0.1095      0.54  |VQ      |          |          |          |
3+25       0.1132      0.54  |VQ      |          |          |          |
3+30       0.1170      0.54  |VQ      |          |          |          |
3+35       0.1207      0.54  | Q      |          |          |          |
3+40       0.1244      0.54  | Q      |          |          |          |
3+45       0.1282      0.54  | Q      |          |          |          |
3+50       0.1323      0.61  | Q      |          |          |          |
3+55       0.1368      0.64  | Q      |          |          |          |
4+ 0       0.1413      0.65  | Q      |          |          |          |
4+ 5       0.1457      0.65  | Q      |          |          |          |
4+10       0.1502      0.65  | Q      |          |          |          |
4+15       0.1547      0.65  | Q      |          |          |          |
4+20       0.1596      0.71  | Q      |          |          |          |
4+25       0.1648      0.75  | VQ     |          |          |          |
4+30       0.1700      0.76  | VQ     |          |          |          |
4+35       0.1753      0.76  | VQ     |          |          |          |
4+40       0.1805      0.76  |  Q     |          |          |          |
4+45       0.1857      0.76  |  Q     |          |          |          |
4+50       0.1914      0.82  |  Q     |          |          |          |
4+55       0.1973      0.86  |  Q     |          |          |          |
5+ 0       0.2033      0.87  |  Q     |          |          |          |
5+ 5       0.2084      0.74  | QV     |          |          |          |
5+10       0.2129      0.66  | QV     |          |          |          |
5+15       0.2174      0.65  | QV     |          |          |          |
5+20       0.2223      0.71  | QV     |          |          |          |
5+25       0.2275      0.75  |  Q     |          |          |          |
5+30       0.2327      0.76  |  Q     |          |          |          |
5+35       0.2384      0.82  |  Q     |          |          |          |
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5+40	0.2443	0.86	QV				
5+45	0.2503	0.87	QV				
5+50	0.2563	0.87	QV				
5+55	0.2623	0.87	QV				
6+ 0	0.2682	0.87	QV				
6+ 5	0.2746	0.93	QV				
6+10	0.2813	0.97	QV				
6+15	0.2880	0.98	QV				
6+20	0.2948	0.98	QV				
6+25	0.3015	0.98	Q V				
6+30	0.3082	0.98	Q V				
6+35	0.3154	1.04	QV				
6+40	0.3228	1.08	QV				
6+45	0.3302	1.08	QV				
6+50	0.3377	1.08	QV				
6+55	0.3452	1.08	QV				
7+ 0	0.3526	1.08	QV				
7+ 5	0.3601	1.08	Q V				
7+10	0.3676	1.08	Q V				
7+15	0.3750	1.08	Q V				
7+20	0.3829	1.15	Q V				
7+25	0.3911	1.19	Q V				
7+30	0.3993	1.19	Q V				
7+35	0.4080	1.26	QV				
7+40	0.4169	1.30	QV				
7+45	0.4259	1.30	Q V				
7+50	0.4353	1.36	Q V				
7+55	0.4449	1.40	Q V				
8+ 0	0.4546	1.41	Q V				
8+ 5	0.4652	1.54	QV				
8+10	0.4763	1.61	QV				
8+15	0.4875	1.63	Q V				
8+20	0.4987	1.63	Q V				
8+25	0.5099	1.63	Q V				
8+30	0.5211	1.63	Q V				
8+35	0.5328	1.69	Q V				
8+40	0.5447	1.73	Q V				
8+45	0.5566	1.73	Q V				
8+50	0.5690	1.80	Q V				
8+55	0.5816	1.84	Q V				
9+ 0	0.5943	1.84	Q V				
9+ 5	0.6079	1.97	Q V				
9+10	0.6220	2.05	Q V				
9+15	0.6362	2.06	Q V				
9+20	0.6508	2.12	Q V				
9+25	0.6657	2.16	Q V				
9+30	0.6806	2.17	Q V				
9+35	0.6960	2.23	Q V				
9+40	0.7116	2.27	Q V				
9+45	0.7273	2.28	Q V				
9+50	0.7434	2.34	Q V				
9+55	0.7598	2.38	Q V				
10+ 0	0.7763	2.38	Q V				
10+ 5	0.7896	1.94	Q V				
10+10	0.8011	1.67	Q V				
10+15	0.8123	1.63	Q V				
10+20	0.8235	1.63	Q V				
10+25	0.8347	1.63	Q V				
10+30	0.8459	1.63	Q V				
10+35	0.8593	1.94	Q V				



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15+40       2.1017      2.22  |       Q |         |         |    V    |
15+45       2.1167      2.19  |       Q |         |         |    V    |
15+50       2.1319      2.20  |       Q |         |         |    V    |
15+55       2.1470      2.20  |       Q |         |         |     V   |
16+ 0       2.1622      2.21  |       Q |         |         |     V   |
16+ 5       2.1703      1.16  |   Q     |         |         |     V   |
16+10       2.1739      0.53  | Q       |         |         |     V   |
16+15       2.1769      0.43  |Q        |         |         |     V   |
16+20       2.1799      0.43  |Q        |         |         |     V   |
16+25       2.1828      0.43  |Q        |         |         |     V   |
16+30       2.1858      0.43  |Q        |         |         |     V   |
16+35       2.1884      0.37  |Q        |         |         |     V   |
16+40       2.1907      0.33  |Q        |         |         |     V   |
16+45       2.1929      0.33  |Q        |         |         |     V   |
16+50       2.1951      0.33  |Q        |         |         |     V   |
16+55       2.1974      0.33  |Q        |         |         |     V   |
17+ 0       2.1996      0.33  |Q        |         |         |     V   |
17+ 5       2.2027      0.45  |Q        |         |         |     V   |
17+10       2.2064      0.53  | Q       |         |         |      V  |
17+15       2.2101      0.54  | Q       |         |         |      V  |
17+20       2.2139      0.54  | Q       |         |         |      V  |
17+25       2.2176      0.54  | Q       |         |         |      V  |
17+30       2.2213      0.54  | Q       |         |         |      V  |
17+35       2.2251      0.54  | Q       |         |         |      V  |
17+40       2.2288      0.54  | Q       |         |         |      V  |
17+45       2.2325      0.54  | Q       |         |         |      V  |
17+50       2.2358      0.48  |Q        |         |         |      V  |
17+55       2.2388      0.44  |Q        |         |         |      V  |
18+ 0       2.2418      0.43  |Q        |         |         |      V  |
18+ 5       2.2448      0.43  |Q        |         |         |      V  |
18+10       2.2478      0.43  |Q        |         |         |      V  |
18+15       2.2508      0.43  |Q        |         |         |      V  |
18+20       2.2538      0.43  |Q        |         |         |      V  |
18+25       2.2568      0.43  |Q        |         |         |      V  |
18+30       2.2597      0.43  |Q        |         |         |      V  |
18+35       2.2623      0.37  |Q        |         |         |      V  |
18+40       2.2646      0.33  |Q        |         |         |      V  |
18+45       2.2668      0.33  |Q        |         |         |       V |
18+50       2.2686      0.26  |Q        |         |         |       V |
18+55       2.2701      0.22  Q         |         |         |       V |
19+ 0       2.2716      0.22  Q         |         |         |       V |
19+ 5       2.2736      0.28  |Q        |         |         |       V |
19+10       2.2758      0.32  |Q        |         |         |       V |
19+15       2.2780      0.33  |Q        |         |         |       V |
19+20       2.2807      0.39  |Q        |         |         |       V |
19+25       2.2836      0.43  |Q        |         |         |       V |
19+30       2.2866      0.43  |Q        |         |         |       V |
19+35       2.2892      0.37  |Q        |         |         |       V |
19+40       2.2914      0.33  |Q        |         |         |       V |
19+45       2.2937      0.33  |Q        |         |         |       V |
19+50       2.2955      0.26  |Q        |         |         |       V |
19+55       2.2970      0.22  Q         |         |         |       V |
20+ 0       2.2985      0.22  Q         |         |         |       V |
20+ 5       2.3004      0.28  |Q        |         |         |       V |
20+10       2.3026      0.32  |Q        |         |         |       V |
20+15       2.3049      0.33  |Q        |         |         |       V |
20+20       2.3071      0.33  |Q        |         |         |       V |
20+25       2.3094      0.33  |Q        |         |         |       V |
20+30       2.3116      0.33  |Q        |         |         |       V |
20+35       2.3138      0.33  |Q        |         |         |       V |
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  20+40       2.3161      0.33  |Q        |         |         |       V |
  20+45       2.3183      0.33  |Q        |         |         |       V |
  20+50       2.3201      0.26  |Q        |         |         |       V |
  20+55       2.3216      0.22  Q         |         |         |       V |
  21+ 0       2.3231      0.22  Q         |         |         |       V |
  21+ 5       2.3251      0.28  |Q        |         |         |        V|
  21+10       2.3273      0.32  |Q        |         |         |        V|
  21+15       2.3295      0.33  |Q        |         |         |        V|
  21+20       2.3313      0.26  |Q        |         |         |        V|
  21+25       2.3328      0.22  Q         |         |         |        V|
  21+30       2.3343      0.22  Q         |         |         |        V|
  21+35       2.3363      0.28  |Q        |         |         |        V|
  21+40       2.3385      0.32  |Q        |         |         |        V|
  21+45       2.3407      0.33  |Q        |         |         |        V|
  21+50       2.3425      0.26  |Q        |         |         |        V|
  21+55       2.3440      0.22  Q         |         |         |        V|
  22+ 0       2.3455      0.22  Q         |         |         |        V|
  22+ 5       2.3475      0.28  |Q        |         |         |        V|
  22+10       2.3497      0.32  |Q        |         |         |        V|
  22+15       2.3519      0.33  |Q        |         |         |        V|
  22+20       2.3537      0.26  |Q        |         |         |        V|
  22+25       2.3552      0.22  Q         |         |         |        V|
  22+30       2.3567      0.22  Q         |         |         |        V|
  22+35       2.3582      0.22  Q         |         |         |        V|
  22+40       2.3597      0.22  Q         |         |         |        V|
  22+45       2.3612      0.22  Q         |         |         |        V|
  22+50       2.3627      0.22  Q         |         |         |        V|
  22+55       2.3642      0.22  Q         |         |         |        V|
  23+ 0       2.3657      0.22  Q         |         |         |        V|
  23+ 5       2.3672      0.22  Q         |         |         |        V|
  23+10       2.3687      0.22  Q         |         |         |        V|
  23+15       2.3702      0.22  Q         |         |         |        V|
  23+20       2.3717      0.22  Q         |         |         |        V|
  23+25       2.3732      0.22  Q         |         |         |        V|
  23+30       2.3747      0.22  Q         |         |         |        V|
  23+35       2.3761      0.22  Q         |         |         |        V|
  23+40       2.3776      0.22  Q         |         |         |        V|
  23+45       2.3791      0.22  Q         |         |         |        V|
  23+50       2.3806      0.22  Q         |         |         |        V|
  23+55       2.3821      0.22  Q         |         |         |        V|
  24+ 0       2.3836      0.22  Q         |         |         |        V|
  24+ 5       2.3842      0.09  Q         |         |         |        V|
  24+10       2.3843      0.01  Q         |         |         |         V
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APPENDIX D

FLOOD ROUTING CALCULATIONS

DETENTION BASIN NO. 1

WORKSHEETS

TABLE A
AREA A
BASIN NO 1
DETENTION BASIN SIZE

STAGE VS. VOLUME

ELEVATION	DETENTION BASIN DEPTH (ft)	CONTOUR AREA (sf)	AVG. AREA (sf)	VOLUME (cu. ft.)	VOLUME (ac - ft.)	TOTAL VOLUME (ac-ft)	DESIGN FLOW (cfs)
1270	0				0.000	0.000	0.46
1271	1				0.083	0.083	0.46
1276	6				0.691	0.774	0.46
1278	8				0.165	0.939	0.46
1279	9	525	0	0	0.083	1.022	0.95
1280	10	900	713	713	0.016	1.038	1.18
1281	11	1,345	1,123	1,123	0.026	1.064	2.13
1282	12	1,859	1,602	1,602	0.037	1.100	2.64
1283	13	2,441	2,150	2,150	0.049	1.150	3.82
1284	14	3,092	2,767	2,767	0.064	1.213	12.76
1285	15	3,821	3,457	3,457	0.079	1.293	18.13

NOTES:

UNDERGROUND CALCULATIONS
VOLUME FROM ELEV 1270.00 TO 1271.00
FIRST 12" OF GRAVEL VOLUME
GRAVEL AREA = 9000 SQ-FT
DEPTH = 1 FT

SYSTEM VOLUME = 3600.00 CU-FT
SYSTEM VOLUME = 0.083 CU-FT

VOLUME FROM ELEV 1277.50 TO 1284.00
GRAVEL AREA = 9000 SQ-FT
DEPTH = 5 FT

PIPE LENGTH = 1027 FT
PIPE DIAMETER = 60 IN'
PIPE VOLUME = 20165.145 CU-FT

SYSTEM VOLUME = 30099.09 CU-FT
VOLUME 0.691 CU-FT

UNDERGROUND CALCULATIONS
VOLUME FROM ELEV 1276.00 TO 1278.00

GRAVEL AREA = 9000 SQ-FT
DEPTH = 2 FT

SYSTEM VOLUME = 7200.00 CU-FT
SYSTEM VOLUME = 0.165 CU-FT

UNDERGROUND CALCULATIONS
VOLUME FROM ELEV 1278.00 TO 1279.00
FIRST 18" OF GRAVEL VOLUME
GRAVEL AREA = 9000 SQ-FT
DEPTH = 1 FT

SYSTEM VOLUME = 3600.00 CU-FT
SYSTEM VOLUME = 0.083 CU-FT

TABLE B

DETENTION BASIN OUTLET

AREA A

BASIN NO 1

RISER 1

ORIFICE 1		ORIFICE 2		ORIFICE 3		ORIFICE 4	
Rectangular Outlet		Circular Outlet		Circular Outlet		Circular Outlet	
WQ Outlet (Orifice)		WQ Outlet (Orifice)		WQ Outlet (Orifice)		WQ Outlet (Orifice)	
Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5	
C=	0.6	C=	0.6	C=	0.6	C=	0.6
Area Total=	0.11 sq-ft	Area Total=	0.17 sq-ft	Area Total=	0.17 sq-ft	Area Total=	2.09 sq-ft
W=	4 in	Hole Diameter =	4 in	Hole Diameter =	4 in	Hole Diameter =	8 in
H=	4	# of holes =	2	# of holes =	2	# of holes =	6
# of holes =	1						
Elevation =	1278.00 ft	Elevation =	1280.00 ft	Elevation =	1282.00 ft	Elevation =	1283.00 ft

ELEVATION	DEPTH (H) ABOVE ORIFICE	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 2	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 3	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 4	Q(WQ) (cfs)	MWS UNIT	Q TOTAL (cfs)
1270	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46
1271	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46
1276	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46
1278	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46
1279	1.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.95
1280	2.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.46	1.18
1281	3.00	0.90	1.00	0.77	0.00	0.00	0.0	0.00	0.46	2.13
1282	4.00	1.05	2.00	1.14	0.00	0.00	0.00	0.00	0.46	2.64
1283	5.00	1.18	3.00	1.41	1.00	0.77	0.00	0.00	0.46	3.82
1284	6.00	1.29	4.00	1.64	2.00	1.14	1.00	8.23	0.46	12.76
1285	7.00	1.40	5.00	1.85	3.00	1.41	2.00	13.01	0.46	18.13

MWS UNIT

MODEL NO L-8-16

FLOW CAPACITY = 0.46 CFS

DETENTION BASIN NO. 2

WORKSHEETS

TABLE A
AREA B
BASIN NO 2
DETENTION BASIN SIZE

STAGE VS. VOLUME

ELEVATION	DETENTION BASIN DEPTH (ft)	CONTOUR AREA (sf)	AVG. AREA (sf)	VOLUME (cu. ft.)	VOLUME (ac - ft.)	TOTAL VOLUME (ac-ft)	DESIGN FLOW (cfs)
1276	0				0.000	0.000	0.35
1277.5	1.5				0.082	0.082	0.35
1284	8	1,824	0	0	0.528	0.609	0.35
1285	9	2,626	2,225	2,225	0.051	0.661	0.48
1286	10	3,496	3,061	3,061	0.070	0.731	1.35
1287	11	4,431	3,964	3,964	0.091	0.822	5.10
1288	12	5,434	4,933	4,933	0.113	0.935	10.46
1289	13	6,504	5,969	5,969	0.137	1.072	13.75
1290	14	7,640	7,072	7,072	0.162	1.234	16.32
1290.5	14.5	8,254	7,947	3,974	0.091	1.326	17.46

NOTES:

UNDERGROUND CALCULATIONS

VOLUME FROM ELEV 1276.00 TO 1277.50
FIRST 18" OF GRAVEL VOLUME
GRAVEL AREA = 5940 SQ-FT
DEPTH = 1.5 FT

SYSTEM VOLUME = 3564.00 CU-FT
SYSTEM VOLUME = 0.082 CU-FT

VOLUME FROM ELEV 1277.50 TO 1284.00
GRAVEL AREA = 5940 SQ-FT
DEPTH = 6.5 FT

PIPE LENGTH = 640 FT
PIPE DIAMETER = 60 IN'
PIPE VOLUME = 12566.4 CU-FT

SYSTEM VOLUME = 22983.84 CU-FT
VOLUME 0.528 CU-FT

TABLE B

DETENTION BASIN OUTLET

AREA B

BASIN NO 1

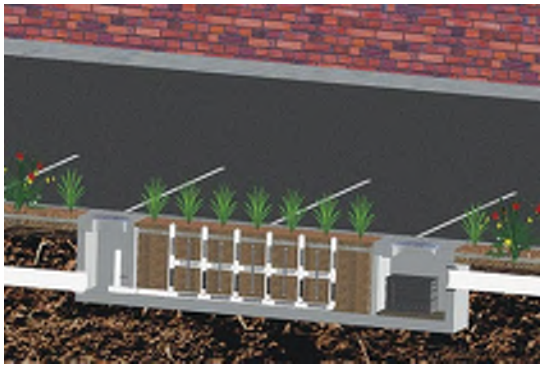
RISER 1

ORIFICE 1		ORIFICE 2		ORIFICE 3		ORIFICE 4	
Rectangular Outlet		Circular Outlet		Circular Outlet		Circular Outlet	
WQ Outlet (Orifice)		WQ Outlet (Orifice)		WQ Outlet (Orifice)		WQ Outlet (Orifice)	
Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5		Q(WQ)=CA(2gH)^0.5	
C=	0.6	C=	0.6	C=	0.6	C=	0.6
Area Total=	0.03 sq-ft	Area Total=	0.20 sq-ft	Area Total=	0.79 sq-ft	Area Total=	0.79 sq-ft
W=	2 in	Hole Diameter =	6 in	Hole Diameter =	6 in	Hole Diameter =	6 in
H=	2	# of holes =	1	# of holes =	4	# of holes =	4
# of holes =	1						
Elevation =	1284.00 ft	Elevation =	1285.00 ft	Elevation =	1286.00 ft	Elevation =	1287.00 ft

ELEVATION	DEPTH (H) ABOVE ORIFICE	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 2	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 3	Q(WQ) (cfs)	DEPTH (H) ABOVE ORIFICE 4	Q(WQ) (cfs)	MWS UNIT	Q TOTAL (cfs)
1276	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35
1277.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35
1284	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.35
1285	1.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.48
1286	2.00	0.19	1.00	0.82	0.00	0.00	0.0	0.00	0.35	1.35
1287	3.00	0.23	2.00	1.25	1.00	3.27	0.00	0.00	0.35	5.10
1288	4.00	0.26	3.00	1.57	2.00	5.00	1.00	3.27	0.35	10.46
1289	5.00	0.30	4.00	1.83	3.00	6.27	2.00	5.00	0.35	13.75
1290	6.00	0.33	5.00	2.06	4.00	7.32	3.00	6.27	0.35	16.32
1290.5	6.50	0.34	5.50	2.17	4.50	7.79	3.50	6.81	0.35	17.46

MWS UNIT		
MODEL NO	L-8-12	
FLOW CAPACITY =	0.35	CFS

MWS Linear | *Sizing Options*



Flow Based Sizing

The MWS Linear can be used in stand alone applications to meet treatment flow requirements. Since the MWS Linear is the only biofiltration system that can accept inflow pipes several feet below the surface it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

Model #	Dimensions	WetlandMEDIA Surface Area	Treatment Flow Rate (cfs)
MWS-L-4-4	4′ x 4′	23 sq. ft.	0.052
MWS-L-4-6	4′ x 6′	32 sq. ft.	0.073
MWS-L-4-8	4′ x 8′	50 sq. ft.	0.115
MWS-L-4-13	4′ x 13′	63 sq. ft.	0.144
MWS-L-4-15	4′ x 15′	76 sq. ft.	0.175
MWS-L-4-17	4′ x 17′	90 sq. ft.	0.206
MWS-L-4-19	4′ x 19′	103 sq. ft.	0.237
MWS-L-4-21	4′ x 21′	117 sq. ft.	0.268
MWS-L-6-8	7′ x 9′	64 sq. ft.	0.147
MWS-L-8-8	8′ x 8′	100 sq. ft.	0.230
MWS-L-8-12	8′ x 12′	151 sq. ft.	0.346 ← USED
MWS-L-8-16	8′ x 16′	201 sq. ft.	0.462 ← USED
MWS-L-8-20	9′ x 21′	252 sq. ft.	0.577
MWS-L-8-24	9′ x 25′	302 sq. ft.	0.693



Volume Based Sizing

Many states require treatment of a water quality volume and do not offer the option of flow based design. The MWS Linear and its unique horizontal flow makes it the only biofilter that can be used in volume based design installed downstream of ponds, detention basins, and underground storage systems.

Model #	Treatment Capacity (cu. ft.) @ 24-Hour Drain Down	Treatment Capacity (cu. ft.) @ 48-Hour Drain Down	
MWS-L-4-4	1140	2280	
MWS-L-4-6	1600	3200	
MWS-L-4-8	2518	5036	
MWS-L-4-13	3131	6261	
MWS-L-4-15	3811	7623	
MWS-L-4-17	4492	8984	
MWS-L-4-19	5172	10345	
MWS-L-4-21	5853	11706	
MWS-L-6-8	3191	6382	
MWS-L-8-8	5036	10072	← USED
MWS-L-8-12	7554	15109	
MWS-L-8-16	10073	20145	← USED
MWS-L-8-20	12560	25120	
MWS-L-8-24	15108	30216	

UNDERGROUND INFILTRATION BASIN WORKSHEETS

TABLE A
AREA C
BASIN NO 1
INFILTRATION BASIN SIZE

STAGE VS. VOLUME

ELEVATION	DETENTION BASIN DEPTH (ft)	CONTOUR AREA (sf)	AVG. AREA (sf)	VOLUME (cu. ft.)	VOLUME (ac - ft.)	TOTAL VOLUME (ac-ft)	DESIGN FLOW (cfs)
1284.5	0				0.000	0.000	0.00
1286	1.5				0.102	0.102	0.64
1293.5	9	1,356	0	0	0.717	0.819	0.64
1294	9.5	1,762	1,559	780	0.018	0.837	0.64
1295	10.5	2,625	2,194	2,194	0.050	0.887	0.64
1296	11.5	3,558	3,092	3,092	0.071	0.958	0.64
1297	12.5	4,560	4,059	4,059	0.093	1.051	0.64
1298	13.5	5,633	5,097	5,097	0.117	1.168	0.64
1299	14.5	6,774	6,204	6,204	0.142	1.311	0.64
1300	15.5	7,986	7,380	7,380	0.169	1.480	0.64

NOTES:

UNDERGROUND CALCULATIONS

VOLUME FROM ELEV 1284.50 TO 1286.00

FIRST 6" OF GRAVEL VOLUME

GRAVEL AREA = 7440 SQ-FT

DEPTH = 1.5 FT

SYSTEM VOLUME = 4464.00 CU-FT

SYSTEM VOLUME = 0.102 CU-FT

VOLUME FROM ELEV 1276.50 TO 1284.00

GRAVEL AREA = 7440 SQ-FT

DEPTH = 7.5 FT

PIPE LENGTH = 755 FT

PIPE DIAMETER = 60 IN'

PIPE VOLUME = 14824.425 CU-FT

SYSTEM VOLUME = 31214.66 CU-FT

VOLUME 0.717 CU-FT

BASIN INFILTRATION CAPACITY

Total Basin Area = 7440

Field Infiltration Rate = 11.20

SF= 3.00 sq-ft

Design Infiltration Rate = 3.73 in/hr

Q= Basin Area x Design Infiltration Rate x 1/12 x 1/60 x 1/60

in/hr

Q= 0.643 cfs

2-YEAR STORM

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
2-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 16
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.059 (CFS)
Total volume = 0.255 (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 12.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 16
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.8 3.53 5.29 7.06	Depth (Ft.)
0.083	0.61	0.01	0.002	O I | | | |	0.02
0.167	1.29	0.05	0.008	O I | | | |	0.10
0.250	1.58	0.10	0.018	O I| | | |	0.21
0.333	1.77	0.16	0.028	O I | | |	0.34
0.417	1.87	0.22	0.040	O I | | |	0.48
0.500	2.03	0.28	0.051	|O |I | | |	0.62
0.583	2.36	0.36	0.064	|O | I | | |	0.77
0.667	2.83	0.44	0.079	|O | I | | |	0.96
0.750	3.82	0.46	0.099	| O | |I | |	1.12
0.833	7.06	0.46	0.133	| O | | | I	1.37
0.917	6.56	0.46	0.177	| O | | | I |	1.68
1.000	3.15	0.46	0.207	| O | I | | |	1.90
1.083	1.50	0.46	0.220	| O I | | | |	1.99
1.167	0.44	0.46	0.224	|IO | | | |	2.02
1.250	0.11	0.46	0.223	I O | | | |	2.01
1.333	0.03	0.46	0.220	I O | | | |	1.99
1.417	0.00	0.46	0.217	I O | | | |	1.97
1.500	0.00	0.46	0.214	I O | | | |	1.95
1.583	0.00	0.46	0.210	I O | | | |	1.92
1.667	0.00	0.46	0.207	I O | | | |	1.90
1.750	0.00	0.46	0.204	I O | | | |	1.88
1.833	0.00	0.46	0.201	I O | | | |	1.85
1.917	0.00	0.46	0.198	I O | | | |	1.83
2.000	0.00	0.46	0.195	I O | | | |	1.81
2.083	0.00	0.46	0.191	I O | | | |	1.78
2.167	0.00	0.46	0.188	I O | | | |	1.76
2.250	0.00	0.46	0.185	I O | | | |	1.74
2.333	0.00	0.46	0.182	I O | | | |	1.72
2.417	0.00	0.46	0.179	I O | | | |	1.69
2.500	0.00	0.46	0.176	I O | | | |	1.67
2.583	0.00	0.46	0.172	I O | | | |	1.65
2.667	0.00	0.46	0.169	I O | | | |	1.62
2.750	0.00	0.46	0.166	I O | | | |	1.60
2.833	0.00	0.46	0.163	I O | | | |	1.58
2.917	0.00	0.46	0.160	I O | | | |	1.56
3.000	0.00	0.46	0.157	I O | | | |	1.53
3.083	0.00	0.46	0.153	I O | | | |	1.51
3.167	0.00	0.46	0.150	I O | | | |	1.49
3.250	0.00	0.46	0.147	I O | | | |	1.46
3.333	0.00	0.46	0.144	I O | | | |	1.44
3.417	0.00	0.46	0.141	I O | | | |	1.42
3.500	0.00	0.46	0.138	I O | | | |	1.39
3.583	0.00	0.46	0.134	I O | | | |	1.37
3.667	0.00	0.46	0.131	I O | | | |	1.35
3.750	0.00	0.46	0.128	I O | | | |	1.33

3.833	0.00	0.46	0.125	I O	|	|	|	1.30
3.917	0.00	0.46	0.122	I O	|	|	|	1.28
4.000	0.00	0.46	0.119	I O	|	|	|	1.26
4.083	0.00	0.46	0.115	I O	|	|	|	1.23
4.167	0.00	0.46	0.112	I O	|	|	|	1.21
4.250	0.00	0.46	0.109	I O	|	|	|	1.19
4.333	0.00	0.46	0.106	I O	|	|	|	1.17
4.417	0.00	0.46	0.103	I O	|	|	|	1.14
4.500	0.00	0.46	0.100	I O	|	|	|	1.12
4.583	0.00	0.46	0.096	I O	|	|	|	1.10
4.667	0.00	0.46	0.093	I O	|	|	|	1.07
4.750	0.00	0.46	0.090	I O	|	|	|	1.05
4.833	0.00	0.46	0.087	I O	|	|	|	1.03
4.917	0.00	0.46	0.084	I O	|	|	|	1.01
5.000	0.00	0.45	0.081	I O	|	|	|	0.97
5.083	0.00	0.43	0.078	IO	|	|	|	0.93
5.167	0.00	0.41	0.075	IO	|	|	|	0.90
5.250	0.00	0.40	0.072	IO	|	|	|	0.87
5.333	0.00	0.38	0.069	IO	|	|	|	0.83
5.417	0.00	0.37	0.067	IO	|	|	|	0.80
5.500	0.00	0.36	0.064	IO	|	|	|	0.77
5.583	0.00	0.34	0.062	IO	|	|	|	0.74
5.667	0.00	0.33	0.059	IO	|	|	|	0.72
5.750	0.00	0.32	0.057	IO	|	|	|	0.69
5.833	0.00	0.30	0.055	IO	|	|	|	0.66
5.917	0.00	0.29	0.053	IO	|	|	|	0.64
6.000	0.00	0.28	0.051	IO	|	|	|	0.61
6.083	0.00	0.27	0.049	IO	|	|	|	0.59
6.167	0.00	0.26	0.047	IO	|	|	|	0.57
6.250	0.00	0.25	0.045	IO	|	|	|	0.55
6.333	0.00	0.24	0.044	IO	|	|	|	0.53
6.417	0.00	0.23	0.042	IO	|	|	|	0.51
6.500	0.00	0.22	0.041	IO	|	|	|	0.49
6.583	0.00	0.22	0.039	O	|	|	|	0.47
6.667	0.00	0.21	0.038	O	|	|	|	0.45
6.750	0.00	0.20	0.036	O	|	|	|	0.44
6.833	0.00	0.19	0.035	O	|	|	|	0.42
6.917	0.00	0.19	0.033	O	|	|	|	0.40
7.000	0.00	0.18	0.032	O	|	|	|	0.39
7.083	0.00	0.17	0.031	O	|	|	|	0.37
7.167	0.00	0.17	0.030	O	|	|	|	0.36
7.250	0.00	0.16	0.029	O	|	|	|	0.35
7.333	0.00	0.15	0.028	O	|	|	|	0.33
7.417	0.00	0.15	0.027	O	|	|	|	0.32
7.500	0.00	0.14	0.026	O	|	|	|	0.31
7.583	0.00	0.14	0.025	O	|	|	|	0.30
7.667	0.00	0.13	0.024	O	|	|	|	0.29
7.750	0.00	0.13	0.023	O	|	|	|	0.28
7.833	0.00	0.12	0.022	O	|	|	|	0.27
7.917	0.00	0.12	0.021	O	|	|	|	0.26
8.000	0.00	0.11	0.020	O	|	|	|	0.25
8.083	0.00	0.11	0.020	O	|	|	|	0.24
8.167	0.00	0.10	0.019	O	|	|	|	0.23
8.250	0.00	0.10	0.018	O	|	|	|	0.22
8.333	0.00	0.10	0.018	O	|	|	|	0.21
8.417	0.00	0.09	0.017	O	|	|	|	0.20
8.500	0.00	0.09	0.016	O	|	|	|	0.20
8.583	0.00	0.09	0.016	O	|	|	|	0.19
8.667	0.00	0.08	0.015	O	|	|	|	0.18
8.750	0.00	0.08	0.014	O	|	|	|	0.17

8.833	0.00	0.08	0.014	O	|	|	|	0.17
8.917	0.00	0.07	0.013	O	|	|	|	0.16
9.000	0.00	0.07	0.013	O	|	|	|	0.16
9.083	0.00	0.07	0.012	O	|	|	|	0.15
9.167	0.00	0.07	0.012	O	|	|	|	0.14
9.250	0.00	0.06	0.012	O	|	|	|	0.14
9.333	0.00	0.06	0.011	O	|	|	|	0.13
9.417	0.00	0.06	0.011	O	|	|	|	0.13
9.500	0.00	0.06	0.010	O	|	|	|	0.12
9.583	0.00	0.05	0.010	O	|	|	|	0.12
9.667	0.00	0.05	0.010	O	|	|	|	0.11
9.750	0.00	0.05	0.009	O	|	|	|	0.11
9.833	0.00	0.05	0.009	O	|	|	|	0.11
9.917	0.00	0.05	0.008	O	|	|	|	0.10
10.000	0.00	0.05	0.008	O	|	|	|	0.10
10.083	0.00	0.04	0.008	O	|	|	|	0.09
10.167	0.00	0.04	0.008	O	|	|	|	0.09
10.250	0.00	0.04	0.007	O	|	|	|	0.09
10.333	0.00	0.04	0.007	O	|	|	|	0.08
10.417	0.00	0.04	0.007	O	|	|	|	0.08
10.500	0.00	0.04	0.006	O	|	|	|	0.08
10.583	0.00	0.03	0.006	O	|	|	|	0.08
10.667	0.00	0.03	0.006	O	|	|	|	0.07
10.750	0.00	0.03	0.006	O	|	|	|	0.07
10.833	0.00	0.03	0.006	O	|	|	|	0.07
10.917	0.00	0.03	0.005	O	|	|	|	0.06
11.000	0.00	0.03	0.005	O	|	|	|	0.06
11.083	0.00	0.03	0.005	O	|	|	|	0.06
11.167	0.00	0.03	0.005	O	|	|	|	0.06
11.250	0.00	0.03	0.005	O	|	|	|	0.06
11.333	0.00	0.02	0.004	O	|	|	|	0.05
11.417	0.00	0.02	0.004	O	|	|	|	0.05
11.500	0.00	0.02	0.004	O	|	|	|	0.05
11.583	0.00	0.02	0.004	O	|	|	|	0.05
11.667	0.00	0.02	0.004	O	|	|	|	0.05
11.750	0.00	0.02	0.004	O	|	|	|	0.04
11.833	0.00	0.02	0.004	O	|	|	|	0.04
11.917	0.00	0.02	0.003	O	|	|	|	0.04
12.000	0.00	0.02	0.003	O	|	|	|	0.04
12.083	0.00	0.02	0.003	O	|	|	|	0.04
12.167	0.00	0.02	0.003	O	|	|	|	0.04
12.250	0.00	0.02	0.003	O	|	|	|	0.04
12.333	0.00	0.02	0.003	O	|	|	|	0.03
12.417	0.00	0.01	0.003	O	|	|	|	0.03
12.500	0.00	0.01	0.003	O	|	|	|	0.03
12.583	0.00	0.01	0.002	O	|	|	|	0.03
12.667	0.00	0.01	0.002	O	|	|	|	0.03
12.750	0.00	0.01	0.002	O	|	|	|	0.03
12.833	0.00	0.01	0.002	O	|	|	|	0.03
12.917	0.00	0.01	0.002	O	|	|	|	0.03
13.000	0.00	0.01	0.002	O	|	|	|	0.02
13.083	0.00	0.01	0.002	O	|	|	|	0.02
13.167	0.00	0.01	0.002	O	|	|	|	0.02
13.250	0.00	0.01	0.002	O	|	|	|	0.02
13.333	0.00	0.01	0.002	O	|	|	|	0.02
13.417	0.00	0.01	0.002	O	|	|	|	0.02
13.500	0.00	0.01	0.002	O	|	|	|	0.02
13.583	0.00	0.01	0.002	O	|	|	|	0.02
13.667	0.00	0.01	0.002	O	|	|	|	0.02
13.750	0.00	0.01	0.001	O	|	|	|	0.02

13.833	0.00	0.01	0.001	O	|	|	|	|	0.02
13.917	0.00	0.01	0.001	O	|	|	|	|	0.02
14.000	0.00	0.01	0.001	O	|	|	|	|	0.02
14.083	0.00	0.01	0.001	O	|	|	|	|	0.02
14.167	0.00	0.01	0.001	O	|	|	|	|	0.01
14.250	0.00	0.01	0.001	O	|	|	|	|	0.01
14.333	0.00	0.01	0.001	O	|	|	|	|	0.01
14.417	0.00	0.01	0.001	O	|	|	|	|	0.01
14.500	0.00	0.01	0.001	O	|	|	|	|	0.01
14.583	0.00	0.01	0.001	O	|	|	|	|	0.01
14.667	0.00	0.01	0.001	O	|	|	|	|	0.01
14.750	0.00	0.01	0.001	O	|	|	|	|	0.01
14.833	0.00	0.00	0.001	O	|	|	|	|	0.01
14.917	0.00	0.00	0.001	O	|	|	|	|	0.01
15.000	0.00	0.00	0.001	O	|	|	|	|	0.01
15.083	0.00	0.00	0.001	O	|	|	|	|	0.01
15.167	0.00	0.00	0.001	O	|	|	|	|	0.01
15.250	0.00	0.00	0.001	O	|	|	|	|	0.01
15.333	0.00	0.00	0.001	O	|	|	|	|	0.01
15.417	0.00	0.00	0.001	O	|	|	|	|	0.01
15.500	0.00	0.00	0.001	O	|	|	|	|	0.01
15.583	0.00	0.00	0.001	O	|	|	|	|	0.01
15.667	0.00	0.00	0.001	O	|	|	|	|	0.01
15.750	0.00	0.00	0.001	O	|	|	|	|	0.01
15.833	0.00	0.00	0.001	O	|	|	|	|	0.01
15.917	0.00	0.00	0.001	O	|	|	|	|	0.01
16.000	0.00	0.00	0.001	O	|	|	|	|	0.01
16.083	0.00	0.00	0.001	O	|	|	|	|	0.01
16.167	0.00	0.00	0.000	O	|	|	|	|	0.01
16.250	0.00	0.00	0.000	O	|	|	|	|	0.01
16.333	0.00	0.00	0.000	O	|	|	|	|	0.01
16.417	0.00	0.00	0.000	O	|	|	|	|	0.01
16.500	0.00	0.00	0.000	O	|	|	|	|	0.01
16.583	0.00	0.00	0.000	O	|	|	|	|	0.00
16.667	0.00	0.00	0.000	O	|	|	|	|	0.00
16.750	0.00	0.00	0.000	O	|	|	|	|	0.00
16.833	0.00	0.00	0.000	O	|	|	|	|	0.00
16.917	0.00	0.00	0.000	O	|	|	|	|	0.00
17.000	0.00	0.00	0.000	O	|	|	|	|	0.00
17.083	0.00	0.00	0.000	O	|	|	|	|	0.00
17.167	0.00	0.00	0.000	O	|	|	|	|	0.00
17.250	0.00	0.00	0.000	O	|	|	|	|	0.00
17.333	0.00	0.00	0.000	O	|	|	|	|	0.00
17.417	0.00	0.00	0.000	O	|	|	|	|	0.00
17.500	0.00	0.00	0.000	O	|	|	|	|	0.00
17.583	0.00	0.00	0.000	O	|	|	|	|	0.00
17.667	0.00	0.00	0.000	O	|	|	|	|	0.00
17.750	0.00	0.00	0.000	O	|	|	|	|	0.00
17.833	0.00	0.00	0.000	O	|	|	|	|	0.00
17.917	0.00	0.00	0.000	O	|	|	|	|	0.00
18.000	0.00	0.00	0.000	O	|	|	|	|	0.00
18.083	0.00	0.00	0.000	O	|	|	|	|	0.00
18.167	0.00	0.00	0.000	O	|	|	|	|	0.00
18.250	0.00	0.00	0.000	O	|	|	|	|	0.00
18.333	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 220
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)

```
      Total volume =       0.255 (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: 10/28/24

DEXTER VILLAGE
AREA A
2-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte

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

Number of intervals = 40
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5.070 (CFS)
Total volume = 0.428 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 40
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.3	2.54	3.80	5.07	Depth (Ft.)
0.083	0.32	0.01	0.001	O I	|	|	|	|	0.01
0.167	0.66	0.02	0.004	O I	|	|	|	|	0.05
0.250	0.69	0.05	0.009	O I	|	|	|	|	0.11
0.333	0.76	0.07	0.013	O I	|	|	|	|	0.16
0.417	0.87	0.10	0.018	O I	|	|	|	|	0.22
0.500	0.96	0.13	0.024	O I	|	|	|	|	0.29
0.583	0.98	0.16	0.030	|O I	|	|	|	|	0.36
0.667	0.99	0.19	0.035	|O I	|	|	|	|	0.42
0.750	1.06	0.23	0.041	|O I	|	|	|	|	0.49
0.833	1.00	0.26	0.046	|O I	|	|	|	|	0.56
0.917	0.95	0.28	0.051	|O I	|	|	|	|	0.61
1.000	1.01	0.31	0.056	|O I	|	|	|	|	0.67
1.083	1.16	0.34	0.061	| O I	|	|	|	|	0.73
1.167	1.28	0.37	0.067	| O I	|	|	|	|	0.81
1.250	1.30	0.40	0.073	| O I	|	|	|	|	0.88
1.333	1.27	0.44	0.079	| O I	|	|	|	|	0.95
1.417	1.36	0.46	0.085	| O I	|	|	|	|	1.01
1.500	1.54	0.46	0.092	| O |I	|	|	|	|	1.06
1.583	1.52	0.46	0.099	| O |I	|	|	|	|	1.12
1.667	1.53	0.46	0.107	| O |I	|	|	|	|	1.17
1.750	1.75	0.46	0.115	| O | I	|	|	|	|	1.23
1.833	1.87	0.46	0.124	| O | I	|	|	|	|	1.30
1.917	1.81	0.46	0.133	| O | I	|	|	|	|	1.36
2.000	1.78	0.46	0.143	| O | I	|	|	|	|	1.43
2.083	1.82	0.46	0.152	| O | I	|	|	|	|	1.50
2.167	2.12	0.46	0.162	| O | I	|	|	|	|	1.57
2.250	2.65	0.46	0.175	| O | I	|	|	|	|	1.67
2.333	2.56	0.46	0.190	| O | I	|	|	|	|	1.78
2.417	3.20	0.46	0.207	| O | I	|	|	|	|	1.90
2.500	4.39	0.46	0.230	| O | I	|	|	|	|	2.06
2.583	5.07	0.46	0.259	| O | I	|	|	|	|	2.28
2.667	4.75	0.46	0.290	| O | I	|	|	|	|	2.50
2.750	2.98	0.46	0.313	| O | I	|	|	|	|	2.67
2.833	1.63	0.46	0.326	| O | I	|	|	|	|	2.76
2.917	1.27	0.46	0.333	| O | I	|	|	|	|	2.81
3.000	0.84	0.46	0.337	| O I	|	|	|	|	2.84
3.083	0.32	0.46	0.338	| O	|	|	|	|	2.84
3.167	0.09	0.46	0.336	I O	|	|	|	|	2.83
3.250	0.03	0.46	0.333	I O	|	|	|	|	2.81
3.333	0.01	0.46	0.330	I O	|	|	|	|	2.79
3.417	0.00	0.46	0.327	I O	|	|	|	|	2.77
3.500	0.00	0.46	0.324	I O	|	|	|	|	2.74
3.583	0.00	0.46	0.321	I O	|	|	|	|	2.72
3.667	0.00	0.46	0.318	I O	|	|	|	|	2.70
3.750	0.00	0.46	0.315	I O	|	|	|	|	2.68

3.833	0.00	0.46	0.311	I	O	|	|	|	| 2.65
3.917	0.00	0.46	0.308	I	O	|	|	|	| 2.63
4.000	0.00	0.46	0.305	I	O	|	|	|	| 2.61
4.083	0.00	0.46	0.302	I	O	|	|	|	| 2.58
4.167	0.00	0.46	0.299	I	O	|	|	|	| 2.56
4.250	0.00	0.46	0.296	I	O	|	|	|	| 2.54
4.333	0.00	0.46	0.292	I	O	|	|	|	| 2.52
4.417	0.00	0.46	0.289	I	O	|	|	|	| 2.49
4.500	0.00	0.46	0.286	I	O	|	|	|	| 2.47
4.583	0.00	0.46	0.283	I	O	|	|	|	| 2.45
4.667	0.00	0.46	0.280	I	O	|	|	|	| 2.42
4.750	0.00	0.46	0.277	I	O	|	|	|	| 2.40
4.833	0.00	0.46	0.273	I	O	|	|	|	| 2.38
4.917	0.00	0.46	0.270	I	O	|	|	|	| 2.35
5.000	0.00	0.46	0.267	I	O	|	|	|	| 2.33
5.083	0.00	0.46	0.264	I	O	|	|	|	| 2.31
5.167	0.00	0.46	0.261	I	O	|	|	|	| 2.29
5.250	0.00	0.46	0.258	I	O	|	|	|	| 2.26
5.333	0.00	0.46	0.254	I	O	|	|	|	| 2.24
5.417	0.00	0.46	0.251	I	O	|	|	|	| 2.22
5.500	0.00	0.46	0.248	I	O	|	|	|	| 2.19
5.583	0.00	0.46	0.245	I	O	|	|	|	| 2.17
5.667	0.00	0.46	0.242	I	O	|	|	|	| 2.15
5.750	0.00	0.46	0.239	I	O	|	|	|	| 2.13
5.833	0.00	0.46	0.235	I	O	|	|	|	| 2.10
5.917	0.00	0.46	0.232	I	O	|	|	|	| 2.08
6.000	0.00	0.46	0.229	I	O	|	|	|	| 2.06
6.083	0.00	0.46	0.226	I	O	|	|	|	| 2.03
6.167	0.00	0.46	0.223	I	O	|	|	|	| 2.01
6.250	0.00	0.46	0.220	I	O	|	|	|	| 1.99
6.333	0.00	0.46	0.216	I	O	|	|	|	| 1.97
6.417	0.00	0.46	0.213	I	O	|	|	|	| 1.94
6.500	0.00	0.46	0.210	I	O	|	|	|	| 1.92
6.583	0.00	0.46	0.207	I	O	|	|	|	| 1.90
6.667	0.00	0.46	0.204	I	O	|	|	|	| 1.87
6.750	0.00	0.46	0.201	I	O	|	|	|	| 1.85
6.833	0.00	0.46	0.197	I	O	|	|	|	| 1.83
6.917	0.00	0.46	0.194	I	O	|	|	|	| 1.80
7.000	0.00	0.46	0.191	I	O	|	|	|	| 1.78
7.083	0.00	0.46	0.188	I	O	|	|	|	| 1.76
7.167	0.00	0.46	0.185	I	O	|	|	|	| 1.74
7.250	0.00	0.46	0.182	I	O	|	|	|	| 1.71
7.333	0.00	0.46	0.178	I	O	|	|	|	| 1.69
7.417	0.00	0.46	0.175	I	O	|	|	|	| 1.67
7.500	0.00	0.46	0.172	I	O	|	|	|	| 1.64
7.583	0.00	0.46	0.169	I	O	|	|	|	| 1.62
7.667	0.00	0.46	0.166	I	O	|	|	|	| 1.60
7.750	0.00	0.46	0.163	I	O	|	|	|	| 1.58
7.833	0.00	0.46	0.159	I	O	|	|	|	| 1.55
7.917	0.00	0.46	0.156	I	O	|	|	|	| 1.53
8.000	0.00	0.46	0.153	I	O	|	|	|	| 1.51
8.083	0.00	0.46	0.150	I	O	|	|	|	| 1.48
8.167	0.00	0.46	0.147	I	O	|	|	|	| 1.46
8.250	0.00	0.46	0.144	I	O	|	|	|	| 1.44
8.333	0.00	0.46	0.140	I	O	|	|	|	| 1.42
8.417	0.00	0.46	0.137	I	O	|	|	|	| 1.39
8.500	0.00	0.46	0.134	I	O	|	|	|	| 1.37
8.583	0.00	0.46	0.131	I	O	|	|	|	| 1.35
8.667	0.00	0.46	0.128	I	O	|	|	|	| 1.32
8.750	0.00	0.46	0.125	I	O	|	|	|	| 1.30

8.833	0.00	0.46	0.121	I O	|	|	|	1.28
8.917	0.00	0.46	0.118	I O	|	|	|	1.25
9.000	0.00	0.46	0.115	I O	|	|	|	1.23
9.083	0.00	0.46	0.112	I O	|	|	|	1.21
9.167	0.00	0.46	0.109	I O	|	|	|	1.19
9.250	0.00	0.46	0.106	I O	|	|	|	1.16
9.333	0.00	0.46	0.102	I O	|	|	|	1.14
9.417	0.00	0.46	0.099	I O	|	|	|	1.12
9.500	0.00	0.46	0.096	I O	|	|	|	1.09
9.583	0.00	0.46	0.093	I O	|	|	|	1.07
9.667	0.00	0.46	0.090	I O	|	|	|	1.05
9.750	0.00	0.46	0.087	I O	|	|	|	1.03
9.833	0.00	0.46	0.083	I O	|	|	|	1.00
9.917	0.00	0.44	0.080	I O	|	|	|	0.97
10.000	0.00	0.43	0.077	I O	|	|	|	0.93
10.083	0.00	0.41	0.074	I O	|	|	|	0.90
10.167	0.00	0.40	0.072	I O	|	|	|	0.86
10.250	0.00	0.38	0.069	I O	|	|	|	0.83
10.333	0.00	0.37	0.066	I O	|	|	|	0.80
10.417	0.00	0.35	0.064	I O	|	|	|	0.77
10.500	0.00	0.34	0.061	I O	|	|	|	0.74
10.583	0.00	0.33	0.059	I O	|	|	|	0.71
10.667	0.00	0.32	0.057	IO	|	|	|	0.69
10.750	0.00	0.30	0.055	IO	|	|	|	0.66
10.833	0.00	0.29	0.053	IO	|	|	|	0.64
10.917	0.00	0.28	0.051	IO	|	|	|	0.61
11.000	0.00	0.27	0.049	IO	|	|	|	0.59
11.083	0.00	0.26	0.047	IO	|	|	|	0.57
11.167	0.00	0.25	0.045	IO	|	|	|	0.55
11.250	0.00	0.24	0.044	IO	|	|	|	0.52
11.333	0.00	0.23	0.042	IO	|	|	|	0.51
11.417	0.00	0.22	0.040	IO	|	|	|	0.49
11.500	0.00	0.22	0.039	IO	|	|	|	0.47
11.583	0.00	0.21	0.037	IO	|	|	|	0.45
11.667	0.00	0.20	0.036	IO	|	|	|	0.43
11.750	0.00	0.19	0.035	IO	|	|	|	0.42
11.833	0.00	0.18	0.033	IO	|	|	|	0.40
11.917	0.00	0.18	0.032	IO	|	|	|	0.39
12.000	0.00	0.17	0.031	IO	|	|	|	0.37
12.083	0.00	0.16	0.030	IO	|	|	|	0.36
12.167	0.00	0.16	0.029	IO	|	|	|	0.34
12.250	0.00	0.15	0.028	O	|	|	|	0.33
12.333	0.00	0.15	0.027	O	|	|	|	0.32
12.417	0.00	0.14	0.026	O	|	|	|	0.31
12.500	0.00	0.14	0.025	O	|	|	|	0.30
12.583	0.00	0.13	0.024	O	|	|	|	0.28
12.667	0.00	0.13	0.023	O	|	|	|	0.27
12.750	0.00	0.12	0.022	O	|	|	|	0.26
12.833	0.00	0.12	0.021	O	|	|	|	0.25
12.917	0.00	0.11	0.020	O	|	|	|	0.24
13.000	0.00	0.11	0.020	O	|	|	|	0.24
13.083	0.00	0.10	0.019	O	|	|	|	0.23
13.167	0.00	0.10	0.018	O	|	|	|	0.22
13.250	0.00	0.10	0.017	O	|	|	|	0.21
13.333	0.00	0.09	0.017	O	|	|	|	0.20
13.417	0.00	0.09	0.016	O	|	|	|	0.19
13.500	0.00	0.09	0.016	O	|	|	|	0.19
13.583	0.00	0.08	0.015	O	|	|	|	0.18
13.667	0.00	0.08	0.014	O	|	|	|	0.17
13.750	0.00	0.08	0.014	O	|	|	|	0.17

13.833	0.00	0.07	0.013	O	|	|	|	0.16
13.917	0.00	0.07	0.013	O	|	|	|	0.15
14.000	0.00	0.07	0.012	O	|	|	|	0.15
14.083	0.00	0.07	0.012	O	|	|	|	0.14
14.167	0.00	0.06	0.011	O	|	|	|	0.14
14.250	0.00	0.06	0.011	O	|	|	|	0.13
14.333	0.00	0.06	0.011	O	|	|	|	0.13
14.417	0.00	0.06	0.010	O	|	|	|	0.12
14.500	0.00	0.05	0.010	O	|	|	|	0.12
14.583	0.00	0.05	0.009	O	|	|	|	0.11
14.667	0.00	0.05	0.009	O	|	|	|	0.11
14.750	0.00	0.05	0.009	O	|	|	|	0.11
14.833	0.00	0.05	0.008	O	|	|	|	0.10
14.917	0.00	0.05	0.008	O	|	|	|	0.10
15.000	0.00	0.04	0.008	O	|	|	|	0.09
15.083	0.00	0.04	0.008	O	|	|	|	0.09
15.167	0.00	0.04	0.007	O	|	|	|	0.09
15.250	0.00	0.04	0.007	O	|	|	|	0.08
15.333	0.00	0.04	0.007	O	|	|	|	0.08
15.417	0.00	0.04	0.006	O	|	|	|	0.08
15.500	0.00	0.03	0.006	O	|	|	|	0.07
15.583	0.00	0.03	0.006	O	|	|	|	0.07
15.667	0.00	0.03	0.006	O	|	|	|	0.07
15.750	0.00	0.03	0.006	O	|	|	|	0.07
15.833	0.00	0.03	0.005	O	|	|	|	0.06
15.917	0.00	0.03	0.005	O	|	|	|	0.06
16.000	0.00	0.03	0.005	O	|	|	|	0.06
16.083	0.00	0.03	0.005	O	|	|	|	0.06
16.167	0.00	0.03	0.005	O	|	|	|	0.06
16.250	0.00	0.02	0.004	O	|	|	|	0.05
16.333	0.00	0.02	0.004	O	|	|	|	0.05
16.417	0.00	0.02	0.004	O	|	|	|	0.05
16.500	0.00	0.02	0.004	O	|	|	|	0.05
16.583	0.00	0.02	0.004	O	|	|	|	0.05
16.667	0.00	0.02	0.004	O	|	|	|	0.04
16.750	0.00	0.02	0.004	O	|	|	|	0.04
16.833	0.00	0.02	0.003	O	|	|	|	0.04
16.917	0.00	0.02	0.003	O	|	|	|	0.04
17.000	0.00	0.02	0.003	O	|	|	|	0.04
17.083	0.00	0.02	0.003	O	|	|	|	0.04
17.167	0.00	0.02	0.003	O	|	|	|	0.03
17.250	0.00	0.02	0.003	O	|	|	|	0.03
17.333	0.00	0.01	0.003	O	|	|	|	0.03
17.417	0.00	0.01	0.003	O	|	|	|	0.03
17.500	0.00	0.01	0.002	O	|	|	|	0.03
17.583	0.00	0.01	0.002	O	|	|	|	0.03
17.667	0.00	0.01	0.002	O	|	|	|	0.03
17.750	0.00	0.01	0.002	O	|	|	|	0.03
17.833	0.00	0.01	0.002	O	|	|	|	0.03
17.917	0.00	0.01	0.002	O	|	|	|	0.02
18.000	0.00	0.01	0.002	O	|	|	|	0.02
18.083	0.00	0.01	0.002	O	|	|	|	0.02
18.167	0.00	0.01	0.002	O	|	|	|	0.02
18.250	0.00	0.01	0.002	O	|	|	|	0.02
18.333	0.00	0.01	0.002	O	|	|	|	0.02
18.417	0.00	0.01	0.002	O	|	|	|	0.02
18.500	0.00	0.01	0.002	O	|	|	|	0.02
18.583	0.00	0.01	0.002	O	|	|	|	0.02
18.667	0.00	0.01	0.001	O	|	|	|	0.02
18.750	0.00	0.01	0.001	O	|	|	|	0.02

18.833	0.00	0.01	0.001	O	|	|	|	|	0.02
18.917	0.00	0.01	0.001	O	|	|	|	|	0.02
19.000	0.00	0.01	0.001	O	|	|	|	|	0.02
19.083	0.00	0.01	0.001	O	|	|	|	|	0.01
19.167	0.00	0.01	0.001	O	|	|	|	|	0.01
19.250	0.00	0.01	0.001	O	|	|	|	|	0.01
19.333	0.00	0.01	0.001	O	|	|	|	|	0.01
19.417	0.00	0.01	0.001	O	|	|	|	|	0.01
19.500	0.00	0.01	0.001	O	|	|	|	|	0.01
19.583	0.00	0.01	0.001	O	|	|	|	|	0.01
19.667	0.00	0.01	0.001	O	|	|	|	|	0.01
19.750	0.00	0.00	0.001	O	|	|	|	|	0.01
19.833	0.00	0.00	0.001	O	|	|	|	|	0.01
19.917	0.00	0.00	0.001	O	|	|	|	|	0.01
20.000	0.00	0.00	0.001	O	|	|	|	|	0.01
20.083	0.00	0.00	0.001	O	|	|	|	|	0.01
20.167	0.00	0.00	0.001	O	|	|	|	|	0.01
20.250	0.00	0.00	0.001	O	|	|	|	|	0.01
20.333	0.00	0.00	0.001	O	|	|	|	|	0.01
20.417	0.00	0.00	0.001	O	|	|	|	|	0.01
20.500	0.00	0.00	0.001	O	|	|	|	|	0.01
20.583	0.00	0.00	0.001	O	|	|	|	|	0.01
20.667	0.00	0.00	0.001	O	|	|	|	|	0.01
20.750	0.00	0.00	0.001	O	|	|	|	|	0.01
20.833	0.00	0.00	0.001	O	|	|	|	|	0.01
20.917	0.00	0.00	0.001	O	|	|	|	|	0.01
21.000	0.00	0.00	0.001	O	|	|	|	|	0.01
21.083	0.00	0.00	0.000	O	|	|	|	|	0.01
21.167	0.00	0.00	0.000	O	|	|	|	|	0.01
21.250	0.00	0.00	0.000	O	|	|	|	|	0.01
21.333	0.00	0.00	0.000	O	|	|	|	|	0.01
21.417	0.00	0.00	0.000	O	|	|	|	|	0.00
21.500	0.00	0.00	0.000	O	|	|	|	|	0.00
21.583	0.00	0.00	0.000	O	|	|	|	|	0.00
21.667	0.00	0.00	0.000	O	|	|	|	|	0.00
21.750	0.00	0.00	0.000	O	|	|	|	|	0.00
21.833	0.00	0.00	0.000	O	|	|	|	|	0.00
21.917	0.00	0.00	0.000	O	|	|	|	|	0.00
22.000	0.00	0.00	0.000	O	|	|	|	|	0.00
22.083	0.00	0.00	0.000	O	|	|	|	|	0.00
22.167	0.00	0.00	0.000	O	|	|	|	|	0.00
22.250	0.00	0.00	0.000	O	|	|	|	|	0.00
22.333	0.00	0.00	0.000	O	|	|	|	|	0.00
22.417	0.00	0.00	0.000	O	|	|	|	|	0.00
22.500	0.00	0.00	0.000	O	|	|	|	|	0.00
22.583	0.00	0.00	0.000	O	|	|	|	|	0.00
22.667	0.00	0.00	0.000	O	|	|	|	|	0.00
22.750	0.00	0.00	0.000	O	|	|	|	|	0.00
22.833	0.00	0.00	0.000	O	|	|	|	|	0.00
22.917	0.00	0.00	0.000	O	|	|	|	|	0.00
23.000	0.00	0.00	0.000	O	|	|	|	|	0.00
23.083	0.00	0.00	0.000	O	|	|	|	|	0.00
23.167	0.00	0.00	0.000	O	|	|	|	|	0.00
23.250	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 279
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.428 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
2-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 76
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.674 (CFS)
Total volume = 0.590 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 76
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.2 2.34 3.51 4.67	Depth (Ft.)
0.083	0.17	0.00	0.001	OI | | | |	0.01
0.167	0.39	0.01	0.002	O I | | | |	0.03
0.250	0.47	0.03	0.005	O I | | | |	0.06
0.333	0.49	0.05	0.008	O I | | | |	0.10
0.417	0.50	0.06	0.011	O I | | | |	0.14
0.500	0.54	0.08	0.014	O I | | | |	0.17
0.583	0.58	0.10	0.018	O I | | | |	0.21
0.667	0.58	0.12	0.021	O I | | | |	0.25
0.750	0.59	0.13	0.024	O I | | | |	0.29
0.833	0.59	0.15	0.027	|O I | | | |	0.33
0.917	0.59	0.17	0.030	|O I | | | |	0.36
1.000	0.62	0.18	0.033	|O I | | | |	0.40
1.083	0.66	0.20	0.036	|O I | | | |	0.44
1.167	0.67	0.22	0.039	|O I | | | |	0.47
1.250	0.67	0.23	0.042	|O I | | | |	0.51
1.333	0.67	0.25	0.045	|O I | | | |	0.55
1.417	0.67	0.27	0.048	|O I | | | |	0.58
1.500	0.67	0.28	0.051	|O I | | | |	0.61
1.583	0.67	0.30	0.054	| O I | | | |	0.64
1.667	0.67	0.31	0.056	| O I | | | |	0.68
1.750	0.67	0.32	0.058	| O I | | | |	0.70
1.833	0.67	0.34	0.061	| O I | | | |	0.73
1.917	0.67	0.35	0.063	| O I | | | |	0.76
2.000	0.71	0.36	0.065	| O I | | | |	0.79
2.083	0.71	0.38	0.068	| O I | | | |	0.82
2.167	0.71	0.39	0.070	| O I | | | |	0.84
2.250	0.75	0.40	0.072	| O I | | | |	0.87
2.333	0.75	0.41	0.075	| O I | | | |	0.90
2.417	0.75	0.43	0.077	| O I | | | |	0.93
2.500	0.76	0.44	0.079	| O I | | | |	0.95
2.583	0.76	0.45	0.081	| O I | | | |	0.98
2.667	0.76	0.46	0.083	| O I | | | |	1.00
2.750	0.79	0.46	0.086	| O I | | | |	1.02
2.833	0.83	0.46	0.088	| O I | | | |	1.04
2.917	0.84	0.46	0.091	| O I | | | |	1.05
3.000	0.84	0.46	0.093	| O I | | | |	1.07
3.083	0.84	0.46	0.096	| O I | | | |	1.09
3.167	0.87	0.46	0.098	| O I | | | |	1.11
3.250	0.91	0.46	0.101	| O I | | | |	1.13
3.333	0.92	0.46	0.105	| O I | | | |	1.16
3.417	0.96	0.46	0.108	| O I | | | |	1.18
3.500	1.03	0.46	0.112	| O I| | | |	1.21
3.583	1.11	0.46	0.116	| O I| | | |	1.24
3.667	1.16	0.46	0.120	| O I| | | |	1.27
3.750	1.20	0.46	0.125	| O I | | |	1.31

3.833	1.25	0.46	0.131	|	O	I	|	|	1.34
3.917	1.29	0.46	0.136	|	O	I	|	|	1.38
4.000	1.33	0.46	0.142	|	O	|I	|	|	1.43
4.083	1.37	0.46	0.148	|	O	|I	|	|	1.47
4.167	1.45	0.46	0.155	|	O	|I	|	|	1.52
4.250	1.53	0.46	0.162	|	O	| I	|	|	1.57
4.333	1.61	0.46	0.169	|	O	| I	|	|	1.63
4.417	1.70	0.46	0.178	|	O	| I	|	|	1.68
4.500	1.75	0.46	0.186	|	O	| I	|	|	1.75
4.583	1.79	0.46	0.195	|	O	| I	|	|	1.81
4.667	1.87	0.46	0.205	|	O	| I	|	|	1.88
4.750	1.95	0.46	0.215	|	O	| I	|	|	1.95
4.833	2.00	0.46	0.225	|	O	| I	|	|	2.03
4.917	2.04	0.46	0.236	|	O	| I	|	|	2.11
5.000	2.12	0.46	0.247	|	O	| I	|	|	2.19
5.083	2.34	0.46	0.259	|	O	| I	|	|	2.28
5.167	2.74	0.46	0.274	|	O	| I	|	|	2.38
5.250	3.16	0.46	0.291	|	O	| I	|	|	2.50
5.333	3.51	0.46	0.311	|	O	| I	|	|	2.65
5.417	3.95	0.46	0.333	|	O	| I	|	|	2.81
5.500	4.67	0.46	0.360	|	O	| I	|	|	3.00
5.583	3.66	0.46	0.385	|	O	| I	|	|	3.19
5.667	1.75	0.46	0.401	|	O	| I	|	|	3.30
5.750	0.97	0.46	0.407	|	O I	|	|	|	3.34
5.833	0.62	0.46	0.409	|	OI	|	|	|	3.36
5.917	0.39	0.46	0.409	|	IO	|	|	|	3.36
6.000	0.25	0.46	0.408	|I	O	|	|	|	3.36
6.083	0.12	0.46	0.407	I	O	|	|	|	3.34
6.167	0.03	0.46	0.404	I	O	|	|	|	3.32
6.250	0.01	0.46	0.401	I	O	|	|	|	3.30
6.333	0.00	0.46	0.398	I	O	|	|	|	3.28
6.417	0.00	0.46	0.395	I	O	|	|	|	3.26
6.500	0.00	0.46	0.391	I	O	|	|	|	3.23
6.583	0.00	0.46	0.388	I	O	|	|	|	3.21
6.667	0.00	0.46	0.385	I	O	|	|	|	3.19
6.750	0.00	0.46	0.382	I	O	|	|	|	3.16
6.833	0.00	0.46	0.379	I	O	|	|	|	3.14
6.917	0.00	0.46	0.376	I	O	|	|	|	3.12
7.000	0.00	0.46	0.372	I	O	|	|	|	3.09
7.083	0.00	0.46	0.369	I	O	|	|	|	3.07
7.167	0.00	0.46	0.366	I	O	|	|	|	3.05
7.250	0.00	0.46	0.363	I	O	|	|	|	3.03
7.333	0.00	0.46	0.360	I	O	|	|	|	3.00
7.417	0.00	0.46	0.357	I	O	|	|	|	2.98
7.500	0.00	0.46	0.353	I	O	|	|	|	2.96
7.583	0.00	0.46	0.350	I	O	|	|	|	2.93
7.667	0.00	0.46	0.347	I	O	|	|	|	2.91
7.750	0.00	0.46	0.344	I	O	|	|	|	2.89
7.833	0.00	0.46	0.341	I	O	|	|	|	2.87
7.917	0.00	0.46	0.338	I	O	|	|	|	2.84
8.000	0.00	0.46	0.334	I	O	|	|	|	2.82
8.083	0.00	0.46	0.331	I	O	|	|	|	2.80
8.167	0.00	0.46	0.328	I	O	|	|	|	2.77
8.250	0.00	0.46	0.325	I	O	|	|	|	2.75
8.333	0.00	0.46	0.322	I	O	|	|	|	2.73
8.417	0.00	0.46	0.319	I	O	|	|	|	2.71
8.500	0.00	0.46	0.315	I	O	|	|	|	2.68
8.583	0.00	0.46	0.312	I	O	|	|	|	2.66
8.667	0.00	0.46	0.309	I	O	|	|	|	2.64
8.750	0.00	0.46	0.306	I	O	|	|	|	2.61

8.833	0.00	0.46	0.303	I	O	|	|	|	|	2.59
8.917	0.00	0.46	0.300	I	O	|	|	|	|	2.57
9.000	0.00	0.46	0.296	I	O	|	|	|	|	2.54
9.083	0.00	0.46	0.293	I	O	|	|	|	|	2.52
9.167	0.00	0.46	0.290	I	O	|	|	|	|	2.50
9.250	0.00	0.46	0.287	I	O	|	|	|	|	2.48
9.333	0.00	0.46	0.284	I	O	|	|	|	|	2.45
9.417	0.00	0.46	0.281	I	O	|	|	|	|	2.43
9.500	0.00	0.46	0.277	I	O	|	|	|	|	2.41
9.583	0.00	0.46	0.274	I	O	|	|	|	|	2.38
9.667	0.00	0.46	0.271	I	O	|	|	|	|	2.36
9.750	0.00	0.46	0.268	I	O	|	|	|	|	2.34
9.833	0.00	0.46	0.265	I	O	|	|	|	|	2.32
9.917	0.00	0.46	0.262	I	O	|	|	|	|	2.29
10.000	0.00	0.46	0.258	I	O	|	|	|	|	2.27
10.083	0.00	0.46	0.255	I	O	|	|	|	|	2.25
10.167	0.00	0.46	0.252	I	O	|	|	|	|	2.22
10.250	0.00	0.46	0.249	I	O	|	|	|	|	2.20
10.333	0.00	0.46	0.246	I	O	|	|	|	|	2.18
10.417	0.00	0.46	0.243	I	O	|	|	|	|	2.15
10.500	0.00	0.46	0.239	I	O	|	|	|	|	2.13
10.583	0.00	0.46	0.236	I	O	|	|	|	|	2.11
10.667	0.00	0.46	0.233	I	O	|	|	|	|	2.09
10.750	0.00	0.46	0.230	I	O	|	|	|	|	2.06
10.833	0.00	0.46	0.227	I	O	|	|	|	|	2.04
10.917	0.00	0.46	0.224	I	O	|	|	|	|	2.02
11.000	0.00	0.46	0.220	I	O	|	|	|	|	1.99
11.083	0.00	0.46	0.217	I	O	|	|	|	|	1.97
11.167	0.00	0.46	0.214	I	O	|	|	|	|	1.95
11.250	0.00	0.46	0.211	I	O	|	|	|	|	1.93
11.333	0.00	0.46	0.208	I	O	|	|	|	|	1.90
11.417	0.00	0.46	0.205	I	O	|	|	|	|	1.88
11.500	0.00	0.46	0.201	I	O	|	|	|	|	1.86
11.583	0.00	0.46	0.198	I	O	|	|	|	|	1.83
11.667	0.00	0.46	0.195	I	O	|	|	|	|	1.81
11.750	0.00	0.46	0.192	I	O	|	|	|	|	1.79
11.833	0.00	0.46	0.189	I	O	|	|	|	|	1.77
11.917	0.00	0.46	0.186	I	O	|	|	|	|	1.74
12.000	0.00	0.46	0.182	I	O	|	|	|	|	1.72
12.083	0.00	0.46	0.179	I	O	|	|	|	|	1.70
12.167	0.00	0.46	0.176	I	O	|	|	|	|	1.67
12.250	0.00	0.46	0.173	I	O	|	|	|	|	1.65
12.333	0.00	0.46	0.170	I	O	|	|	|	|	1.63
12.417	0.00	0.46	0.167	I	O	|	|	|	|	1.60
12.500	0.00	0.46	0.163	I	O	|	|	|	|	1.58
12.583	0.00	0.46	0.160	I	O	|	|	|	|	1.56
12.667	0.00	0.46	0.157	I	O	|	|	|	|	1.54
12.750	0.00	0.46	0.154	I	O	|	|	|	|	1.51
12.833	0.00	0.46	0.151	I	O	|	|	|	|	1.49
12.917	0.00	0.46	0.148	I	O	|	|	|	|	1.47
13.000	0.00	0.46	0.144	I	O	|	|	|	|	1.44
13.083	0.00	0.46	0.141	I	O	|	|	|	|	1.42
13.167	0.00	0.46	0.138	I	O	|	|	|	|	1.40
13.250	0.00	0.46	0.135	I	O	|	|	|	|	1.38
13.333	0.00	0.46	0.132	I	O	|	|	|	|	1.35
13.417	0.00	0.46	0.129	I	O	|	|	|	|	1.33
13.500	0.00	0.46	0.125	I	O	|	|	|	|	1.31
13.583	0.00	0.46	0.122	I	O	|	|	|	|	1.28
13.667	0.00	0.46	0.119	I	O	|	|	|	|	1.26
13.750	0.00	0.46	0.116	I	O	|	|	|	|	1.24

13.833	0.00	0.46	0.113	I O	|	|	|	1.21
13.917	0.00	0.46	0.110	I O	|	|	|	1.19
14.000	0.00	0.46	0.106	I O	|	|	|	1.17
14.083	0.00	0.46	0.103	I O	|	|	|	1.15
14.167	0.00	0.46	0.100	I O	|	|	|	1.12
14.250	0.00	0.46	0.097	I O	|	|	|	1.10
14.333	0.00	0.46	0.094	I O	|	|	|	1.08
14.417	0.00	0.46	0.091	I O	|	|	|	1.05
14.500	0.00	0.46	0.087	I O	|	|	|	1.03
14.583	0.00	0.46	0.084	I O	|	|	|	1.01
14.667	0.00	0.45	0.081	I O	|	|	|	0.98
14.750	0.00	0.43	0.078	I O	|	|	|	0.94
14.833	0.00	0.42	0.075	I O	|	|	|	0.90
14.917	0.00	0.40	0.072	I O	|	|	|	0.87
15.000	0.00	0.39	0.070	I O	|	|	|	0.84
15.083	0.00	0.37	0.067	I O	|	|	|	0.81
15.167	0.00	0.36	0.064	I O	|	|	|	0.78
15.250	0.00	0.34	0.062	I O	|	|	|	0.75
15.333	0.00	0.33	0.060	I O	|	|	|	0.72
15.417	0.00	0.32	0.057	I O	|	|	|	0.69
15.500	0.00	0.31	0.055	I O	|	|	|	0.67
15.583	0.00	0.30	0.053	I O	|	|	|	0.64
15.667	0.00	0.28	0.051	IO	|	|	|	0.62
15.750	0.00	0.27	0.049	IO	|	|	|	0.59
15.833	0.00	0.26	0.048	IO	|	|	|	0.57
15.917	0.00	0.25	0.046	IO	|	|	|	0.55
16.000	0.00	0.24	0.044	IO	|	|	|	0.53
16.083	0.00	0.23	0.042	IO	|	|	|	0.51
16.167	0.00	0.23	0.041	IO	|	|	|	0.49
16.250	0.00	0.22	0.039	IO	|	|	|	0.47
16.333	0.00	0.21	0.038	IO	|	|	|	0.46
16.417	0.00	0.20	0.036	IO	|	|	|	0.44
16.500	0.00	0.19	0.035	IO	|	|	|	0.42
16.583	0.00	0.19	0.034	IO	|	|	|	0.41
16.667	0.00	0.18	0.032	IO	|	|	|	0.39
16.750	0.00	0.17	0.031	IO	|	|	|	0.38
16.833	0.00	0.17	0.030	IO	|	|	|	0.36
16.917	0.00	0.16	0.029	IO	|	|	|	0.35
17.000	0.00	0.15	0.028	IO	|	|	|	0.34
17.083	0.00	0.15	0.027	IO	|	|	|	0.32
17.167	0.00	0.14	0.026	O	|	|	|	0.31
17.250	0.00	0.14	0.025	O	|	|	|	0.30
17.333	0.00	0.13	0.024	O	|	|	|	0.29
17.417	0.00	0.13	0.023	O	|	|	|	0.28
17.500	0.00	0.12	0.022	O	|	|	|	0.27
17.583	0.00	0.12	0.021	O	|	|	|	0.26
17.667	0.00	0.11	0.021	O	|	|	|	0.25
17.750	0.00	0.11	0.020	O	|	|	|	0.24
17.833	0.00	0.11	0.019	O	|	|	|	0.23
17.917	0.00	0.10	0.018	O	|	|	|	0.22
18.000	0.00	0.10	0.018	O	|	|	|	0.21
18.083	0.00	0.09	0.017	O	|	|	|	0.20
18.167	0.00	0.09	0.016	O	|	|	|	0.20
18.250	0.00	0.09	0.016	O	|	|	|	0.19
18.333	0.00	0.08	0.015	O	|	|	|	0.18
18.417	0.00	0.08	0.015	O	|	|	|	0.18
18.500	0.00	0.08	0.014	O	|	|	|	0.17
18.583	0.00	0.07	0.013	O	|	|	|	0.16
18.667	0.00	0.07	0.013	O	|	|	|	0.16
18.750	0.00	0.07	0.012	O	|	|	|	0.15

18.833	0.00	0.07	0.012	O	|	|	|	0.14
18.917	0.00	0.06	0.012	O	|	|	|	0.14
19.000	0.00	0.06	0.011	O	|	|	|	0.13
19.083	0.00	0.06	0.011	O	|	|	|	0.13
19.167	0.00	0.06	0.010	O	|	|	|	0.12
19.250	0.00	0.06	0.010	O	|	|	|	0.12
19.333	0.00	0.05	0.010	O	|	|	|	0.12
19.417	0.00	0.05	0.009	O	|	|	|	0.11
19.500	0.00	0.05	0.009	O	|	|	|	0.11
19.583	0.00	0.05	0.009	O	|	|	|	0.10
19.667	0.00	0.05	0.008	O	|	|	|	0.10
19.750	0.00	0.04	0.008	O	|	|	|	0.10
19.833	0.00	0.04	0.008	O	|	|	|	0.09
19.917	0.00	0.04	0.007	O	|	|	|	0.09
20.000	0.00	0.04	0.007	O	|	|	|	0.08
20.083	0.00	0.04	0.007	O	|	|	|	0.08
20.167	0.00	0.04	0.007	O	|	|	|	0.08
20.250	0.00	0.03	0.006	O	|	|	|	0.08
20.333	0.00	0.03	0.006	O	|	|	|	0.07
20.417	0.00	0.03	0.006	O	|	|	|	0.07
20.500	0.00	0.03	0.006	O	|	|	|	0.07
20.583	0.00	0.03	0.005	O	|	|	|	0.06
20.667	0.00	0.03	0.005	O	|	|	|	0.06
20.750	0.00	0.03	0.005	O	|	|	|	0.06
20.833	0.00	0.03	0.005	O	|	|	|	0.06
20.917	0.00	0.03	0.005	O	|	|	|	0.06
21.000	0.00	0.02	0.004	O	|	|	|	0.05
21.083	0.00	0.02	0.004	O	|	|	|	0.05
21.167	0.00	0.02	0.004	O	|	|	|	0.05
21.250	0.00	0.02	0.004	O	|	|	|	0.05
21.333	0.00	0.02	0.004	O	|	|	|	0.05
21.417	0.00	0.02	0.004	O	|	|	|	0.04
21.500	0.00	0.02	0.004	O	|	|	|	0.04
21.583	0.00	0.02	0.003	O	|	|	|	0.04
21.667	0.00	0.02	0.003	O	|	|	|	0.04
21.750	0.00	0.02	0.003	O	|	|	|	0.04
21.833	0.00	0.02	0.003	O	|	|	|	0.04
21.917	0.00	0.02	0.003	O	|	|	|	0.04
22.000	0.00	0.02	0.003	O	|	|	|	0.03
22.083	0.00	0.02	0.003	O	|	|	|	0.03
22.167	0.00	0.01	0.003	O	|	|	|	0.03
22.250	0.00	0.01	0.003	O	|	|	|	0.03
22.333	0.00	0.01	0.002	O	|	|	|	0.03
22.417	0.00	0.01	0.002	O	|	|	|	0.03
22.500	0.00	0.01	0.002	O	|	|	|	0.03
22.583	0.00	0.01	0.002	O	|	|	|	0.03
22.667	0.00	0.01	0.002	O	|	|	|	0.03
22.750	0.00	0.01	0.002	O	|	|	|	0.02
22.833	0.00	0.01	0.002	O	|	|	|	0.02
22.917	0.00	0.01	0.002	O	|	|	|	0.02
23.000	0.00	0.01	0.002	O	|	|	|	0.02
23.083	0.00	0.01	0.002	O	|	|	|	0.02
23.167	0.00	0.01	0.002	O	|	|	|	0.02
23.250	0.00	0.01	0.002	O	|	|	|	0.02
23.333	0.00	0.01	0.002	O	|	|	|	0.02
23.417	0.00	0.01	0.001	O	|	|	|	0.02
23.500	0.00	0.01	0.001	O	|	|	|	0.02
23.583	0.00	0.01	0.001	O	|	|	|	0.02
23.667	0.00	0.01	0.001	O	|	|	|	0.02
23.750	0.00	0.01	0.001	O	|	|	|	0.02

23.833	0.00	0.01	0.001	O	|	|	|	|	0.01
23.917	0.00	0.01	0.001	O	|	|	|	|	0.01
24.000	0.00	0.01	0.001	O	|	|	|	|	0.01
24.083	0.00	0.01	0.001	O	|	|	|	|	0.01
24.167	0.00	0.01	0.001	O	|	|	|	|	0.01
24.250	0.00	0.01	0.001	O	|	|	|	|	0.01
24.333	0.00	0.01	0.001	O	|	|	|	|	0.01
24.417	0.00	0.01	0.001	O	|	|	|	|	0.01
24.500	0.00	0.00	0.001	O	|	|	|	|	0.01
24.583	0.00	0.00	0.001	O	|	|	|	|	0.01
24.667	0.00	0.00	0.001	O	|	|	|	|	0.01
24.750	0.00	0.00	0.001	O	|	|	|	|	0.01
24.833	0.00	0.00	0.001	O	|	|	|	|	0.01
24.917	0.00	0.00	0.001	O	|	|	|	|	0.01
25.000	0.00	0.00	0.001	O	|	|	|	|	0.01
25.083	0.00	0.00	0.001	O	|	|	|	|	0.01
25.167	0.00	0.00	0.001	O	|	|	|	|	0.01
25.250	0.00	0.00	0.001	O	|	|	|	|	0.01
25.333	0.00	0.00	0.001	O	|	|	|	|	0.01
25.417	0.00	0.00	0.001	O	|	|	|	|	0.01
25.500	0.00	0.00	0.001	O	|	|	|	|	0.01
25.583	0.00	0.00	0.001	O	|	|	|	|	0.01
25.667	0.00	0.00	0.001	O	|	|	|	|	0.01
25.750	0.00	0.00	0.001	O	|	|	|	|	0.01
25.833	0.00	0.00	0.000	O	|	|	|	|	0.01
25.917	0.00	0.00	0.000	O	|	|	|	|	0.01
26.000	0.00	0.00	0.000	O	|	|	|	|	0.01
26.083	0.00	0.00	0.000	O	|	|	|	|	0.01
26.167	0.00	0.00	0.000	O	|	|	|	|	0.01
26.250	0.00	0.00	0.000	O	|	|	|	|	0.00
26.333	0.00	0.00	0.000	O	|	|	|	|	0.00
26.417	0.00	0.00	0.000	O	|	|	|	|	0.00
26.500	0.00	0.00	0.000	O	|	|	|	|	0.00
26.583	0.00	0.00	0.000	O	|	|	|	|	0.00
26.667	0.00	0.00	0.000	O	|	|	|	|	0.00
26.750	0.00	0.00	0.000	O	|	|	|	|	0.00
26.833	0.00	0.00	0.000	O	|	|	|	|	0.00
26.917	0.00	0.00	0.000	O	|	|	|	|	0.00
27.000	0.00	0.00	0.000	O	|	|	|	|	0.00
27.083	0.00	0.00	0.000	O	|	|	|	|	0.00
27.167	0.00	0.00	0.000	O	|	|	|	|	0.00
27.250	0.00	0.00	0.000	O	|	|	|	|	0.00
27.333	0.00	0.00	0.000	O	|	|	|	|	0.00
27.417	0.00	0.00	0.000	O	|	|	|	|	0.00
27.500	0.00	0.00	0.000	O	|	|	|	|	0.00
27.583	0.00	0.00	0.000	O	|	|	|	|	0.00
27.667	0.00	0.00	0.000	O	|	|	|	|	0.00
27.750	0.00	0.00	0.000	O	|	|	|	|	0.00
27.833	0.00	0.00	0.000	O	|	|	|	|	0.00
27.917	0.00	0.00	0.000	O	|	|	|	|	0.00
28.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 336
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.590 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
2-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.700 (CFS)
Total volume = 1.033 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.4	0.85	1.27	1.70	Depth (Ft.)
0.083	0.04	0.00	0.000	O	|	|	|	|	0.00
0.167	0.09	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.09	0.01	0.001	OI	|	|	|	|	0.01
0.333	0.12	0.01	0.002	O I	|	|	|	|	0.02
0.417	0.14	0.01	0.003	O I	|	|	|	|	0.03
0.500	0.15	0.02	0.004	O I	|	|	|	|	0.04
0.583	0.15	0.02	0.004	O I	|	|	|	|	0.05
0.667	0.15	0.03	0.005	O I	|	|	|	|	0.06
0.750	0.15	0.03	0.006	O I	|	|	|	|	0.07
0.833	0.17	0.04	0.007	O I	|	|	|	|	0.08
0.917	0.19	0.04	0.008	O I	|	|	|	|	0.09
1.000	0.20	0.05	0.009	O I	|	|	|	|	0.11
1.083	0.18	0.05	0.010	|O I	|	|	|	|	0.12
1.167	0.16	0.06	0.011	|OI	|	|	|	|	0.13
1.250	0.15	0.06	0.011	|OI	|	|	|	|	0.14
1.333	0.15	0.07	0.012	|OI	|	|	|	|	0.14
1.417	0.15	0.07	0.012	|OI	|	|	|	|	0.15
1.500	0.15	0.07	0.013	|OI	|	|	|	|	0.16
1.583	0.15	0.07	0.014	|OI	|	|	|	|	0.16
1.667	0.15	0.08	0.014	|OI	|	|	|	|	0.17
1.750	0.15	0.08	0.014	|OI	|	|	|	|	0.17
1.833	0.17	0.08	0.015	|O I	|	|	|	|	0.18
1.917	0.19	0.09	0.016	|O I	|	|	|	|	0.19
2.000	0.20	0.09	0.016	|O I	|	|	|	|	0.20
2.083	0.20	0.10	0.017	|O I	|	|	|	|	0.21
2.167	0.20	0.10	0.018	|O I	|	|	|	|	0.22
2.250	0.20	0.10	0.019	|O I	|	|	|	|	0.22
2.333	0.20	0.11	0.019	| OI	|	|	|	|	0.23
2.417	0.20	0.11	0.020	| OI	|	|	|	|	0.24
2.500	0.20	0.11	0.020	| OI	|	|	|	|	0.25
2.583	0.22	0.12	0.021	| O I	|	|	|	|	0.25
2.667	0.24	0.12	0.022	| O I	|	|	|	|	0.26
2.750	0.25	0.13	0.023	| O I	|	|	|	|	0.27
2.833	0.25	0.13	0.024	| O I	|	|	|	|	0.28
2.917	0.25	0.13	0.024	| O I	|	|	|	|	0.29
3.000	0.25	0.14	0.025	| O I	|	|	|	|	0.30
3.083	0.25	0.14	0.026	| O I	|	|	|	|	0.31
3.167	0.25	0.15	0.027	| O I	|	|	|	|	0.32
3.250	0.25	0.15	0.027	| O I	|	|	|	|	0.33
3.333	0.25	0.15	0.028	| O I	|	|	|	|	0.34
3.417	0.25	0.16	0.029	| O I	|	|	|	|	0.34
3.500	0.25	0.16	0.029	| OI	|	|	|	|	0.35
3.583	0.25	0.17	0.030	| OI	|	|	|	|	0.36
3.667	0.25	0.17	0.030	| OI	|	|	|	|	0.37
3.750	0.25	0.17	0.031	| OI	|	|	|	|	0.37

3.833	0.27	0.17	0.032	O I				0.38
3.917	0.29	0.18	0.032	O I				0.39
4.000	0.30	0.18	0.033	O I				0.40
4.083	0.30	0.19	0.034	O I				0.41
4.167	0.30	0.19	0.035	O I				0.42
4.250	0.30	0.20	0.035	O I				0.43
4.333	0.32	0.20	0.036	O I				0.43
4.417	0.34	0.20	0.037	O I				0.45
4.500	0.35	0.21	0.038	O I				0.46
4.583	0.35	0.22	0.039	O I				0.47
4.667	0.35	0.22	0.040	O I				0.48
4.750	0.35	0.23	0.041	O I				0.49
4.833	0.37	0.23	0.042	O I				0.50
4.917	0.39	0.24	0.043	O I				0.51
5.000	0.40	0.24	0.044	O I				0.53
5.083	0.36	0.25	0.045	O I				0.54
5.167	0.31	0.25	0.045	OI				0.54
5.250	0.31	0.25	0.046	OI				0.55
5.333	0.32	0.25	0.046	O I				0.55
5.417	0.34	0.26	0.046	O I				0.56
5.500	0.35	0.26	0.047	O I				0.57
5.583	0.37	0.26	0.048	O I				0.58
5.667	0.39	0.27	0.049	O I				0.58
5.750	0.40	0.27	0.049	O I				0.59
5.833	0.40	0.28	0.050	O I				0.61
5.917	0.40	0.28	0.051	O I				0.61
6.000	0.40	0.29	0.052	O I				0.62
6.083	0.42	0.29	0.053	O I				0.63
6.167	0.44	0.30	0.054	O I				0.65
6.250	0.45	0.30	0.055	O I				0.66
6.333	0.45	0.31	0.056	O I				0.67
6.417	0.45	0.31	0.057	O I				0.68
6.500	0.45	0.32	0.057	O I				0.69
6.583	0.47	0.32	0.058	O I				0.70
6.667	0.49	0.33	0.059	O I				0.72
6.750	0.50	0.34	0.061	O I				0.73
6.833	0.50	0.34	0.062	O I				0.74
6.917	0.50	0.35	0.063	O I				0.76
7.000	0.50	0.35	0.064	O I				0.77
7.083	0.50	0.36	0.065	O I				0.78
7.167	0.50	0.36	0.066	O I				0.79
7.250	0.50	0.37	0.067	O I				0.80
7.333	0.52	0.37	0.068	O I				0.81
7.417	0.54	0.38	0.069	O I				0.83
7.500	0.55	0.39	0.070	O I				0.84
7.583	0.57	0.39	0.071	O I				0.85
7.667	0.59	0.40	0.072	O I				0.87
7.750	0.60	0.41	0.074	O I				0.89
7.833	0.62	0.41	0.075	O I				0.90
7.917	0.64	0.42	0.076	O I				0.92
8.000	0.65	0.43	0.078	O I				0.94
8.083	0.69	0.44	0.079	O I				0.96
8.167	0.73	0.45	0.081	O I				0.98
8.250	0.74	0.46	0.083	O I				1.00
8.333	0.75	0.46	0.085	O I				1.02
8.417	0.75	0.46	0.087	O I				1.03
8.500	0.75	0.46	0.089	O I				1.04
8.583	0.77	0.46	0.091	O I				1.06
8.667	0.79	0.46	0.093	O I				1.08
8.750	0.80	0.46	0.096	O I				1.09

8.833	0.82	0.46	0.098	|	O	I|	|	1.11
8.917	0.84	0.46	0.101	|	O	I|	|	1.13
9.000	0.85	0.46	0.103	|	O	I|	|	1.15
9.083	0.89	0.46	0.106	|	O	I	|	1.17
9.167	0.93	0.46	0.109	|	O	|I	|	1.19
9.250	0.94	0.46	0.113	|	O	|I	|	1.21
9.333	0.97	0.46	0.116	|	O	| I	|	1.24
9.417	0.99	0.46	0.120	|	O	| I	|	1.26
9.500	1.00	0.46	0.123	|	O	| I	|	1.29
9.583	1.02	0.46	0.127	|	O	| I	|	1.32
9.667	1.04	0.46	0.131	|	O	| I	|	1.35
9.750	1.05	0.46	0.135	|	O	| I	|	1.38
9.833	1.07	0.46	0.139	|	O	| I	|	1.41
9.917	1.09	0.46	0.143	|	O	| I	|	1.44
10.000	1.10	0.46	0.148	|	O	| I	|	1.47
10.083	0.96	0.46	0.152	|	O	| I	|	1.50
10.167	0.80	0.46	0.155	|	O	I|	|	1.52
10.250	0.77	0.46	0.157	|	O	I |	|	1.53
10.333	0.76	0.46	0.159	|	O	I |	|	1.55
10.417	0.75	0.46	0.161	|	O	I |	|	1.56
10.500	0.75	0.46	0.163	|	O	I |	|	1.58
10.583	0.85	0.46	0.165	|	O	I	|	1.60
10.667	0.96	0.46	0.168	|	O	| I	|	1.62
10.750	0.99	0.46	0.172	|	O	| I	|	1.64
10.833	1.00	0.46	0.176	|	O	| I	|	1.67
10.917	1.00	0.46	0.179	|	O	| I	|	1.70
11.000	1.00	0.46	0.183	|	O	| I	|	1.72
11.083	0.98	0.46	0.187	|	O	| I	|	1.75
11.167	0.96	0.46	0.190	|	O	| I	|	1.78
11.250	0.95	0.46	0.194	|	O	|I	|	1.80
11.333	0.95	0.46	0.197	|	O	|I	|	1.82
11.417	0.95	0.46	0.200	|	O	|I	|	1.85
11.500	0.95	0.46	0.204	|	O	|I	|	1.87
11.583	0.91	0.46	0.207	|	O	|I	|	1.90
11.667	0.86	0.46	0.210	|	O	I	|	1.92
11.750	0.86	0.46	0.213	|	O	I	|	1.94
11.833	0.87	0.46	0.215	|	O	I	|	1.96
11.917	0.89	0.46	0.218	|	O	I	|	1.98
12.000	0.90	0.46	0.221	|	O	I	|	2.00
12.083	1.04	0.46	0.225	|	O	| I	|	2.03
12.167	1.20	0.46	0.229	|	O	| I |	|	2.06
12.250	1.23	0.46	0.235	|	O	| I|	|	2.10
12.333	1.26	0.46	0.240	|	O	| I|	|	2.14
12.417	1.29	0.46	0.246	|	O	| I	|	2.18
12.500	1.30	0.46	0.251	|	O	| I	|	2.22
12.583	1.34	0.46	0.257	|	O	|I	|	2.26
12.667	1.38	0.46	0.263	|	O	| I	|	2.31
12.750	1.39	0.46	0.270	|	O	| I	|	2.35
12.833	1.42	0.46	0.276	|	O	| I	|	2.40
12.917	1.44	0.46	0.283	|	O	| I	|	2.45
13.000	1.45	0.46	0.290	|	O	| I	|	2.50
13.083	1.55	0.46	0.297	|	O	| I	|	2.55
13.167	1.66	0.46	0.305	|	O	| I|	|	2.61
13.250	1.69	0.46	0.313	|	O	| I|	|	2.67
13.333	1.70	0.46	0.322	|	O	| I|	|	2.73
13.417	1.70	0.46	0.330	|	O	| I	|	2.79
13.500	1.70	0.46	0.339	|	O	| I	|	2.85
13.583	1.48	0.46	0.347	|	O	| I	|	2.91
13.667	1.23	0.46	0.353	|	O	| I|	|	2.95
13.750	1.18	0.46	0.358	|	O	| I |	|	2.99

13.833	1.16	0.46	0.363	| O | I | | 3.02
13.917	1.15	0.46	0.368	| O | I | | 3.06
14.000	1.15	0.46	0.372	| O | I | | 3.09
14.083	1.23	0.46	0.377	| O | I| | 3.13
14.167	1.32	0.46	0.383	| O | I | 3.17
14.250	1.34	0.46	0.389	| O | |I | 3.21
14.333	1.33	0.46	0.395	| O | I | 3.26
14.417	1.31	0.46	0.401	| O | I | 3.30
14.500	1.30	0.46	0.407	| O | I | 3.34
14.583	1.30	0.46	0.412	| O | I | 3.38
14.667	1.30	0.46	0.418	| O | I | 3.43
14.750	1.30	0.46	0.424	| O | I | 3.47
14.833	1.28	0.46	0.430	| O | I | 3.51
14.917	1.26	0.46	0.435	| O | I| | 3.55
15.000	1.25	0.46	0.441	| O | I| | 3.59
15.083	1.23	0.46	0.446	| O | I| | 3.63
15.167	1.21	0.46	0.451	| O | I | | 3.67
15.250	1.20	0.46	0.456	| O | I | | 3.70
15.333	1.18	0.46	0.462	| O | I | | 3.74
15.417	1.16	0.46	0.466	| O | I | | 3.77
15.500	1.15	0.46	0.471	| O | I | | 3.81
15.583	1.07	0.46	0.476	| O | I | | 3.84
15.667	0.98	0.46	0.480	| O | I | | 3.87
15.750	0.96	0.46	0.483	| O | I | | 3.89
15.833	0.95	0.46	0.487	| O |I | | 3.92
15.917	0.95	0.46	0.490	| O |I | | 3.94
16.000	0.95	0.46	0.493	| O |I | | 3.97
16.083	0.65	0.46	0.496	| O I | | | 3.99
16.167	0.31	0.46	0.496	| I O | | | 3.99
16.250	0.24	0.46	0.494	| I O | | | 3.98
16.333	0.21	0.46	0.493	| I O | | | 3.97
16.417	0.20	0.46	0.491	| I O | | | 3.95
16.500	0.20	0.46	0.489	| I O | | | 3.94
16.583	0.18	0.46	0.487	| I O | | | 3.93
16.667	0.16	0.46	0.485	| I O | | | 3.91
16.750	0.15	0.46	0.483	| I O | | | 3.90
16.833	0.15	0.46	0.481	| I O | | | 3.88
16.917	0.15	0.46	0.479	| I O | | | 3.87
17.000	0.15	0.46	0.477	| I O | | | 3.85
17.083	0.19	0.46	0.475	| I O | | | 3.84
17.167	0.24	0.46	0.473	| I O | | | 3.82
17.250	0.24	0.46	0.472	| I O | | | 3.81
17.333	0.25	0.46	0.470	| I O | | | 3.80
17.417	0.25	0.46	0.469	| I O | | | 3.79
17.500	0.25	0.46	0.467	| I O | | | 3.78
17.583	0.25	0.46	0.466	| I O | | | 3.77
17.667	0.25	0.46	0.464	| I O | | | 3.76
17.750	0.25	0.46	0.463	| I O | | | 3.75
17.833	0.23	0.46	0.462	| I O | | | 3.74
17.917	0.21	0.46	0.460	| I O | | | 3.73
18.000	0.20	0.46	0.458	| I O | | | 3.71
18.083	0.20	0.46	0.456	| I O | | | 3.70
18.167	0.20	0.46	0.455	| I O | | | 3.69
18.250	0.20	0.46	0.453	| I O | | | 3.68
18.333	0.20	0.46	0.451	| I O | | | 3.66
18.417	0.20	0.46	0.449	| I O | | | 3.65
18.500	0.20	0.46	0.447	| I O | | | 3.64
18.583	0.18	0.46	0.446	| I O | | | 3.62
18.667	0.16	0.46	0.443	| I O | | | 3.61
18.750	0.15	0.46	0.441	| I O | | | 3.59

18.833	0.13	0.46	0.439	| I	O	|	|	3.58
18.917	0.11	0.46	0.437	| I	O	|	|	3.56
19.000	0.10	0.46	0.434	|I	O	|	|	3.54
19.083	0.12	0.46	0.432	| I	O	|	|	3.53
19.167	0.14	0.46	0.430	| I	O	|	|	3.51
19.250	0.15	0.46	0.428	| I	O	|	|	3.49
19.333	0.17	0.46	0.426	| I	O	|	|	3.48
19.417	0.19	0.46	0.424	| I	O	|	|	3.46
19.500	0.20	0.46	0.422	| I	O	|	|	3.45
19.583	0.18	0.46	0.420	| I	O	|	|	3.44
19.667	0.16	0.46	0.418	| I	O	|	|	3.42
19.750	0.15	0.46	0.416	| I	O	|	|	3.41
19.833	0.13	0.46	0.414	| I	O	|	|	3.39
19.917	0.11	0.46	0.411	| I	O	|	|	3.38
20.000	0.10	0.46	0.409	|I	O	|	|	3.36
20.083	0.12	0.46	0.406	| I	O	|	|	3.34
20.167	0.14	0.46	0.404	| I	O	|	|	3.32
20.250	0.15	0.46	0.402	| I	O	|	|	3.31
20.333	0.15	0.46	0.400	| I	O	|	|	3.29
20.417	0.15	0.46	0.398	| I	O	|	|	3.28
20.500	0.15	0.46	0.396	| I	O	|	|	3.26
20.583	0.15	0.46	0.393	| I	O	|	|	3.25
20.667	0.15	0.46	0.391	| I	O	|	|	3.23
20.750	0.15	0.46	0.389	| I	O	|	|	3.22
20.833	0.13	0.46	0.387	| I	O	|	|	3.20
20.917	0.11	0.46	0.385	| I	O	|	|	3.18
21.000	0.10	0.46	0.382	|I	O	|	|	3.16
21.083	0.12	0.46	0.380	| I	O	|	|	3.15
21.167	0.14	0.46	0.377	| I	O	|	|	3.13
21.250	0.15	0.46	0.375	| I	O	|	|	3.12
21.333	0.13	0.46	0.373	| I	O	|	|	3.10
21.417	0.11	0.46	0.371	| I	O	|	|	3.08
21.500	0.10	0.46	0.368	|I	O	|	|	3.06
21.583	0.12	0.46	0.366	| I	O	|	|	3.05
21.667	0.14	0.46	0.364	| I	O	|	|	3.03
21.750	0.15	0.46	0.361	| I	O	|	|	3.01
21.833	0.13	0.46	0.359	| I	O	|	|	3.00
21.917	0.11	0.46	0.357	| I	O	|	|	2.98
22.000	0.10	0.46	0.354	|I	O	|	|	2.96
22.083	0.12	0.46	0.352	| I	O	|	|	2.95
22.167	0.14	0.46	0.350	| I	O	|	|	2.93
22.250	0.15	0.46	0.348	| I	O	|	|	2.91
22.333	0.13	0.46	0.345	| I	O	|	|	2.90
22.417	0.11	0.46	0.343	| I	O	|	|	2.88
22.500	0.10	0.46	0.341	|I	O	|	|	2.86
22.583	0.10	0.46	0.338	|I	O	|	|	2.85
22.667	0.10	0.46	0.336	|I	O	|	|	2.83
22.750	0.10	0.46	0.333	|I	O	|	|	2.81
22.833	0.10	0.46	0.331	|I	O	|	|	2.79
22.917	0.10	0.46	0.328	|I	O	|	|	2.77
23.000	0.10	0.46	0.326	|I	O	|	|	2.76
23.083	0.10	0.46	0.323	|I	O	|	|	2.74
23.167	0.10	0.46	0.321	|I	O	|	|	2.72
23.250	0.10	0.46	0.318	|I	O	|	|	2.70
23.333	0.10	0.46	0.316	|I	O	|	|	2.68
23.417	0.10	0.46	0.313	|I	O	|	|	2.67
23.500	0.10	0.46	0.311	|I	O	|	|	2.65
23.583	0.10	0.46	0.308	|I	O	|	|	2.63
23.667	0.10	0.46	0.306	|I	O	|	|	2.61
23.750	0.10	0.46	0.303	|I	O	|	|	2.59

23.833	0.10	0.46	0.301	|I	O	|	|	|	2.58
23.917	0.10	0.46	0.298	|I	O	|	|	|	2.56
24.000	0.10	0.46	0.296	|I	O	|	|	|	2.54
24.083	0.06	0.46	0.293	|I	O	|	|	|	2.52
24.167	0.01	0.46	0.290	I	O	|	|	|	2.50
24.250	0.01	0.46	0.287	I	O	|	|	|	2.48
24.333	0.00	0.46	0.284	I	O	|	|	|	2.46
24.417	0.00	0.46	0.281	I	O	|	|	|	2.43
24.500	0.00	0.46	0.278	I	O	|	|	|	2.41
24.583	0.00	0.46	0.275	I	O	|	|	|	2.39
24.667	0.00	0.46	0.272	I	O	|	|	|	2.36
24.750	0.00	0.46	0.268	I	O	|	|	|	2.34
24.833	0.00	0.46	0.265	I	O	|	|	|	2.32
24.917	0.00	0.46	0.262	I	O	|	|	|	2.30
25.000	0.00	0.46	0.259	I	O	|	|	|	2.27
25.083	0.00	0.46	0.256	I	O	|	|	|	2.25
25.167	0.00	0.46	0.253	I	O	|	|	|	2.23
25.250	0.00	0.46	0.249	I	O	|	|	|	2.20
25.333	0.00	0.46	0.246	I	O	|	|	|	2.18
25.417	0.00	0.46	0.243	I	O	|	|	|	2.16
25.500	0.00	0.46	0.240	I	O	|	|	|	2.14
25.583	0.00	0.46	0.237	I	O	|	|	|	2.11
25.667	0.00	0.46	0.234	I	O	|	|	|	2.09
25.750	0.00	0.46	0.230	I	O	|	|	|	2.07
25.833	0.00	0.46	0.227	I	O	|	|	|	2.04
25.917	0.00	0.46	0.224	I	O	|	|	|	2.02
26.000	0.00	0.46	0.221	I	O	|	|	|	2.00
26.083	0.00	0.46	0.218	I	O	|	|	|	1.97
26.167	0.00	0.46	0.215	I	O	|	|	|	1.95
26.250	0.00	0.46	0.211	I	O	|	|	|	1.93
26.333	0.00	0.46	0.208	I	O	|	|	|	1.91
26.417	0.00	0.46	0.205	I	O	|	|	|	1.88
26.500	0.00	0.46	0.202	I	O	|	|	|	1.86
26.583	0.00	0.46	0.199	I	O	|	|	|	1.84
26.667	0.00	0.46	0.196	I	O	|	|	|	1.81
26.750	0.00	0.46	0.192	I	O	|	|	|	1.79
26.833	0.00	0.46	0.189	I	O	|	|	|	1.77
26.917	0.00	0.46	0.186	I	O	|	|	|	1.75
27.000	0.00	0.46	0.183	I	O	|	|	|	1.72
27.083	0.00	0.46	0.180	I	O	|	|	|	1.70
27.167	0.00	0.46	0.177	I	O	|	|	|	1.68
27.250	0.00	0.46	0.173	I	O	|	|	|	1.65
27.333	0.00	0.46	0.170	I	O	|	|	|	1.63
27.417	0.00	0.46	0.167	I	O	|	|	|	1.61
27.500	0.00	0.46	0.164	I	O	|	|	|	1.58
27.583	0.00	0.46	0.161	I	O	|	|	|	1.56
27.667	0.00	0.46	0.157	I	O	|	|	|	1.54
27.750	0.00	0.46	0.154	I	O	|	|	|	1.52
27.833	0.00	0.46	0.151	I	O	|	|	|	1.49
27.917	0.00	0.46	0.148	I	O	|	|	|	1.47
28.000	0.00	0.46	0.145	I	O	|	|	|	1.45
28.083	0.00	0.46	0.142	I	O	|	|	|	1.42
28.167	0.00	0.46	0.138	I	O	|	|	|	1.40
28.250	0.00	0.46	0.135	I	O	|	|	|	1.38
28.333	0.00	0.46	0.132	I	O	|	|	|	1.36
28.417	0.00	0.46	0.129	I	O	|	|	|	1.33
28.500	0.00	0.46	0.126	I	O	|	|	|	1.31
28.583	0.00	0.46	0.123	I	O	|	|	|	1.29
28.667	0.00	0.46	0.119	I	O	|	|	|	1.26
28.750	0.00	0.46	0.116	I	O	|	|	|	1.24

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28.833    0.00    0.46      0.113  I       O       |       |       |     1.22
28.917    0.00    0.46      0.110  I       O       |       |       |     1.20
29.000    0.00    0.46      0.107  I       O       |       |       |     1.17
29.083    0.00    0.46      0.104  I       O       |       |       |     1.15
29.167    0.00    0.46      0.100  I       O       |       |       |     1.13
29.250    0.00    0.46      0.097  I       O       |       |       |     1.10
29.333    0.00    0.46      0.094  I       O       |       |       |     1.08
29.417    0.00    0.46      0.091  I       O       |       |       |     1.06
29.500    0.00    0.46      0.088  I       O       |       |       |     1.03
29.583    0.00    0.46      0.085  I       O       |       |       |     1.01
29.667    0.00    0.45      0.081  I       O       |       |       |     0.98
29.750    0.00    0.43      0.078  I       O       |       |       |     0.95
29.833    0.00    0.42      0.076  I      O|       |       |       |     0.91
29.917    0.00    0.40      0.073  I      O|       |       |       |     0.88
30.000    0.00    0.39      0.070  I      O|       |       |       |     0.84
30.083    0.00    0.37      0.067  I      O|       |       |       |     0.81
30.167    0.00    0.36      0.065  I     O |       |       |       |     0.78
30.250    0.00    0.35      0.062  I     O |       |       |       |     0.75
30.333    0.00    0.33      0.060  I     O |       |       |       |     0.72
30.417    0.00    0.32      0.058  I     O |       |       |       |     0.70
30.500    0.00    0.31      0.056  I    O  |       |       |       |     0.67
30.583    0.00    0.30      0.054  I    O  |       |       |       |     0.65
30.667    0.00    0.29      0.052  I    O  |       |       |       |     0.62
30.750    0.00    0.27      0.050  I    O  |       |       |       |     0.60
30.833    0.00    0.26      0.048  I   O   |       |       |       |     0.58
30.917    0.00    0.25      0.046  I   O   |       |       |       |     0.55
31.000    0.00    0.25      0.044  I   O   |       |       |       |     0.53
31.083    0.00    0.24      0.043  I   O   |       |       |       |     0.51
31.167    0.00    0.23      0.041  I   O   |       |       |       |     0.49
31.250    0.00    0.22      0.039  I   O   |       |       |       |     0.48
31.333    0.00    0.21      0.038  I  O    |       |       |       |     0.46
31.417    0.00    0.20      0.037  I  O    |       |       |       |     0.44
31.500    0.00    0.20      0.035  I  O    |       |       |       |     0.42
31.583    0.00    0.19      0.034  I  O    |       |       |       |     0.41
31.667    0.00    0.18      0.033  I  O    |       |       |       |     0.39
31.750    0.00    0.17      0.031  I  O    |       |       |       |     0.38
31.833    0.00    0.17      0.030  I  O    |       |       |       |     0.36
31.917    0.00    0.16      0.029  I  O    |       |       |       |     0.35
32.000    0.00    0.16      0.028  I O     |       |       |       |     0.34
32.083    0.00    0.15      0.027  I O     |       |       |       |     0.32
32.167    0.00    0.14      0.026  I O     |       |       |       |     0.31
32.250    0.00    0.14      0.025  I O     |       |       |       |     0.30
32.333    0.00    0.13      0.024  I O     |       |       |       |     0.29
32.417    0.00    0.13      0.023  I O     |       |       |       |     0.28
32.500    0.00    0.12      0.022  I O     |       |       |       |     0.27
32.583    0.00    0.12      0.021  I O     |       |       |       |     0.26
32.667    0.00    0.11      0.021  I O     |       |       |       |     0.25
32.750    0.00    0.11      0.020  I O     |       |       |       |     0.24
32.833    0.00    0.11      0.019  IO      |       |       |       |     0.23
32.917    0.00    0.10      0.018  IO      |       |       |       |     0.22
33.000    0.00    0.10      0.018  IO      |       |       |       |     0.21
33.083    0.00    0.09      0.017  IO      |       |       |       |     0.21
33.167    0.00    0.09      0.016  IO      |       |       |       |     0.20
33.250    0.00    0.09      0.016  IO      |       |       |       |     0.19
33.333    0.00    0.08      0.015  IO      |       |       |       |     0.18
33.417    0.00    0.08      0.015  IO      |       |       |       |     0.18
33.500    0.00    0.08      0.014  IO      |       |       |       |     0.17
33.583    0.00    0.08      0.014  IO      |       |       |       |     0.16
33.667    0.00    0.07      0.013  IO      |       |       |       |     0.16
33.750    0.00    0.07      0.013  IO      |       |       |       |     0.15
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33.833	0.00	0.07	0.012	IO				0.15
33.917	0.00	0.06	0.012	IO				0.14
34.000	0.00	0.06	0.011	IO				0.13
34.083	0.00	0.06	0.011	IO				0.13
34.167	0.00	0.06	0.010	IO				0.12
34.250	0.00	0.06	0.010	IO				0.12
34.333	0.00	0.05	0.010	IO				0.12
34.417	0.00	0.05	0.009	O				0.11
34.500	0.00	0.05	0.009	O				0.11
34.583	0.00	0.05	0.009	O				0.10
34.667	0.00	0.05	0.008	O				0.10
34.750	0.00	0.04	0.008	O				0.10
34.833	0.00	0.04	0.008	O				0.09
34.917	0.00	0.04	0.007	O				0.09
35.000	0.00	0.04	0.007	O				0.09
35.083	0.00	0.04	0.007	O				0.08
35.167	0.00	0.04	0.007	O				0.08
35.250	0.00	0.03	0.006	O				0.08
35.333	0.00	0.03	0.006	O				0.07
35.417	0.00	0.03	0.006	O				0.07
35.500	0.00	0.03	0.006	O				0.07
35.583	0.00	0.03	0.005	O				0.07
35.667	0.00	0.03	0.005	O				0.06
35.750	0.00	0.03	0.005	O				0.06
35.833	0.00	0.03	0.005	O				0.06
35.917	0.00	0.03	0.005	O				0.06
36.000	0.00	0.02	0.004	O				0.05
36.083	0.00	0.02	0.004	O				0.05
36.167	0.00	0.02	0.004	O				0.05
36.250	0.00	0.02	0.004	O				0.05
36.333	0.00	0.02	0.004	O				0.05
36.417	0.00	0.02	0.004	O				0.04
36.500	0.00	0.02	0.004	O				0.04
36.583	0.00	0.02	0.003	O				0.04
36.667	0.00	0.02	0.003	O				0.04
36.750	0.00	0.02	0.003	O				0.04
36.833	0.00	0.02	0.003	O				0.04
36.917	0.00	0.02	0.003	O				0.04
37.000	0.00	0.02	0.003	O				0.03
37.083	0.00	0.02	0.003	O				0.03
37.167	0.00	0.01	0.003	O				0.03
37.250	0.00	0.01	0.003	O				0.03
37.333	0.00	0.01	0.002	O				0.03
37.417	0.00	0.01	0.002	O				0.03
37.500	0.00	0.01	0.002	O				0.03
37.583	0.00	0.01	0.002	O				0.03
37.667	0.00	0.01	0.002	O				0.03
37.750	0.00	0.01	0.002	O				0.02
37.833	0.00	0.01	0.002	O				0.02
37.917	0.00	0.01	0.002	O				0.02
38.000	0.00	0.01	0.002	O				0.02
38.083	0.00	0.01	0.002	O				0.02
38.167	0.00	0.01	0.002	O				0.02
38.250	0.00	0.01	0.002	O				0.02
38.333	0.00	0.01	0.002	O				0.02
38.417	0.00	0.01	0.001	O				0.02
38.500	0.00	0.01	0.001	O				0.02
38.583	0.00	0.01	0.001	O				0.02
38.667	0.00	0.01	0.001	O				0.02
38.750	0.00	0.01	0.001	O				0.02

38.833	0.00	0.01	0.001	O	|	|	|	|	0.01
38.917	0.00	0.01	0.001	O	|	|	|	|	0.01
39.000	0.00	0.01	0.001	O	|	|	|	|	0.01
39.083	0.00	0.01	0.001	O	|	|	|	|	0.01
39.167	0.00	0.01	0.001	O	|	|	|	|	0.01
39.250	0.00	0.01	0.001	O	|	|	|	|	0.01
39.333	0.00	0.01	0.001	O	|	|	|	|	0.01
39.417	0.00	0.01	0.001	O	|	|	|	|	0.01
39.500	0.00	0.00	0.001	O	|	|	|	|	0.01
39.583	0.00	0.00	0.001	O	|	|	|	|	0.01
39.667	0.00	0.00	0.001	O	|	|	|	|	0.01
39.750	0.00	0.00	0.001	O	|	|	|	|	0.01
39.833	0.00	0.00	0.001	O	|	|	|	|	0.01
39.917	0.00	0.00	0.001	O	|	|	|	|	0.01
40.000	0.00	0.00	0.001	O	|	|	|	|	0.01
40.083	0.00	0.00	0.001	O	|	|	|	|	0.01
40.167	0.00	0.00	0.001	O	|	|	|	|	0.01
40.250	0.00	0.00	0.001	O	|	|	|	|	0.01
40.333	0.00	0.00	0.001	O	|	|	|	|	0.01
40.417	0.00	0.00	0.001	O	|	|	|	|	0.01
40.500	0.00	0.00	0.001	O	|	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	|	0.01
40.667	0.00	0.00	0.001	O	|	|	|	|	0.01
40.750	0.00	0.00	0.001	O	|	|	|	|	0.01
40.833	0.00	0.00	0.000	O	|	|	|	|	0.01
40.917	0.00	0.00	0.000	O	|	|	|	|	0.01
41.000	0.00	0.00	0.000	O	|	|	|	|	0.01
41.083	0.00	0.00	0.000	O	|	|	|	|	0.01
41.167	0.00	0.00	0.000	O	|	|	|	|	0.01
41.250	0.00	0.00	0.000	O	|	|	|	|	0.00
41.333	0.00	0.00	0.000	O	|	|	|	|	0.00
41.417	0.00	0.00	0.000	O	|	|	|	|	0.00
41.500	0.00	0.00	0.000	O	|	|	|	|	0.00
41.583	0.00	0.00	0.000	O	|	|	|	|	0.00
41.667	0.00	0.00	0.000	O	|	|	|	|	0.00
41.750	0.00	0.00	0.000	O	|	|	|	|	0.00
41.833	0.00	0.00	0.000	O	|	|	|	|	0.00
41.917	0.00	0.00	0.000	O	|	|	|	|	0.00
42.000	0.00	0.00	0.000	O	|	|	|	|	0.00
42.083	0.00	0.00	0.000	O	|	|	|	|	0.00
42.167	0.00	0.00	0.000	O	|	|	|	|	0.00
42.250	0.00	0.00	0.000	O	|	|	|	|	0.00
42.333	0.00	0.00	0.000	O	|	|	|	|	0.00
42.417	0.00	0.00	0.000	O	|	|	|	|	0.00
42.500	0.00	0.00	0.000	O	|	|	|	|	0.00
42.583	0.00	0.00	0.000	O	|	|	|	|	0.00
42.667	0.00	0.00	0.000	O	|	|	|	|	0.00
42.750	0.00	0.00	0.000	O	|	|	|	|	0.00
42.833	0.00	0.00	0.000	O	|	|	|	|	0.00
42.917	0.00	0.00	0.000	O	|	|	|	|	0.00
43.000	0.00	0.00	0.000	O	|	|	|	|	0.00
43.083	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 517
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 1.033 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
2-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.320 (CFS)
Total volume = 0.348 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	2.8	5.66	8.49	11.32	Depth (Ft.)
0.083	1.05	0.02	0.004	O I	|	|	|	|	0.07
0.167	1.85	0.06	0.013	O I	|	|	|	|	0.24
0.250	2.25	0.11	0.027	O I	|	|	|	|	0.49
0.333	2.41	0.18	0.042	O I	|	|	|	|	0.77
0.417	2.51	0.24	0.057	O I	|	|	|	|	1.05
0.500	2.73	0.31	0.074	O I	|	|	|	|	1.34
0.583	3.23	0.35	0.092	O I	|	|	|	|	1.62
0.667	3.92	0.35	0.114	O I	|	|	|	|	1.89
0.750	5.62	0.35	0.144	O I	|	|	|	|	2.27
0.833	11.32	0.35	0.200	O I	|	|	|	|	2.96
0.917	8.54	0.35	0.266	O I	|	|	|	|	3.77
1.000	3.81	0.35	0.306	O I	|	|	|	|	4.27
1.083	1.15	0.35	0.321	O I	|	|	|	|	4.45
1.167	0.18	0.35	0.323	O	|	|	|	|	4.48
1.250	0.00	0.35	0.321	O	|	|	|	|	4.45
1.333	0.00	0.35	0.319	O	|	|	|	|	4.42
1.417	0.00	0.35	0.317	O	|	|	|	|	4.39
1.500	0.00	0.35	0.314	O	|	|	|	|	4.36
1.583	0.00	0.35	0.312	O	|	|	|	|	4.33
1.667	0.00	0.35	0.309	O	|	|	|	|	4.31
1.750	0.00	0.35	0.307	O	|	|	|	|	4.28
1.833	0.00	0.35	0.305	O	|	|	|	|	4.25
1.917	0.00	0.35	0.302	O	|	|	|	|	4.22
2.000	0.00	0.35	0.300	O	|	|	|	|	4.19
2.083	0.00	0.35	0.297	O	|	|	|	|	4.16
2.167	0.00	0.35	0.295	O	|	|	|	|	4.13
2.250	0.00	0.35	0.293	O	|	|	|	|	4.10
2.333	0.00	0.35	0.290	O	|	|	|	|	4.07
2.417	0.00	0.35	0.288	O	|	|	|	|	4.04
2.500	0.00	0.35	0.285	O	|	|	|	|	4.01
2.583	0.00	0.35	0.283	O	|	|	|	|	3.98
2.667	0.00	0.35	0.281	O	|	|	|	|	3.95
2.750	0.00	0.35	0.278	O	|	|	|	|	3.92
2.833	0.00	0.35	0.276	O	|	|	|	|	3.89
2.917	0.00	0.35	0.273	O	|	|	|	|	3.86
3.000	0.00	0.35	0.271	O	|	|	|	|	3.83
3.083	0.00	0.35	0.268	O	|	|	|	|	3.80
3.167	0.00	0.35	0.266	O	|	|	|	|	3.77
3.250	0.00	0.35	0.264	O	|	|	|	|	3.74
3.333	0.00	0.35	0.261	O	|	|	|	|	3.71
3.417	0.00	0.35	0.259	O	|	|	|	|	3.68
3.500	0.00	0.35	0.256	O	|	|	|	|	3.65
3.583	0.00	0.35	0.254	O	|	|	|	|	3.62
3.667	0.00	0.35	0.252	O	|	|	|	|	3.59
3.750	0.00	0.35	0.249	O	|	|	|	|	3.56
3.833	0.00	0.35	0.247	O	|	|	|	|	3.53

3.917	0.00	0.35	0.244	O				3.50
4.000	0.00	0.35	0.242	O				3.47
4.083	0.00	0.35	0.240	O				3.44
4.167	0.00	0.35	0.237	O				3.41
4.250	0.00	0.35	0.235	O				3.38
4.333	0.00	0.35	0.232	O				3.35
4.417	0.00	0.35	0.230	O				3.32
4.500	0.00	0.35	0.227	O				3.29
4.583	0.00	0.35	0.225	O				3.26
4.667	0.00	0.35	0.223	O				3.23
4.750	0.00	0.35	0.220	O				3.21
4.833	0.00	0.35	0.218	O				3.18
4.917	0.00	0.35	0.215	O				3.15
5.000	0.00	0.35	0.213	O				3.12
5.083	0.00	0.35	0.211	O				3.09
5.167	0.00	0.35	0.208	O				3.06
5.250	0.00	0.35	0.206	O				3.03
5.333	0.00	0.35	0.203	O				3.00
5.417	0.00	0.35	0.201	O				2.97
5.500	0.00	0.35	0.199	O				2.94
5.583	0.00	0.35	0.196	O				2.91
5.667	0.00	0.35	0.194	O				2.88
5.750	0.00	0.35	0.191	O				2.85
5.833	0.00	0.35	0.189	O				2.82
5.917	0.00	0.35	0.187	O				2.79
6.000	0.00	0.35	0.184	O				2.76
6.083	0.00	0.35	0.182	O				2.73
6.167	0.00	0.35	0.179	O				2.70
6.250	0.00	0.35	0.177	O				2.67
6.333	0.00	0.35	0.174	O				2.64
6.417	0.00	0.35	0.172	O				2.61
6.500	0.00	0.35	0.170	O				2.58
6.583	0.00	0.35	0.167	O				2.55
6.667	0.00	0.35	0.165	O				2.52
6.750	0.00	0.35	0.162	O				2.49
6.833	0.00	0.35	0.160	O				2.46
6.917	0.00	0.35	0.158	O				2.43
7.000	0.00	0.35	0.155	O				2.40
7.083	0.00	0.35	0.153	O				2.37
7.167	0.00	0.35	0.150	O				2.34
7.250	0.00	0.35	0.148	O				2.31
7.333	0.00	0.35	0.146	O				2.28
7.417	0.00	0.35	0.143	O				2.25
7.500	0.00	0.35	0.141	O				2.22
7.583	0.00	0.35	0.138	O				2.19
7.667	0.00	0.35	0.136	O				2.16
7.750	0.00	0.35	0.133	O				2.13
7.833	0.00	0.35	0.131	O				2.11
7.917	0.00	0.35	0.129	O				2.08
8.000	0.00	0.35	0.126	O				2.05
8.083	0.00	0.35	0.124	O				2.02
8.167	0.00	0.35	0.121	O				1.99
8.250	0.00	0.35	0.119	O				1.96
8.333	0.00	0.35	0.117	O				1.93
8.417	0.00	0.35	0.114	O				1.90
8.500	0.00	0.35	0.112	O				1.87
8.583	0.00	0.35	0.109	O				1.84
8.667	0.00	0.35	0.107	O				1.81
8.750	0.00	0.35	0.105	O				1.78
8.833	0.00	0.35	0.102	O				1.75

8.917	0.00	0.35	0.100	O					1.72
9.000	0.00	0.35	0.097	O					1.69
9.083	0.00	0.35	0.095	O					1.66
9.167	0.00	0.35	0.092	O					1.63
9.250	0.00	0.35	0.090	O					1.60
9.333	0.00	0.35	0.088	O					1.57
9.417	0.00	0.35	0.085	O					1.54
9.500	0.00	0.35	0.083	O					1.51
9.583	0.00	0.34	0.080	O					1.47
9.667	0.00	0.33	0.078	O					1.43
9.750	0.00	0.32	0.076	O					1.39
9.833	0.00	0.31	0.074	O					1.35
9.917	0.00	0.31	0.072	O					1.31
10.000	0.00	0.30	0.069	O					1.27
10.083	0.00	0.29	0.067	O					1.23
10.167	0.00	0.28	0.066	O					1.20
10.250	0.00	0.27	0.064	O					1.16
10.333	0.00	0.26	0.062	O					1.13
10.417	0.00	0.26	0.060	O					1.10
10.500	0.00	0.25	0.058	O					1.07
10.583	0.00	0.24	0.057	O					1.03
10.667	0.00	0.23	0.055	O					1.00
10.750	0.00	0.23	0.053	O					0.98
10.833	0.00	0.22	0.052	O					0.95
10.917	0.00	0.21	0.050	O					0.92
11.000	0.00	0.21	0.049	O					0.89
11.083	0.00	0.20	0.047	O					0.87
11.167	0.00	0.20	0.046	O					0.84
11.250	0.00	0.19	0.045	O					0.82
11.333	0.00	0.19	0.043	O					0.79
11.417	0.00	0.18	0.042	O					0.77
11.500	0.00	0.17	0.041	O					0.75
11.583	0.00	0.17	0.040	O					0.73
11.667	0.00	0.16	0.039	O					0.71
11.750	0.00	0.16	0.037	O					0.69
11.833	0.00	0.16	0.036	O					0.67
11.917	0.00	0.15	0.035	O					0.65
12.000	0.00	0.15	0.034	O					0.63
12.083	0.00	0.14	0.033	O					0.61
12.167	0.00	0.14	0.032	O					0.59
12.250	0.00	0.13	0.031	O					0.57
12.333	0.00	0.13	0.030	O					0.56
12.417	0.00	0.13	0.030	O					0.54
12.500	0.00	0.12	0.029	O					0.53
12.583	0.00	0.12	0.028	O					0.51
12.667	0.00	0.12	0.027	O					0.50
12.750	0.00	0.11	0.026	O					0.48
12.833	0.00	0.11	0.026	O					0.47
12.917	0.00	0.11	0.025	O					0.45
13.000	0.00	0.10	0.024	O					0.44
13.083	0.00	0.10	0.023	O					0.43
13.167	0.00	0.10	0.023	O					0.42
13.250	0.00	0.09	0.022	O					0.40
13.333	0.00	0.09	0.021	O					0.39
13.417	0.00	0.09	0.021	O					0.38
13.500	0.00	0.09	0.020	O					0.37
13.583	0.00	0.08	0.020	O					0.36
13.667	0.00	0.08	0.019	O					0.35
13.750	0.00	0.08	0.019	O					0.34
13.833	0.00	0.08	0.018	O					0.33

13.917	0.00	0.07	0.017	O					0.32
14.000	0.00	0.07	0.017	O					0.31
14.083	0.00	0.07	0.016	O					0.30
14.167	0.00	0.07	0.016	O					0.29
14.250	0.00	0.07	0.016	O					0.28
14.333	0.00	0.06	0.015	O					0.28
14.417	0.00	0.06	0.015	O					0.27
14.500	0.00	0.06	0.014	O					0.26
14.583	0.00	0.06	0.014	O					0.25
14.667	0.00	0.06	0.013	O					0.24
14.750	0.00	0.06	0.013	O					0.24
14.833	0.00	0.05	0.013	O					0.23
14.917	0.00	0.05	0.012	O					0.22
15.000	0.00	0.05	0.012	O					0.22
15.083	0.00	0.05	0.012	O					0.21
15.167	0.00	0.05	0.011	O					0.21
15.250	0.00	0.05	0.011	O					0.20
15.333	0.00	0.05	0.011	O					0.19
15.417	0.00	0.04	0.010	O					0.19
15.500	0.00	0.04	0.010	O					0.18
15.583	0.00	0.04	0.010	O					0.18
15.667	0.00	0.04	0.009	O					0.17
15.750	0.00	0.04	0.009	O					0.17
15.833	0.00	0.04	0.009	O					0.16
15.917	0.00	0.04	0.009	O					0.16
16.000	0.00	0.04	0.008	O					0.15
16.083	0.00	0.03	0.008	O					0.15
16.167	0.00	0.03	0.008	O					0.14
16.250	0.00	0.03	0.008	O					0.14
16.333	0.00	0.03	0.007	O					0.14
16.417	0.00	0.03	0.007	O					0.13
16.500	0.00	0.03	0.007	O					0.13
16.583	0.00	0.03	0.007	O					0.12
16.667	0.00	0.03	0.007	O					0.12
16.750	0.00	0.03	0.006	O					0.12
16.833	0.00	0.03	0.006	O					0.11
16.917	0.00	0.03	0.006	O					0.11
17.000	0.00	0.03	0.006	O					0.11
17.083	0.00	0.02	0.006	O					0.10
17.167	0.00	0.02	0.006	O					0.10
17.250	0.00	0.02	0.005	O					0.10
17.333	0.00	0.02	0.005	O					0.10
17.417	0.00	0.02	0.005	O					0.09
17.500	0.00	0.02	0.005	O					0.09
17.583	0.00	0.02	0.005	O					0.09
17.667	0.00	0.02	0.005	O					0.09
17.750	0.00	0.02	0.005	O					0.08
17.833	0.00	0.02	0.004	O					0.08
17.917	0.00	0.02	0.004	O					0.08
18.000	0.00	0.02	0.004	O					0.08
18.083	0.00	0.02	0.004	O					0.07
18.167	0.00	0.02	0.004	O					0.07
18.250	0.00	0.02	0.004	O					0.07
18.333	0.00	0.02	0.004	O					0.07
18.417	0.00	0.02	0.004	O					0.07
18.500	0.00	0.01	0.003	O					0.06
18.583	0.00	0.01	0.003	O					0.06
18.667	0.00	0.01	0.003	O					0.06
18.750	0.00	0.01	0.003	O					0.06
18.833	0.00	0.01	0.003	O					0.06

18.917	0.00	0.01	0.003	O	|	|	|	0.05
19.000	0.00	0.01	0.003	O	|	|	|	0.05
19.083	0.00	0.01	0.003	O	|	|	|	0.05
19.167	0.00	0.01	0.003	O	|	|	|	0.05
19.250	0.00	0.01	0.003	O	|	|	|	0.05
19.333	0.00	0.01	0.003	O	|	|	|	0.05
19.417	0.00	0.01	0.003	O	|	|	|	0.05
19.500	0.00	0.01	0.002	O	|	|	|	0.04
19.583	0.00	0.01	0.002	O	|	|	|	0.04
19.667	0.00	0.01	0.002	O	|	|	|	0.04
19.750	0.00	0.01	0.002	O	|	|	|	0.04
19.833	0.00	0.01	0.002	O	|	|	|	0.04
19.917	0.00	0.01	0.002	O	|	|	|	0.04
20.000	0.00	0.01	0.002	O	|	|	|	0.04
20.083	0.00	0.01	0.002	O	|	|	|	0.04
20.167	0.00	0.01	0.002	O	|	|	|	0.04
20.250	0.00	0.01	0.002	O	|	|	|	0.03
20.333	0.00	0.01	0.002	O	|	|	|	0.03
20.417	0.00	0.01	0.002	O	|	|	|	0.03
20.500	0.00	0.01	0.002	O	|	|	|	0.03
20.583	0.00	0.01	0.002	O	|	|	|	0.03
20.667	0.00	0.01	0.002	O	|	|	|	0.03
20.750	0.00	0.01	0.002	O	|	|	|	0.03
20.833	0.00	0.01	0.002	O	|	|	|	0.03
20.917	0.00	0.01	0.001	O	|	|	|	0.03
21.000	0.00	0.01	0.001	O	|	|	|	0.03
21.083	0.00	0.01	0.001	O	|	|	|	0.03
21.167	0.00	0.01	0.001	O	|	|	|	0.02
21.250	0.00	0.01	0.001	O	|	|	|	0.02
21.333	0.00	0.01	0.001	O	|	|	|	0.02
21.417	0.00	0.01	0.001	O	|	|	|	0.02
21.500	0.00	0.01	0.001	O	|	|	|	0.02
21.583	0.00	0.00	0.001	O	|	|	|	0.02
21.667	0.00	0.00	0.001	O	|	|	|	0.02
21.750	0.00	0.00	0.001	O	|	|	|	0.02
21.833	0.00	0.00	0.001	O	|	|	|	0.02
21.917	0.00	0.00	0.001	O	|	|	|	0.02
22.000	0.00	0.00	0.001	O	|	|	|	0.02
22.083	0.00	0.00	0.001	O	|	|	|	0.02
22.167	0.00	0.00	0.001	O	|	|	|	0.02
22.250	0.00	0.00	0.001	O	|	|	|	0.02
22.333	0.00	0.00	0.001	O	|	|	|	0.02
22.417	0.00	0.00	0.001	O	|	|	|	0.02
22.500	0.00	0.00	0.001	O	|	|	|	0.02
22.583	0.00	0.00	0.001	O	|	|	|	0.02
22.667	0.00	0.00	0.001	O	|	|	|	0.01
22.750	0.00	0.00	0.001	O	|	|	|	0.01
22.833	0.00	0.00	0.001	O	|	|	|	0.01
22.917	0.00	0.00	0.001	O	|	|	|	0.01
23.000	0.00	0.00	0.001	O	|	|	|	0.01
23.083	0.00	0.00	0.001	O	|	|	|	0.01
23.167	0.00	0.00	0.001	O	|	|	|	0.01
23.250	0.00	0.00	0.001	O	|	|	|	0.01
23.333	0.00	0.00	0.001	O	|	|	|	0.01
23.417	0.00	0.00	0.001	O	|	|	|	0.01
23.500	0.00	0.00	0.001	O	|	|	|	0.01
23.583	0.00	0.00	0.001	O	|	|	|	0.01
23.667	0.00	0.00	0.001	O	|	|	|	0.01
23.750	0.00	0.00	0.001	O	|	|	|	0.01
23.833	0.00	0.00	0.001	O	|	|	|	0.01

23.917	0.00	0.00	0.001	O	|	|	|	|	0.01
24.000	0.00	0.00	0.000	O	|	|	|	|	0.01
24.083	0.00	0.00	0.000	O	|	|	|	|	0.01
24.167	0.00	0.00	0.000	O	|	|	|	|	0.01
24.250	0.00	0.00	0.000	O	|	|	|	|	0.01
24.333	0.00	0.00	0.000	O	|	|	|	|	0.01
24.417	0.00	0.00	0.000	O	|	|	|	|	0.01
24.500	0.00	0.00	0.000	O	|	|	|	|	0.01
24.583	0.00	0.00	0.000	O	|	|	|	|	0.01
24.667	0.00	0.00	0.000	O	|	|	|	|	0.01
24.750	0.00	0.00	0.000	O	|	|	|	|	0.01
24.833	0.00	0.00	0.000	O	|	|	|	|	0.01
24.917	0.00	0.00	0.000	O	|	|	|	|	0.01
25.000	0.00	0.00	0.000	O	|	|	|	|	0.01
25.083	0.00	0.00	0.000	O	|	|	|	|	0.01
25.167	0.00	0.00	0.000	O	|	|	|	|	0.01
25.250	0.00	0.00	0.000	O	|	|	|	|	0.01
25.333	0.00	0.00	0.000	O	|	|	|	|	0.01
25.417	0.00	0.00	0.000	O	|	|	|	|	0.01
25.500	0.00	0.00	0.000	O	|	|	|	|	0.01
25.583	0.00	0.00	0.000	O	|	|	|	|	0.01
25.667	0.00	0.00	0.000	O	|	|	|	|	0.01
25.750	0.00	0.00	0.000	O	|	|	|	|	0.00
25.833	0.00	0.00	0.000	O	|	|	|	|	0.00
25.917	0.00	0.00	0.000	O	|	|	|	|	0.00
26.000	0.00	0.00	0.000	O	|	|	|	|	0.00
26.083	0.00	0.00	0.000	O	|	|	|	|	0.00
26.167	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 314
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.350 (CFS)
Total volume = 0.348 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
2-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte

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

Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.404 (CFS)
Total volume = 0.574 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.9 3.70 5.55 7.40	Depth (Ft.)
0.083	0.55	0.01	0.002	O I | | | |	0.03
0.167	0.95	0.03	0.007	O I | | | |	0.13
0.250	0.95	0.06	0.013	O I | | | |	0.24
0.333	1.05	0.08	0.020	O I | | | |	0.36
0.417	1.16	0.11	0.026	O I | | | |	0.48
0.500	1.32	0.15	0.034	O I | | | |	0.62
0.583	1.28	0.18	0.042	O I | | | |	0.77
0.667	1.33	0.21	0.050	O I | | | |	0.91
0.750	1.41	0.25	0.057	|O I | | |	1.05
0.833	1.30	0.28	0.065	|O I | | |	1.19
0.917	1.25	0.31	0.072	|O I | | |	1.31
1.000	1.35	0.34	0.079	|O I | | |	1.44
1.083	1.58	0.35	0.086	|O I | | |	1.55
1.167	1.72	0.35	0.095	|O I| | |	1.66
1.250	1.74	0.35	0.105	|O I| | |	1.78
1.333	1.66	0.35	0.114	|O I| | |	1.90
1.417	1.85	0.35	0.124	|O I| | |	2.01
1.500	2.07	0.35	0.135	|O I | |	2.15
1.583	2.01	0.35	0.146	|O I | |	2.29
1.667	2.05	0.35	0.158	|O I | |	2.44
1.750	2.37	0.35	0.171	|O | I | |	2.60
1.833	2.49	0.35	0.185	|O | I | |	2.77
1.917	2.39	0.35	0.200	|O | I | |	2.95
2.000	2.35	0.35	0.213	|O | I | |	3.12
2.083	2.41	0.35	0.227	|O | I | |	3.29
2.167	2.91	0.35	0.243	|O | I | |	3.49
2.250	3.68	0.35	0.264	|O | I| |	3.74
2.333	3.34	0.35	0.285	|O | I | |	4.01
2.417	4.74	0.35	0.311	|O | | I |	4.32
2.500	6.32	0.35	0.347	|O | | | I |	4.76
2.583	7.40	0.35	0.391	|O | | | I	5.32
2.667	6.41	0.35	0.437	|O | | | I |	5.87
2.750	3.50	0.35	0.468	|O | | I| |	6.26
2.833	1.79	0.35	0.484	|O | I| | |	6.46
2.917	1.44	0.35	0.493	|O | I | | |	6.57
3.000	0.92	0.35	0.499	|O I | | | |	6.64
3.083	0.30	0.35	0.500	|O | | | |	6.66
3.167	0.04	0.35	0.499	IO | | | |	6.64
3.250	0.00	0.35	0.497	IO | | | |	6.62
3.333	0.00	0.35	0.494	IO | | | |	6.59
3.417	0.00	0.35	0.492	IO | | | |	6.56
3.500	0.00	0.35	0.490	IO | | | |	6.53
3.583	0.00	0.35	0.487	IO | | | |	6.50
3.667	0.00	0.35	0.485	IO | | | |	6.47
3.750	0.00	0.35	0.482	IO | | | |	6.44
3.833	0.00	0.35	0.480	IO | | | |	6.41

3.917	0.00	0.35	0.477	IO				6.38
4.000	0.00	0.35	0.475	IO				6.35
4.083	0.00	0.35	0.473	IO				6.32
4.167	0.00	0.35	0.470	IO				6.29
4.250	0.00	0.35	0.468	IO				6.26
4.333	0.00	0.35	0.465	IO				6.23
4.417	0.00	0.35	0.463	IO				6.20
4.500	0.00	0.35	0.461	IO				6.17
4.583	0.00	0.35	0.458	IO				6.14
4.667	0.00	0.35	0.456	IO				6.11
4.750	0.00	0.35	0.453	IO				6.08
4.833	0.00	0.35	0.451	IO				6.05
4.917	0.00	0.35	0.449	IO				6.02
5.000	0.00	0.35	0.446	IO				5.99
5.083	0.00	0.35	0.444	IO				5.96
5.167	0.00	0.35	0.441	IO				5.93
5.250	0.00	0.35	0.439	IO				5.90
5.333	0.00	0.35	0.437	IO				5.87
5.417	0.00	0.35	0.434	IO				5.84
5.500	0.00	0.35	0.432	IO				5.81
5.583	0.00	0.35	0.429	IO				5.78
5.667	0.00	0.35	0.427	IO				5.75
5.750	0.00	0.35	0.424	IO				5.72
5.833	0.00	0.35	0.422	IO				5.69
5.917	0.00	0.35	0.420	IO				5.66
6.000	0.00	0.35	0.417	IO				5.63
6.083	0.00	0.35	0.415	IO				5.61
6.167	0.00	0.35	0.412	IO				5.58
6.250	0.00	0.35	0.410	IO				5.55
6.333	0.00	0.35	0.408	IO				5.52
6.417	0.00	0.35	0.405	IO				5.49
6.500	0.00	0.35	0.403	IO				5.46
6.583	0.00	0.35	0.400	IO				5.43
6.667	0.00	0.35	0.398	IO				5.40
6.750	0.00	0.35	0.396	IO				5.37
6.833	0.00	0.35	0.393	IO				5.34
6.917	0.00	0.35	0.391	IO				5.31
7.000	0.00	0.35	0.388	IO				5.28
7.083	0.00	0.35	0.386	IO				5.25
7.167	0.00	0.35	0.383	IO				5.22
7.250	0.00	0.35	0.381	IO				5.19
7.333	0.00	0.35	0.379	IO				5.16
7.417	0.00	0.35	0.376	IO				5.13
7.500	0.00	0.35	0.374	IO				5.10
7.583	0.00	0.35	0.371	IO				5.07
7.667	0.00	0.35	0.369	IO				5.04
7.750	0.00	0.35	0.367	IO				5.01
7.833	0.00	0.35	0.364	IO				4.98
7.917	0.00	0.35	0.362	IO				4.95
8.000	0.00	0.35	0.359	IO				4.92
8.083	0.00	0.35	0.357	IO				4.89
8.167	0.00	0.35	0.355	IO				4.86
8.250	0.00	0.35	0.352	IO				4.83
8.333	0.00	0.35	0.350	IO				4.80
8.417	0.00	0.35	0.347	IO				4.77
8.500	0.00	0.35	0.345	IO				4.74
8.583	0.00	0.35	0.343	IO				4.71
8.667	0.00	0.35	0.340	IO				4.68
8.750	0.00	0.35	0.338	IO				4.65
8.833	0.00	0.35	0.335	IO				4.62

8.917	0.00	0.35	0.333	IO				4.59
9.000	0.00	0.35	0.330	IO				4.56
9.083	0.00	0.35	0.328	IO				4.53
9.167	0.00	0.35	0.326	IO				4.50
9.250	0.00	0.35	0.323	IO				4.48
9.333	0.00	0.35	0.321	IO				4.45
9.417	0.00	0.35	0.318	IO				4.42
9.500	0.00	0.35	0.316	IO				4.39
9.583	0.00	0.35	0.314	IO				4.36
9.667	0.00	0.35	0.311	IO				4.33
9.750	0.00	0.35	0.309	IO				4.30
9.833	0.00	0.35	0.306	IO				4.27
9.917	0.00	0.35	0.304	IO				4.24
10.000	0.00	0.35	0.302	IO				4.21
10.083	0.00	0.35	0.299	IO				4.18
10.167	0.00	0.35	0.297	IO				4.15
10.250	0.00	0.35	0.294	IO				4.12
10.333	0.00	0.35	0.292	IO				4.09
10.417	0.00	0.35	0.289	IO				4.06
10.500	0.00	0.35	0.287	IO				4.03
10.583	0.00	0.35	0.285	IO				4.00
10.667	0.00	0.35	0.282	IO				3.97
10.750	0.00	0.35	0.280	IO				3.94
10.833	0.00	0.35	0.277	IO				3.91
10.917	0.00	0.35	0.275	IO				3.88
11.000	0.00	0.35	0.273	IO				3.85
11.083	0.00	0.35	0.270	IO				3.82
11.167	0.00	0.35	0.268	IO				3.79
11.250	0.00	0.35	0.265	IO				3.76
11.333	0.00	0.35	0.263	IO				3.73
11.417	0.00	0.35	0.261	IO				3.70
11.500	0.00	0.35	0.258	IO				3.67
11.583	0.00	0.35	0.256	IO				3.64
11.667	0.00	0.35	0.253	IO				3.61
11.750	0.00	0.35	0.251	IO				3.58
11.833	0.00	0.35	0.249	IO				3.55
11.917	0.00	0.35	0.246	IO				3.52
12.000	0.00	0.35	0.244	IO				3.49
12.083	0.00	0.35	0.241	IO				3.46
12.167	0.00	0.35	0.239	IO				3.43
12.250	0.00	0.35	0.236	IO				3.40
12.333	0.00	0.35	0.234	IO				3.38
12.417	0.00	0.35	0.232	IO				3.35
12.500	0.00	0.35	0.229	IO				3.32
12.583	0.00	0.35	0.227	IO				3.29
12.667	0.00	0.35	0.224	IO				3.26
12.750	0.00	0.35	0.222	IO				3.23
12.833	0.00	0.35	0.220	IO				3.20
12.917	0.00	0.35	0.217	IO				3.17
13.000	0.00	0.35	0.215	IO				3.14
13.083	0.00	0.35	0.212	IO				3.11
13.167	0.00	0.35	0.210	IO				3.08
13.250	0.00	0.35	0.208	IO				3.05
13.333	0.00	0.35	0.205	IO				3.02
13.417	0.00	0.35	0.203	IO				2.99
13.500	0.00	0.35	0.200	IO				2.96
13.583	0.00	0.35	0.198	IO				2.93
13.667	0.00	0.35	0.195	IO				2.90
13.750	0.00	0.35	0.193	IO				2.87
13.833	0.00	0.35	0.191	IO				2.84

13.917	0.00	0.35	0.188	IO	|	|	|	2.81
14.000	0.00	0.35	0.186	IO	|	|	|	2.78
14.083	0.00	0.35	0.183	IO	|	|	|	2.75
14.167	0.00	0.35	0.181	IO	|	|	|	2.72
14.250	0.00	0.35	0.179	IO	|	|	|	2.69
14.333	0.00	0.35	0.176	IO	|	|	|	2.66
14.417	0.00	0.35	0.174	IO	|	|	|	2.63
14.500	0.00	0.35	0.171	IO	|	|	|	2.60
14.583	0.00	0.35	0.169	IO	|	|	|	2.57
14.667	0.00	0.35	0.167	IO	|	|	|	2.54
14.750	0.00	0.35	0.164	IO	|	|	|	2.51
14.833	0.00	0.35	0.162	IO	|	|	|	2.48
14.917	0.00	0.35	0.159	IO	|	|	|	2.45
15.000	0.00	0.35	0.157	IO	|	|	|	2.42
15.083	0.00	0.35	0.154	IO	|	|	|	2.39
15.167	0.00	0.35	0.152	IO	|	|	|	2.36
15.250	0.00	0.35	0.150	IO	|	|	|	2.33
15.333	0.00	0.35	0.147	IO	|	|	|	2.30
15.417	0.00	0.35	0.145	IO	|	|	|	2.28
15.500	0.00	0.35	0.142	IO	|	|	|	2.25
15.583	0.00	0.35	0.140	IO	|	|	|	2.22
15.667	0.00	0.35	0.138	IO	|	|	|	2.19
15.750	0.00	0.35	0.135	IO	|	|	|	2.16
15.833	0.00	0.35	0.133	IO	|	|	|	2.13
15.917	0.00	0.35	0.130	IO	|	|	|	2.10
16.000	0.00	0.35	0.128	IO	|	|	|	2.07
16.083	0.00	0.35	0.126	IO	|	|	|	2.04
16.167	0.00	0.35	0.123	IO	|	|	|	2.01
16.250	0.00	0.35	0.121	IO	|	|	|	1.98
16.333	0.00	0.35	0.118	IO	|	|	|	1.95
16.417	0.00	0.35	0.116	IO	|	|	|	1.92
16.500	0.00	0.35	0.114	IO	|	|	|	1.89
16.583	0.00	0.35	0.111	IO	|	|	|	1.86
16.667	0.00	0.35	0.109	IO	|	|	|	1.83
16.750	0.00	0.35	0.106	IO	|	|	|	1.80
16.833	0.00	0.35	0.104	IO	|	|	|	1.77
16.917	0.00	0.35	0.101	IO	|	|	|	1.74
17.000	0.00	0.35	0.099	IO	|	|	|	1.71
17.083	0.00	0.35	0.097	IO	|	|	|	1.68
17.167	0.00	0.35	0.094	IO	|	|	|	1.65
17.250	0.00	0.35	0.092	IO	|	|	|	1.62
17.333	0.00	0.35	0.089	IO	|	|	|	1.59
17.417	0.00	0.35	0.087	IO	|	|	|	1.56
17.500	0.00	0.35	0.085	IO	|	|	|	1.53
17.583	0.00	0.35	0.082	IO	|	|	|	1.50
17.667	0.00	0.34	0.080	IO	|	|	|	1.46
17.750	0.00	0.33	0.077	IO	|	|	|	1.42
17.833	0.00	0.32	0.075	IO	|	|	|	1.38
17.917	0.00	0.31	0.073	IO	|	|	|	1.34
18.000	0.00	0.30	0.071	IO	|	|	|	1.30
18.083	0.00	0.29	0.069	IO	|	|	|	1.26
18.167	0.00	0.29	0.067	IO	|	|	|	1.22
18.250	0.00	0.28	0.065	IO	|	|	|	1.19
18.333	0.00	0.27	0.063	IO	|	|	|	1.15
18.417	0.00	0.26	0.061	IO	|	|	|	1.12
18.500	0.00	0.25	0.059	IO	|	|	|	1.09
18.583	0.00	0.25	0.058	IO	|	|	|	1.06
18.667	0.00	0.24	0.056	IO	|	|	|	1.03
18.750	0.00	0.23	0.054	IO	|	|	|	1.00
18.833	0.00	0.23	0.053	O	|	|	|	0.97

18.917	0.00	0.22	0.051	O					0.94
19.000	0.00	0.21	0.050	O					0.91
19.083	0.00	0.21	0.048	O					0.89
19.167	0.00	0.20	0.047	O					0.86
19.250	0.00	0.19	0.046	O					0.84
19.333	0.00	0.19	0.044	O					0.81
19.417	0.00	0.18	0.043	O					0.79
19.500	0.00	0.18	0.042	O					0.76
19.583	0.00	0.17	0.041	O					0.74
19.667	0.00	0.17	0.039	O					0.72
19.750	0.00	0.16	0.038	O					0.70
19.833	0.00	0.16	0.037	O					0.68
19.917	0.00	0.15	0.036	O					0.66
20.000	0.00	0.15	0.035	O					0.64
20.083	0.00	0.15	0.034	O					0.62
20.167	0.00	0.14	0.033	O					0.60
20.250	0.00	0.14	0.032	O					0.59
20.333	0.00	0.13	0.031	O					0.57
20.417	0.00	0.13	0.030	O					0.55
20.500	0.00	0.13	0.029	O					0.54
20.583	0.00	0.12	0.029	O					0.52
20.667	0.00	0.12	0.028	O					0.51
20.750	0.00	0.11	0.027	O					0.49
20.833	0.00	0.11	0.026	O					0.48
20.917	0.00	0.11	0.025	O					0.46
21.000	0.00	0.11	0.025	O					0.45
21.083	0.00	0.10	0.024	O					0.44
21.167	0.00	0.10	0.023	O					0.42
21.250	0.00	0.10	0.023	O					0.41
21.333	0.00	0.09	0.022	O					0.40
21.417	0.00	0.09	0.021	O					0.39
21.500	0.00	0.09	0.021	O					0.38
21.583	0.00	0.09	0.020	O					0.37
21.667	0.00	0.08	0.019	O					0.36
21.750	0.00	0.08	0.019	O					0.35
21.833	0.00	0.08	0.018	O					0.34
21.917	0.00	0.08	0.018	O					0.33
22.000	0.00	0.07	0.017	O					0.32
22.083	0.00	0.07	0.017	O					0.31
22.167	0.00	0.07	0.016	O					0.30
22.250	0.00	0.07	0.016	O					0.29
22.333	0.00	0.07	0.015	O					0.28
22.417	0.00	0.06	0.015	O					0.27
22.500	0.00	0.06	0.015	O					0.27
22.583	0.00	0.06	0.014	O					0.26
22.667	0.00	0.06	0.014	O					0.25
22.750	0.00	0.06	0.013	O					0.24
22.833	0.00	0.06	0.013	O					0.24
22.917	0.00	0.05	0.013	O					0.23
23.000	0.00	0.05	0.012	O					0.22
23.083	0.00	0.05	0.012	O					0.22
23.167	0.00	0.05	0.011	O					0.21
23.250	0.00	0.05	0.011	O					0.20
23.333	0.00	0.05	0.011	O					0.20
23.417	0.00	0.04	0.010	O					0.19
23.500	0.00	0.04	0.010	O					0.19
23.583	0.00	0.04	0.010	O					0.18
23.667	0.00	0.04	0.010	O					0.18
23.750	0.00	0.04	0.009	O					0.17
23.833	0.00	0.04	0.009	O					0.17

23.917	0.00	0.04	0.009	O	|	|	|	0.16
24.000	0.00	0.04	0.009	O	|	|	|	0.16
24.083	0.00	0.04	0.008	O	|	|	|	0.15
24.167	0.00	0.03	0.008	O	|	|	|	0.15
24.250	0.00	0.03	0.008	O	|	|	|	0.14
24.333	0.00	0.03	0.008	O	|	|	|	0.14
24.417	0.00	0.03	0.007	O	|	|	|	0.13
24.500	0.00	0.03	0.007	O	|	|	|	0.13
24.583	0.00	0.03	0.007	O	|	|	|	0.13
24.667	0.00	0.03	0.007	O	|	|	|	0.12
24.750	0.00	0.03	0.007	O	|	|	|	0.12
24.833	0.00	0.03	0.006	O	|	|	|	0.12
24.917	0.00	0.03	0.006	O	|	|	|	0.11
25.000	0.00	0.03	0.006	O	|	|	|	0.11
25.083	0.00	0.02	0.006	O	|	|	|	0.11
25.167	0.00	0.02	0.006	O	|	|	|	0.10
25.250	0.00	0.02	0.005	O	|	|	|	0.10
25.333	0.00	0.02	0.005	O	|	|	|	0.10
25.417	0.00	0.02	0.005	O	|	|	|	0.09
25.500	0.00	0.02	0.005	O	|	|	|	0.09
25.583	0.00	0.02	0.005	O	|	|	|	0.09
25.667	0.00	0.02	0.005	O	|	|	|	0.09
25.750	0.00	0.02	0.005	O	|	|	|	0.08
25.833	0.00	0.02	0.004	O	|	|	|	0.08
25.917	0.00	0.02	0.004	O	|	|	|	0.08
26.000	0.00	0.02	0.004	O	|	|	|	0.08
26.083	0.00	0.02	0.004	O	|	|	|	0.07
26.167	0.00	0.02	0.004	O	|	|	|	0.07
26.250	0.00	0.02	0.004	O	|	|	|	0.07
26.333	0.00	0.02	0.004	O	|	|	|	0.07
26.417	0.00	0.02	0.004	O	|	|	|	0.07
26.500	0.00	0.02	0.004	O	|	|	|	0.06
26.583	0.00	0.01	0.003	O	|	|	|	0.06
26.667	0.00	0.01	0.003	O	|	|	|	0.06
26.750	0.00	0.01	0.003	O	|	|	|	0.06
26.833	0.00	0.01	0.003	O	|	|	|	0.06
26.917	0.00	0.01	0.003	O	|	|	|	0.06
27.000	0.00	0.01	0.003	O	|	|	|	0.05
27.083	0.00	0.01	0.003	O	|	|	|	0.05
27.167	0.00	0.01	0.003	O	|	|	|	0.05
27.250	0.00	0.01	0.003	O	|	|	|	0.05
27.333	0.00	0.01	0.003	O	|	|	|	0.05
27.417	0.00	0.01	0.003	O	|	|	|	0.05
27.500	0.00	0.01	0.002	O	|	|	|	0.05
27.583	0.00	0.01	0.002	O	|	|	|	0.04
27.667	0.00	0.01	0.002	O	|	|	|	0.04
27.750	0.00	0.01	0.002	O	|	|	|	0.04
27.833	0.00	0.01	0.002	O	|	|	|	0.04
27.917	0.00	0.01	0.002	O	|	|	|	0.04
28.000	0.00	0.01	0.002	O	|	|	|	0.04
28.083	0.00	0.01	0.002	O	|	|	|	0.04
28.167	0.00	0.01	0.002	O	|	|	|	0.04
28.250	0.00	0.01	0.002	O	|	|	|	0.03
28.333	0.00	0.01	0.002	O	|	|	|	0.03
28.417	0.00	0.01	0.002	O	|	|	|	0.03
28.500	0.00	0.01	0.002	O	|	|	|	0.03
28.583	0.00	0.01	0.002	O	|	|	|	0.03
28.667	0.00	0.01	0.002	O	|	|	|	0.03
28.750	0.00	0.01	0.002	O	|	|	|	0.03
28.833	0.00	0.01	0.002	O	|	|	|	0.03

28.917	0.00	0.01	0.002	O	|	|	|	0.03
29.000	0.00	0.01	0.001	O	|	|	|	0.03
29.083	0.00	0.01	0.001	O	|	|	|	0.03
29.167	0.00	0.01	0.001	O	|	|	|	0.03
29.250	0.00	0.01	0.001	O	|	|	|	0.02
29.333	0.00	0.01	0.001	O	|	|	|	0.02
29.417	0.00	0.01	0.001	O	|	|	|	0.02
29.500	0.00	0.01	0.001	O	|	|	|	0.02
29.583	0.00	0.01	0.001	O	|	|	|	0.02
29.667	0.00	0.00	0.001	O	|	|	|	0.02
29.750	0.00	0.00	0.001	O	|	|	|	0.02
29.833	0.00	0.00	0.001	O	|	|	|	0.02
29.917	0.00	0.00	0.001	O	|	|	|	0.02
30.000	0.00	0.00	0.001	O	|	|	|	0.02
30.083	0.00	0.00	0.001	O	|	|	|	0.02
30.167	0.00	0.00	0.001	O	|	|	|	0.02
30.250	0.00	0.00	0.001	O	|	|	|	0.02
30.333	0.00	0.00	0.001	O	|	|	|	0.02
30.417	0.00	0.00	0.001	O	|	|	|	0.02
30.500	0.00	0.00	0.001	O	|	|	|	0.02
30.583	0.00	0.00	0.001	O	|	|	|	0.02
30.667	0.00	0.00	0.001	O	|	|	|	0.01
30.750	0.00	0.00	0.001	O	|	|	|	0.01
30.833	0.00	0.00	0.001	O	|	|	|	0.01
30.917	0.00	0.00	0.001	O	|	|	|	0.01
31.000	0.00	0.00	0.001	O	|	|	|	0.01
31.083	0.00	0.00	0.001	O	|	|	|	0.01
31.167	0.00	0.00	0.001	O	|	|	|	0.01
31.250	0.00	0.00	0.001	O	|	|	|	0.01
31.333	0.00	0.00	0.001	O	|	|	|	0.01
31.417	0.00	0.00	0.001	O	|	|	|	0.01
31.500	0.00	0.00	0.001	O	|	|	|	0.01
31.583	0.00	0.00	0.001	O	|	|	|	0.01
31.667	0.00	0.00	0.001	O	|	|	|	0.01
31.750	0.00	0.00	0.001	O	|	|	|	0.01
31.833	0.00	0.00	0.001	O	|	|	|	0.01
31.917	0.00	0.00	0.001	O	|	|	|	0.01
32.000	0.00	0.00	0.001	O	|	|	|	0.01
32.083	0.00	0.00	0.000	O	|	|	|	0.01
32.167	0.00	0.00	0.000	O	|	|	|	0.01
32.250	0.00	0.00	0.000	O	|	|	|	0.01
32.333	0.00	0.00	0.000	O	|	|	|	0.01
32.417	0.00	0.00	0.000	O	|	|	|	0.01
32.500	0.00	0.00	0.000	O	|	|	|	0.01
32.583	0.00	0.00	0.000	O	|	|	|	0.01
32.667	0.00	0.00	0.000	O	|	|	|	0.01
32.750	0.00	0.00	0.000	O	|	|	|	0.01
32.833	0.00	0.00	0.000	O	|	|	|	0.01
32.917	0.00	0.00	0.000	O	|	|	|	0.01
33.000	0.00	0.00	0.000	O	|	|	|	0.01
33.083	0.00	0.00	0.000	O	|	|	|	0.01
33.167	0.00	0.00	0.000	O	|	|	|	0.01
33.250	0.00	0.00	0.000	O	|	|	|	0.01
33.333	0.00	0.00	0.000	O	|	|	|	0.01
33.417	0.00	0.00	0.000	O	|	|	|	0.01
33.500	0.00	0.00	0.000	O	|	|	|	0.01
33.583	0.00	0.00	0.000	O	|	|	|	0.01
33.667	0.00	0.00	0.000	O	|	|	|	0.01
33.750	0.00	0.00	0.000	O	|	|	|	0.01
33.833	0.00	0.00	0.000	O	|	|	|	0.00

33.917	0.00	0.00	0.000	O	|	|	|	0.00
34.000	0.00	0.00	0.000	O	|	|	|	0.00
34.083	0.00	0.00	0.000	O	|	|	|	0.00
34.167	0.00	0.00	0.000	O	|	|	|	0.00
34.250	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 411
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.350 (CFS)
Total volume = 0.574 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
2-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.749 (CFS)
Total volume = 0.786 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.7	3.37	5.06	6.75	Depth (Ft.)
0.083	0.29	0.00	0.001	OI	|	|	|	|	0.02
0.167	0.57	0.02	0.004	O I	|	|	|	|	0.07
0.250	0.66	0.03	0.008	O I	|	|	|	|	0.15
0.333	0.67	0.05	0.012	O I	|	|	|	|	0.22
0.417	0.67	0.07	0.016	O I	|	|	|	|	0.30
0.500	0.72	0.09	0.021	O I	|	|	|	|	0.38
0.583	0.77	0.11	0.025	O I	|	|	|	|	0.46
0.667	0.78	0.13	0.030	O I	|	|	|	|	0.54
0.750	0.78	0.15	0.034	O I	|	|	|	|	0.62
0.833	0.78	0.16	0.038	O I	|	|	|	|	0.70
0.917	0.78	0.18	0.042	O I	|	|	|	|	0.78
1.000	0.84	0.20	0.047	O I	|	|	|	|	0.85
1.083	0.88	0.22	0.051	|O I	|	|	|	|	0.94
1.167	0.89	0.24	0.056	|O I	|	|	|	|	1.02
1.250	0.89	0.26	0.060	|O I	|	|	|	|	1.10
1.333	0.89	0.27	0.064	|O I	|	|	|	|	1.18
1.417	0.89	0.29	0.069	|O I	|	|	|	|	1.25
1.500	0.89	0.31	0.073	|O I	|	|	|	|	1.33
1.583	0.89	0.33	0.077	|O I	|	|	|	|	1.40
1.667	0.89	0.34	0.080	|O I	|	|	|	|	1.47
1.750	0.89	0.35	0.084	|O I	|	|	|	|	1.53
1.833	0.89	0.35	0.088	|O I	|	|	|	|	1.57
1.917	0.89	0.35	0.091	|O I	|	|	|	|	1.62
2.000	0.95	0.35	0.095	|O I	|	|	|	|	1.67
2.083	0.93	0.35	0.099	|O I	|	|	|	|	1.72
2.167	0.96	0.35	0.104	|O I	|	|	|	|	1.77
2.250	0.99	0.35	0.108	|O I	|	|	|	|	1.82
2.333	1.00	0.35	0.112	|O I	|	|	|	|	1.87
2.417	1.00	0.35	0.117	|O I	|	|	|	|	1.93
2.500	1.00	0.35	0.121	|O I	|	|	|	|	1.98
2.583	1.00	0.35	0.126	|O I	|	|	|	|	2.04
2.667	1.00	0.35	0.130	|O I	|	|	|	|	2.09
2.750	1.06	0.35	0.135	|O I	|	|	|	|	2.15
2.833	1.10	0.35	0.140	|O I	|	|	|	|	2.21
2.917	1.11	0.35	0.145	|O I	|	|	|	|	2.28
3.000	1.11	0.35	0.150	|O I	|	|	|	|	2.34
3.083	1.11	0.35	0.156	|O I	|	|	|	|	2.41
3.167	1.17	0.35	0.161	|O I	|	|	|	|	2.47
3.250	1.21	0.35	0.167	|O I	|	|	|	|	2.55
3.333	1.22	0.35	0.173	|O I	|	|	|	|	2.62
3.417	1.28	0.35	0.179	|O I	|	|	|	|	2.70
3.500	1.38	0.35	0.186	|O I	|	|	|	|	2.78
3.583	1.49	0.35	0.193	|O I|	|	|	|	|	2.87
3.667	1.55	0.35	0.201	|O I|	|	|	|	|	2.97
3.750	1.61	0.35	0.210	|O I|	|	|	|	|	3.08
3.833	1.66	0.35	0.219	|O I|	|	|	|	|	3.18

3.917	1.72	0.35	0.228	|O	I	|	|	|	3.30
4.000	1.77	0.35	0.237	|O	I	|	|	|	3.42
4.083	1.84	0.35	0.247	|O	I	|	|	|	3.54
4.167	1.94	0.35	0.258	|O	|I	|	|	|	3.67
4.250	2.05	0.35	0.269	|O	|I	|	|	|	3.81
4.333	2.16	0.35	0.281	|O	| I	|	|	|	3.96
4.417	2.27	0.35	0.294	|O	| I	|	|	|	4.12
4.500	2.32	0.35	0.308	|O	| I	|	|	|	4.28
4.583	2.39	0.35	0.321	|O	| I	|	|	|	4.45
4.667	2.49	0.35	0.336	|O	| I	|	|	|	4.63
4.750	2.60	0.35	0.351	|O	| I	|	|	|	4.82
4.833	2.66	0.35	0.367	|O	| I	|	|	|	5.01
4.917	2.72	0.35	0.383	|O	| I	|	|	|	5.21
5.000	2.83	0.35	0.399	|O	| I	|	|	|	5.42
5.083	3.17	0.35	0.418	|O	| I	|	|	|	5.64
5.167	3.78	0.35	0.439	|O	| |I	|	|	|	5.91
5.250	4.37	0.35	0.465	|O	| | I	|	|	|	6.22
5.333	4.90	0.35	0.494	|O	| | I|	|	|	6.59
5.417	5.58	0.35	0.528	|O	| | | I	|	|	7.00
5.500	6.75	0.35	0.568	|O	| | | | I	|	7.50
5.583	4.53	0.35	0.605	|O	| | I	|	|	7.95
5.667	1.95	0.39	0.624	|O	|I	|	|	|	8.30
5.750	0.91	0.41	0.631	|O I	|	|	|	|	8.43
5.833	0.63	0.41	0.634	|O I	|	|	|	|	8.48
5.917	0.45	0.41	0.635	|OI	|	|	|	|	8.50
6.000	0.29	0.41	0.635	|O	|	|	|	|	8.49
6.083	0.11	0.41	0.633	IO	|	|	|	|	8.46
6.167	0.02	0.40	0.631	IO	|	|	|	|	8.42
6.250	0.00	0.40	0.628	IO	|	|	|	|	8.37
6.333	0.00	0.39	0.625	IO	|	|	|	|	8.31
6.417	0.00	0.38	0.623	IO	|	|	|	|	8.26
6.500	0.00	0.38	0.620	IO	|	|	|	|	8.21
6.583	0.00	0.37	0.617	IO	|	|	|	|	8.16
6.667	0.00	0.36	0.615	IO	|	|	|	|	8.11
6.750	0.00	0.36	0.612	IO	|	|	|	|	8.07
6.833	0.00	0.35	0.610	IO	|	|	|	|	8.02
6.917	0.00	0.35	0.608	IO	|	|	|	|	7.98
7.000	0.00	0.35	0.605	IO	|	|	|	|	7.95
7.083	0.00	0.35	0.603	IO	|	|	|	|	7.92
7.167	0.00	0.35	0.600	IO	|	|	|	|	7.89
7.250	0.00	0.35	0.598	IO	|	|	|	|	7.86
7.333	0.00	0.35	0.596	IO	|	|	|	|	7.83
7.417	0.00	0.35	0.593	IO	|	|	|	|	7.80
7.500	0.00	0.35	0.591	IO	|	|	|	|	7.77
7.583	0.00	0.35	0.588	IO	|	|	|	|	7.74
7.667	0.00	0.35	0.586	IO	|	|	|	|	7.71
7.750	0.00	0.35	0.583	IO	|	|	|	|	7.68
7.833	0.00	0.35	0.581	IO	|	|	|	|	7.66
7.917	0.00	0.35	0.579	IO	|	|	|	|	7.63
8.000	0.00	0.35	0.576	IO	|	|	|	|	7.60
8.083	0.00	0.35	0.574	IO	|	|	|	|	7.57
8.167	0.00	0.35	0.571	IO	|	|	|	|	7.54
8.250	0.00	0.35	0.569	IO	|	|	|	|	7.51
8.333	0.00	0.35	0.567	IO	|	|	|	|	7.48
8.417	0.00	0.35	0.564	IO	|	|	|	|	7.45
8.500	0.00	0.35	0.562	IO	|	|	|	|	7.42
8.583	0.00	0.35	0.559	IO	|	|	|	|	7.39
8.667	0.00	0.35	0.557	IO	|	|	|	|	7.36
8.750	0.00	0.35	0.555	IO	|	|	|	|	7.33
8.833	0.00	0.35	0.552	IO	|	|	|	|	7.30

8.917	0.00	0.35	0.550	IO				7.27
9.000	0.00	0.35	0.547	IO				7.24
9.083	0.00	0.35	0.545	IO				7.21
9.167	0.00	0.35	0.542	IO				7.18
9.250	0.00	0.35	0.540	IO				7.15
9.333	0.00	0.35	0.538	IO				7.12
9.417	0.00	0.35	0.535	IO				7.09
9.500	0.00	0.35	0.533	IO				7.06
9.583	0.00	0.35	0.530	IO				7.03
9.667	0.00	0.35	0.528	IO				7.00
9.750	0.00	0.35	0.526	IO				6.97
9.833	0.00	0.35	0.523	IO				6.94
9.917	0.00	0.35	0.521	IO				6.91
10.000	0.00	0.35	0.518	IO				6.88
10.083	0.00	0.35	0.516	IO				6.85
10.167	0.00	0.35	0.514	IO				6.82
10.250	0.00	0.35	0.511	IO				6.79
10.333	0.00	0.35	0.509	IO				6.76
10.417	0.00	0.35	0.506	IO				6.73
10.500	0.00	0.35	0.504	IO				6.70
10.583	0.00	0.35	0.501	IO				6.67
10.667	0.00	0.35	0.499	IO				6.64
10.750	0.00	0.35	0.497	IO				6.61
10.833	0.00	0.35	0.494	IO				6.58
10.917	0.00	0.35	0.492	IO				6.56
11.000	0.00	0.35	0.489	IO				6.53
11.083	0.00	0.35	0.487	IO				6.50
11.167	0.00	0.35	0.485	IO				6.47
11.250	0.00	0.35	0.482	IO				6.44
11.333	0.00	0.35	0.480	IO				6.41
11.417	0.00	0.35	0.477	IO				6.38
11.500	0.00	0.35	0.475	IO				6.35
11.583	0.00	0.35	0.473	IO				6.32
11.667	0.00	0.35	0.470	IO				6.29
11.750	0.00	0.35	0.468	IO				6.26
11.833	0.00	0.35	0.465	IO				6.23
11.917	0.00	0.35	0.463	IO				6.20
12.000	0.00	0.35	0.461	IO				6.17
12.083	0.00	0.35	0.458	IO				6.14
12.167	0.00	0.35	0.456	IO				6.11
12.250	0.00	0.35	0.453	IO				6.08
12.333	0.00	0.35	0.451	IO				6.05
12.417	0.00	0.35	0.448	IO				6.02
12.500	0.00	0.35	0.446	IO				5.99
12.583	0.00	0.35	0.444	IO				5.96
12.667	0.00	0.35	0.441	IO				5.93
12.750	0.00	0.35	0.439	IO				5.90
12.833	0.00	0.35	0.436	IO				5.87
12.917	0.00	0.35	0.434	IO				5.84
13.000	0.00	0.35	0.432	IO				5.81
13.083	0.00	0.35	0.429	IO				5.78
13.167	0.00	0.35	0.427	IO				5.75
13.250	0.00	0.35	0.424	IO				5.72
13.333	0.00	0.35	0.422	IO				5.69
13.417	0.00	0.35	0.420	IO				5.66
13.500	0.00	0.35	0.417	IO				5.63
13.583	0.00	0.35	0.415	IO				5.60
13.667	0.00	0.35	0.412	IO				5.57
13.750	0.00	0.35	0.410	IO				5.54
13.833	0.00	0.35	0.407	IO				5.51

13.917	0.00	0.35	0.405	IO				5.48
14.000	0.00	0.35	0.403	IO				5.46
14.083	0.00	0.35	0.400	IO				5.43
14.167	0.00	0.35	0.398	IO				5.40
14.250	0.00	0.35	0.395	IO				5.37
14.333	0.00	0.35	0.393	IO				5.34
14.417	0.00	0.35	0.391	IO				5.31
14.500	0.00	0.35	0.388	IO				5.28
14.583	0.00	0.35	0.386	IO				5.25
14.667	0.00	0.35	0.383	IO				5.22
14.750	0.00	0.35	0.381	IO				5.19
14.833	0.00	0.35	0.379	IO				5.16
14.917	0.00	0.35	0.376	IO				5.13
15.000	0.00	0.35	0.374	IO				5.10
15.083	0.00	0.35	0.371	IO				5.07
15.167	0.00	0.35	0.369	IO				5.04
15.250	0.00	0.35	0.367	IO				5.01
15.333	0.00	0.35	0.364	IO				4.98
15.417	0.00	0.35	0.362	IO				4.95
15.500	0.00	0.35	0.359	IO				4.92
15.583	0.00	0.35	0.357	IO				4.89
15.667	0.00	0.35	0.354	IO				4.86
15.750	0.00	0.35	0.352	IO				4.83
15.833	0.00	0.35	0.350	IO				4.80
15.917	0.00	0.35	0.347	IO				4.77
16.000	0.00	0.35	0.345	IO				4.74
16.083	0.00	0.35	0.342	IO				4.71
16.167	0.00	0.35	0.340	IO				4.68
16.250	0.00	0.35	0.338	IO				4.65
16.333	0.00	0.35	0.335	IO				4.62
16.417	0.00	0.35	0.333	IO				4.59
16.500	0.00	0.35	0.330	IO				4.56
16.583	0.00	0.35	0.328	IO				4.53
16.667	0.00	0.35	0.326	IO				4.50
16.750	0.00	0.35	0.323	IO				4.47
16.833	0.00	0.35	0.321	IO				4.44
16.917	0.00	0.35	0.318	IO				4.41
17.000	0.00	0.35	0.316	IO				4.38
17.083	0.00	0.35	0.313	IO				4.36
17.167	0.00	0.35	0.311	IO				4.33
17.250	0.00	0.35	0.309	IO				4.30
17.333	0.00	0.35	0.306	IO				4.27
17.417	0.00	0.35	0.304	IO				4.24
17.500	0.00	0.35	0.301	IO				4.21
17.583	0.00	0.35	0.299	IO				4.18
17.667	0.00	0.35	0.297	IO				4.15
17.750	0.00	0.35	0.294	IO				4.12
17.833	0.00	0.35	0.292	IO				4.09
17.917	0.00	0.35	0.289	IO				4.06
18.000	0.00	0.35	0.287	IO				4.03
18.083	0.00	0.35	0.285	IO				4.00
18.167	0.00	0.35	0.282	IO				3.97
18.250	0.00	0.35	0.280	IO				3.94
18.333	0.00	0.35	0.277	IO				3.91
18.417	0.00	0.35	0.275	IO				3.88
18.500	0.00	0.35	0.273	IO				3.85
18.583	0.00	0.35	0.270	IO				3.82
18.667	0.00	0.35	0.268	IO				3.79
18.750	0.00	0.35	0.265	IO				3.76
18.833	0.00	0.35	0.263	IO				3.73

18.917	0.00	0.35	0.260	IO				3.70
19.000	0.00	0.35	0.258	IO				3.67
19.083	0.00	0.35	0.256	IO				3.64
19.167	0.00	0.35	0.253	IO				3.61
19.250	0.00	0.35	0.251	IO				3.58
19.333	0.00	0.35	0.248	IO				3.55
19.417	0.00	0.35	0.246	IO				3.52
19.500	0.00	0.35	0.244	IO				3.49
19.583	0.00	0.35	0.241	IO				3.46
19.667	0.00	0.35	0.239	IO				3.43
19.750	0.00	0.35	0.236	IO				3.40
19.833	0.00	0.35	0.234	IO				3.37
19.917	0.00	0.35	0.232	IO				3.34
20.000	0.00	0.35	0.229	IO				3.31
20.083	0.00	0.35	0.227	IO				3.28
20.167	0.00	0.35	0.224	IO				3.26
20.250	0.00	0.35	0.222	IO				3.23
20.333	0.00	0.35	0.219	IO				3.20
20.417	0.00	0.35	0.217	IO				3.17
20.500	0.00	0.35	0.215	IO				3.14
20.583	0.00	0.35	0.212	IO				3.11
20.667	0.00	0.35	0.210	IO				3.08
20.750	0.00	0.35	0.207	IO				3.05
20.833	0.00	0.35	0.205	IO				3.02
20.917	0.00	0.35	0.203	IO				2.99
21.000	0.00	0.35	0.200	IO				2.96
21.083	0.00	0.35	0.198	IO				2.93
21.167	0.00	0.35	0.195	IO				2.90
21.250	0.00	0.35	0.193	IO				2.87
21.333	0.00	0.35	0.191	IO				2.84
21.417	0.00	0.35	0.188	IO				2.81
21.500	0.00	0.35	0.186	IO				2.78
21.583	0.00	0.35	0.183	IO				2.75
21.667	0.00	0.35	0.181	IO				2.72
21.750	0.00	0.35	0.178	IO				2.69
21.833	0.00	0.35	0.176	IO				2.66
21.917	0.00	0.35	0.174	IO				2.63
22.000	0.00	0.35	0.171	IO				2.60
22.083	0.00	0.35	0.169	IO				2.57
22.167	0.00	0.35	0.166	IO				2.54
22.250	0.00	0.35	0.164	IO				2.51
22.333	0.00	0.35	0.162	IO				2.48
22.417	0.00	0.35	0.159	IO				2.45
22.500	0.00	0.35	0.157	IO				2.42
22.583	0.00	0.35	0.154	IO				2.39
22.667	0.00	0.35	0.152	IO				2.36
22.750	0.00	0.35	0.150	IO				2.33
22.833	0.00	0.35	0.147	IO				2.30
22.917	0.00	0.35	0.145	IO				2.27
23.000	0.00	0.35	0.142	IO				2.24
23.083	0.00	0.35	0.140	IO				2.21
23.167	0.00	0.35	0.138	IO				2.18
23.250	0.00	0.35	0.135	IO				2.16
23.333	0.00	0.35	0.133	IO				2.13
23.417	0.00	0.35	0.130	IO				2.10
23.500	0.00	0.35	0.128	IO				2.07
23.583	0.00	0.35	0.125	IO				2.04
23.667	0.00	0.35	0.123	IO				2.01
23.750	0.00	0.35	0.121	IO				1.98
23.833	0.00	0.35	0.118	IO				1.95

23.917	0.00	0.35	0.116	IO				1.92
24.000	0.00	0.35	0.113	IO				1.89
24.083	0.00	0.35	0.111	IO				1.86
24.167	0.00	0.35	0.109	IO				1.83
24.250	0.00	0.35	0.106	IO				1.80
24.333	0.00	0.35	0.104	IO				1.77
24.417	0.00	0.35	0.101	IO				1.74
24.500	0.00	0.35	0.099	IO				1.71
24.583	0.00	0.35	0.097	IO				1.68
24.667	0.00	0.35	0.094	IO				1.65
24.750	0.00	0.35	0.092	IO				1.62
24.833	0.00	0.35	0.089	IO				1.59
24.917	0.00	0.35	0.087	IO				1.56
25.000	0.00	0.35	0.084	IO				1.53
25.083	0.00	0.35	0.082	IO				1.50
25.167	0.00	0.34	0.080	IO				1.46
25.250	0.00	0.33	0.077	IO				1.42
25.333	0.00	0.32	0.075	IO				1.37
25.417	0.00	0.31	0.073	IO				1.33
25.500	0.00	0.30	0.071	IO				1.30
25.583	0.00	0.29	0.069	IO				1.26
25.667	0.00	0.29	0.067	IO				1.22
25.750	0.00	0.28	0.065	IO				1.19
25.833	0.00	0.27	0.063	IO				1.15
25.917	0.00	0.26	0.061	IO				1.12
26.000	0.00	0.25	0.059	IO				1.09
26.083	0.00	0.25	0.058	IO				1.06
26.167	0.00	0.24	0.056	IO				1.02
26.250	0.00	0.23	0.054	IO				0.99
26.333	0.00	0.23	0.053	IO				0.97
26.417	0.00	0.22	0.051	IO				0.94
26.500	0.00	0.21	0.050	IO				0.91
26.583	0.00	0.21	0.048	O				0.88
26.667	0.00	0.20	0.047	O				0.86
26.750	0.00	0.19	0.046	O				0.83
26.833	0.00	0.19	0.044	O				0.81
26.917	0.00	0.18	0.043	O				0.79
27.000	0.00	0.18	0.042	O				0.76
27.083	0.00	0.17	0.041	O				0.74
27.167	0.00	0.17	0.039	O				0.72
27.250	0.00	0.16	0.038	O				0.70
27.333	0.00	0.16	0.037	O				0.68
27.417	0.00	0.15	0.036	O				0.66
27.500	0.00	0.15	0.035	O				0.64
27.583	0.00	0.15	0.034	O				0.62
27.667	0.00	0.14	0.033	O				0.60
27.750	0.00	0.14	0.032	O				0.59
27.833	0.00	0.13	0.031	O				0.57
27.917	0.00	0.13	0.030	O				0.55
28.000	0.00	0.13	0.029	O				0.54
28.083	0.00	0.12	0.028	O				0.52
28.167	0.00	0.12	0.028	O				0.51
28.250	0.00	0.11	0.027	O				0.49
28.333	0.00	0.11	0.026	O				0.48
28.417	0.00	0.11	0.025	O				0.46
28.500	0.00	0.10	0.025	O				0.45
28.583	0.00	0.10	0.024	O				0.44
28.667	0.00	0.10	0.023	O				0.42
28.750	0.00	0.10	0.023	O				0.41
28.833	0.00	0.09	0.022	O				0.40

28.917	0.00	0.09	0.021	O	|	|	|	0.39
29.000	0.00	0.09	0.021	O	|	|	|	0.38
29.083	0.00	0.09	0.020	O	|	|	|	0.37
29.167	0.00	0.08	0.019	O	|	|	|	0.36
29.250	0.00	0.08	0.019	O	|	|	|	0.35
29.333	0.00	0.08	0.018	O	|	|	|	0.34
29.417	0.00	0.08	0.018	O	|	|	|	0.33
29.500	0.00	0.07	0.017	O	|	|	|	0.32
29.583	0.00	0.07	0.017	O	|	|	|	0.31
29.667	0.00	0.07	0.016	O	|	|	|	0.30
29.750	0.00	0.07	0.016	O	|	|	|	0.29
29.833	0.00	0.07	0.015	O	|	|	|	0.28
29.917	0.00	0.06	0.015	O	|	|	|	0.27
30.000	0.00	0.06	0.014	O	|	|	|	0.26
30.083	0.00	0.06	0.014	O	|	|	|	0.26
30.167	0.00	0.06	0.014	O	|	|	|	0.25
30.250	0.00	0.06	0.013	O	|	|	|	0.24
30.333	0.00	0.05	0.013	O	|	|	|	0.24
30.417	0.00	0.05	0.013	O	|	|	|	0.23
30.500	0.00	0.05	0.012	O	|	|	|	0.22
30.583	0.00	0.05	0.012	O	|	|	|	0.22
30.667	0.00	0.05	0.011	O	|	|	|	0.21
30.750	0.00	0.05	0.011	O	|	|	|	0.20
30.833	0.00	0.05	0.011	O	|	|	|	0.20
30.917	0.00	0.04	0.010	O	|	|	|	0.19
31.000	0.00	0.04	0.010	O	|	|	|	0.19
31.083	0.00	0.04	0.010	O	|	|	|	0.18
31.167	0.00	0.04	0.010	O	|	|	|	0.18
31.250	0.00	0.04	0.009	O	|	|	|	0.17
31.333	0.00	0.04	0.009	O	|	|	|	0.17
31.417	0.00	0.04	0.009	O	|	|	|	0.16
31.500	0.00	0.04	0.009	O	|	|	|	0.16
31.583	0.00	0.04	0.008	O	|	|	|	0.15
31.667	0.00	0.03	0.008	O	|	|	|	0.15
31.750	0.00	0.03	0.008	O	|	|	|	0.14
31.833	0.00	0.03	0.008	O	|	|	|	0.14
31.917	0.00	0.03	0.007	O	|	|	|	0.13
32.000	0.00	0.03	0.007	O	|	|	|	0.13
32.083	0.00	0.03	0.007	O	|	|	|	0.13
32.167	0.00	0.03	0.007	O	|	|	|	0.12
32.250	0.00	0.03	0.007	O	|	|	|	0.12
32.333	0.00	0.03	0.006	O	|	|	|	0.12
32.417	0.00	0.03	0.006	O	|	|	|	0.11
32.500	0.00	0.03	0.006	O	|	|	|	0.11
32.583	0.00	0.02	0.006	O	|	|	|	0.11
32.667	0.00	0.02	0.006	O	|	|	|	0.10
32.750	0.00	0.02	0.005	O	|	|	|	0.10
32.833	0.00	0.02	0.005	O	|	|	|	0.10
32.917	0.00	0.02	0.005	O	|	|	|	0.09
33.000	0.00	0.02	0.005	O	|	|	|	0.09
33.083	0.00	0.02	0.005	O	|	|	|	0.09
33.167	0.00	0.02	0.005	O	|	|	|	0.09
33.250	0.00	0.02	0.005	O	|	|	|	0.08
33.333	0.00	0.02	0.004	O	|	|	|	0.08
33.417	0.00	0.02	0.004	O	|	|	|	0.08
33.500	0.00	0.02	0.004	O	|	|	|	0.08
33.583	0.00	0.02	0.004	O	|	|	|	0.07
33.667	0.00	0.02	0.004	O	|	|	|	0.07
33.750	0.00	0.02	0.004	O	|	|	|	0.07
33.833	0.00	0.02	0.004	O	|	|	|	0.07

33.917	0.00	0.02	0.004	O					0.07
34.000	0.00	0.02	0.004	O					0.06
34.083	0.00	0.01	0.003	O					0.06
34.167	0.00	0.01	0.003	O					0.06
34.250	0.00	0.01	0.003	O					0.06
34.333	0.00	0.01	0.003	O					0.06
34.417	0.00	0.01	0.003	O					0.06
34.500	0.00	0.01	0.003	O					0.05
34.583	0.00	0.01	0.003	O					0.05
34.667	0.00	0.01	0.003	O					0.05
34.750	0.00	0.01	0.003	O					0.05
34.833	0.00	0.01	0.003	O					0.05
34.917	0.00	0.01	0.003	O					0.05
35.000	0.00	0.01	0.002	O					0.05
35.083	0.00	0.01	0.002	O					0.04
35.167	0.00	0.01	0.002	O					0.04
35.250	0.00	0.01	0.002	O					0.04
35.333	0.00	0.01	0.002	O					0.04
35.417	0.00	0.01	0.002	O					0.04
35.500	0.00	0.01	0.002	O					0.04
35.583	0.00	0.01	0.002	O					0.04
35.667	0.00	0.01	0.002	O					0.04
35.750	0.00	0.01	0.002	O					0.03
35.833	0.00	0.01	0.002	O					0.03
35.917	0.00	0.01	0.002	O					0.03
36.000	0.00	0.01	0.002	O					0.03
36.083	0.00	0.01	0.002	O					0.03
36.167	0.00	0.01	0.002	O					0.03
36.250	0.00	0.01	0.002	O					0.03
36.333	0.00	0.01	0.002	O					0.03
36.417	0.00	0.01	0.002	O					0.03
36.500	0.00	0.01	0.001	O					0.03
36.583	0.00	0.01	0.001	O					0.03
36.667	0.00	0.01	0.001	O					0.03
36.750	0.00	0.01	0.001	O					0.02
36.833	0.00	0.01	0.001	O					0.02
36.917	0.00	0.01	0.001	O					0.02
37.000	0.00	0.01	0.001	O					0.02
37.083	0.00	0.01	0.001	O					0.02
37.167	0.00	0.00	0.001	O					0.02
37.250	0.00	0.00	0.001	O					0.02
37.333	0.00	0.00	0.001	O					0.02
37.417	0.00	0.00	0.001	O					0.02
37.500	0.00	0.00	0.001	O					0.02
37.583	0.00	0.00	0.001	O					0.02
37.667	0.00	0.00	0.001	O					0.02
37.750	0.00	0.00	0.001	O					0.02
37.833	0.00	0.00	0.001	O					0.02
37.917	0.00	0.00	0.001	O					0.02
38.000	0.00	0.00	0.001	O					0.02
38.083	0.00	0.00	0.001	O					0.02
38.167	0.00	0.00	0.001	O					0.01
38.250	0.00	0.00	0.001	O					0.01
38.333	0.00	0.00	0.001	O					0.01
38.417	0.00	0.00	0.001	O					0.01
38.500	0.00	0.00	0.001	O					0.01
38.583	0.00	0.00	0.001	O					0.01
38.667	0.00	0.00	0.001	O					0.01
38.750	0.00	0.00	0.001	O					0.01
38.833	0.00	0.00	0.001	O					0.01

38.917	0.00	0.00	0.001	O	|	|	|	|	0.01
39.000	0.00	0.00	0.001	O	|	|	|	|	0.01
39.083	0.00	0.00	0.001	O	|	|	|	|	0.01
39.167	0.00	0.00	0.001	O	|	|	|	|	0.01
39.250	0.00	0.00	0.001	O	|	|	|	|	0.01
39.333	0.00	0.00	0.001	O	|	|	|	|	0.01
39.417	0.00	0.00	0.001	O	|	|	|	|	0.01
39.500	0.00	0.00	0.001	O	|	|	|	|	0.01
39.583	0.00	0.00	0.000	O	|	|	|	|	0.01
39.667	0.00	0.00	0.000	O	|	|	|	|	0.01
39.750	0.00	0.00	0.000	O	|	|	|	|	0.01
39.833	0.00	0.00	0.000	O	|	|	|	|	0.01
39.917	0.00	0.00	0.000	O	|	|	|	|	0.01
40.000	0.00	0.00	0.000	O	|	|	|	|	0.01
40.083	0.00	0.00	0.000	O	|	|	|	|	0.01
40.167	0.00	0.00	0.000	O	|	|	|	|	0.01
40.250	0.00	0.00	0.000	O	|	|	|	|	0.01
40.333	0.00	0.00	0.000	O	|	|	|	|	0.01
40.417	0.00	0.00	0.000	O	|	|	|	|	0.01
40.500	0.00	0.00	0.000	O	|	|	|	|	0.01
40.583	0.00	0.00	0.000	O	|	|	|	|	0.01
40.667	0.00	0.00	0.000	O	|	|	|	|	0.01
40.750	0.00	0.00	0.000	O	|	|	|	|	0.01
40.833	0.00	0.00	0.000	O	|	|	|	|	0.01
40.917	0.00	0.00	0.000	O	|	|	|	|	0.01
41.000	0.00	0.00	0.000	O	|	|	|	|	0.01
41.083	0.00	0.00	0.000	O	|	|	|	|	0.01
41.167	0.00	0.00	0.000	O	|	|	|	|	0.01
41.250	0.00	0.00	0.000	O	|	|	|	|	0.01
41.333	0.00	0.00	0.000	O	|	|	|	|	0.00
41.417	0.00	0.00	0.000	O	|	|	|	|	0.00
41.500	0.00	0.00	0.000	O	|	|	|	|	0.00
41.583	0.00	0.00	0.000	O	|	|	|	|	0.00
41.667	0.00	0.00	0.000	O	|	|	|	|	0.00
41.750	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 501
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.415 (CFS)
Total volume = 0.786 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
2-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.247 (CFS)
Total volume = 1.365 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

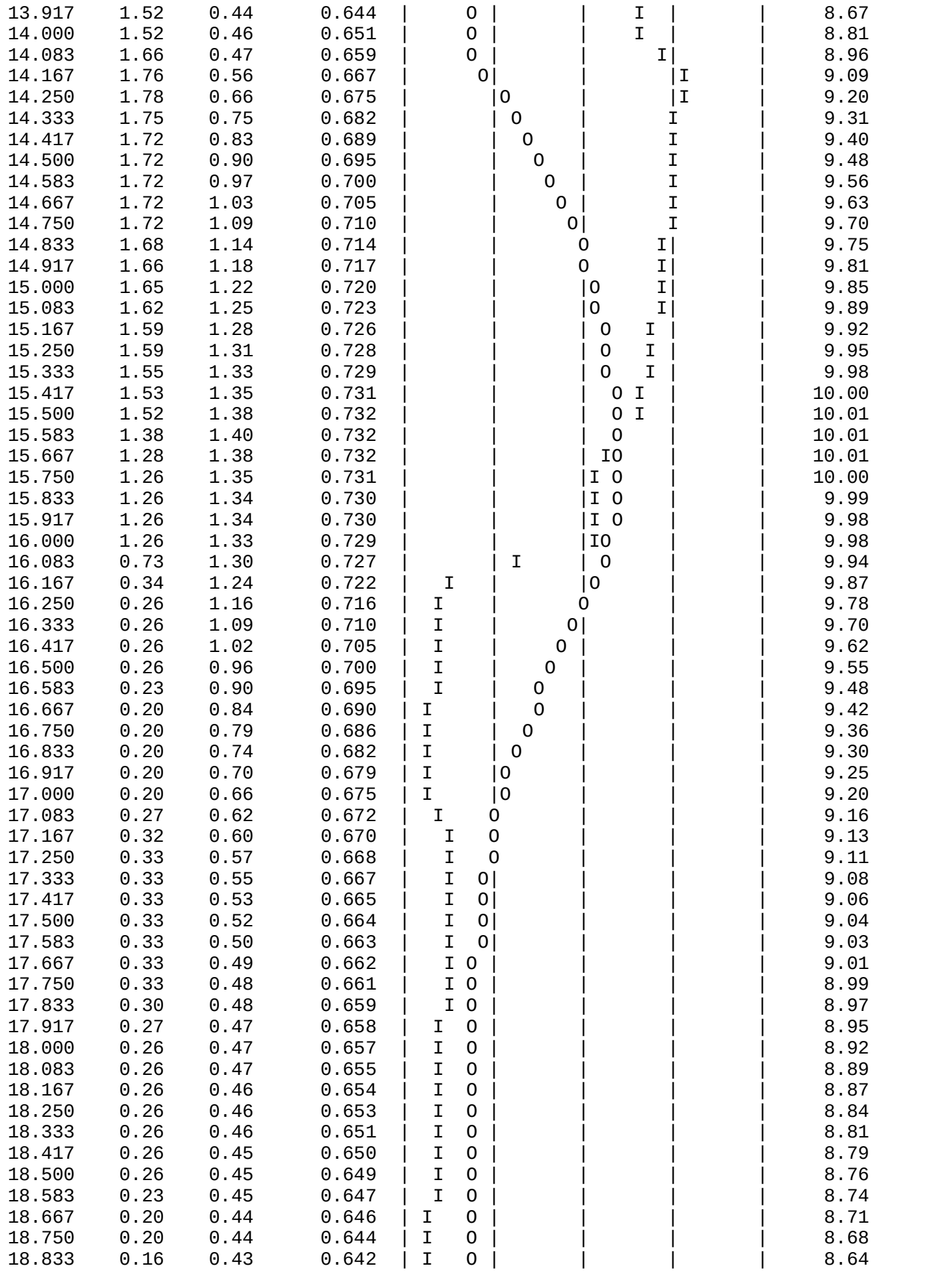
Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 0.6 1.12 1.69 2.25	Depth (Ft.)
0.083	0.07	0.00	0.000	O | | | |	0.00
0.167	0.12	0.00	0.001	OI | | | |	0.02
0.250	0.13	0.01	0.002	OI | | | |	0.03
0.333	0.17	0.01	0.003	O I | | | |	0.05
0.417	0.19	0.02	0.004	O I | | | |	0.07
0.500	0.20	0.02	0.005	O I | | | |	0.09
0.583	0.20	0.03	0.006	O I | | | |	0.11
0.667	0.20	0.03	0.007	O I | | | |	0.14
0.750	0.20	0.04	0.009	O I | | | |	0.16
0.833	0.23	0.04	0.010	O I | | | |	0.18
0.917	0.26	0.05	0.011	O I | | | |	0.20
1.000	0.26	0.05	0.013	O I | | | |	0.23
1.083	0.23	0.06	0.014	O I | | | |	0.25
1.167	0.20	0.06	0.015	O I | | | |	0.27
1.250	0.20	0.07	0.016	O I | | | |	0.29
1.333	0.20	0.07	0.017	|OI | | | |	0.31
1.417	0.20	0.08	0.018	|OI | | | |	0.32
1.500	0.20	0.08	0.018	|OI | | | |	0.34
1.583	0.20	0.08	0.019	|OI | | | |	0.35
1.667	0.20	0.09	0.020	|OI | | | |	0.37
1.750	0.20	0.09	0.021	|OI | | | |	0.38
1.833	0.23	0.09	0.022	|O I | | | |	0.40
1.917	0.26	0.10	0.023	|O I | | | |	0.42
2.000	0.26	0.10	0.024	|O I | | | |	0.44
2.083	0.26	0.11	0.025	|O I | | | |	0.46
2.167	0.26	0.11	0.026	|O I | | | |	0.48
2.250	0.26	0.12	0.027	|O I | | | |	0.50
2.333	0.26	0.12	0.028	|O I | | | |	0.51
2.417	0.26	0.12	0.029	|O I | | | |	0.53
2.500	0.26	0.13	0.030	|O I | | | |	0.55
2.583	0.30	0.13	0.031	|O I | | | |	0.57
2.667	0.33	0.14	0.032	|O I | | | |	0.59
2.750	0.33	0.14	0.034	| O I | | | |	0.61
2.833	0.33	0.15	0.035	| O I | | | |	0.64
2.917	0.33	0.15	0.036	| O I | | | |	0.66
3.000	0.33	0.16	0.037	| O I | | | |	0.68
3.083	0.33	0.16	0.038	| O I | | | |	0.70
3.167	0.33	0.17	0.040	| O I | | | |	0.72
3.250	0.33	0.17	0.041	| O I | | | |	0.74
3.333	0.33	0.18	0.042	| O I | | | |	0.76
3.417	0.33	0.18	0.043	| O I | | | |	0.78
3.500	0.33	0.19	0.044	| O I | | | |	0.80
3.583	0.33	0.19	0.045	| O I | | | |	0.82
3.667	0.33	0.19	0.046	| O I | | | |	0.84
3.750	0.33	0.20	0.047	| O I | | | |	0.85
3.833	0.37	0.20	0.048	| O I | | | |	0.87

3.917	0.39	0.21	0.049	O I				0.89
4.000	0.40	0.21	0.050	O I				0.92
4.083	0.40	0.22	0.051	O I				0.94
4.167	0.40	0.22	0.053	O I				0.96
4.250	0.40	0.23	0.054	O I				0.98
4.333	0.43	0.23	0.055	O I				1.00
4.417	0.46	0.24	0.056	O I				1.03
4.500	0.46	0.25	0.058	O I				1.06
4.583	0.46	0.25	0.059	O I				1.08
4.667	0.46	0.26	0.061	O I				1.11
4.750	0.46	0.27	0.062	O I				1.14
4.833	0.50	0.27	0.064	O I				1.16
4.917	0.52	0.28	0.065	O I				1.19
5.000	0.53	0.29	0.067	O I				1.22
5.083	0.46	0.29	0.068	O I				1.25
5.167	0.41	0.30	0.069	OI				1.27
5.250	0.40	0.30	0.070	OI				1.28
5.333	0.43	0.30	0.071	O I				1.29
5.417	0.46	0.31	0.072	O I				1.31
5.500	0.46	0.31	0.073	O I				1.33
5.583	0.50	0.32	0.074	O I				1.35
5.667	0.52	0.32	0.075	O I				1.38
5.750	0.53	0.33	0.077	O I				1.40
5.833	0.53	0.33	0.078	O I				1.43
5.917	0.53	0.34	0.079	O I				1.45
6.000	0.53	0.34	0.081	O I				1.47
6.083	0.56	0.35	0.082	O I				1.50
6.167	0.59	0.35	0.084	O I				1.52
6.250	0.59	0.35	0.085	O I				1.54
6.333	0.59	0.35	0.087	O I				1.56
6.417	0.59	0.35	0.089	O I				1.58
6.500	0.59	0.35	0.090	O I				1.60
6.583	0.63	0.35	0.092	O I				1.62
6.667	0.66	0.35	0.094	O	I			1.65
6.750	0.66	0.35	0.096	O	I			1.68
6.833	0.66	0.35	0.098	O	I			1.70
6.917	0.66	0.35	0.100	O	I			1.73
7.000	0.66	0.35	0.103	O	I			1.75
7.083	0.66	0.35	0.105	O	I			1.78
7.167	0.66	0.35	0.107	O	I			1.81
7.250	0.66	0.35	0.109	O	I			1.83
7.333	0.70	0.35	0.111	O	I			1.86
7.417	0.72	0.35	0.114	O	I			1.89
7.500	0.73	0.35	0.116	O	I			1.92
7.583	0.76	0.35	0.119	O	I			1.96
7.667	0.79	0.35	0.122	O	I			1.99
7.750	0.79	0.35	0.125	O	I			2.03
7.833	0.83	0.35	0.128	O	I			2.07
7.917	0.85	0.35	0.132	O	I			2.11
8.000	0.86	0.35	0.135	O	I			2.15
8.083	0.93	0.35	0.139	O	I			2.20
8.167	0.98	0.35	0.143	O	I			2.25
8.250	0.99	0.35	0.147	O	I			2.31
8.333	0.99	0.35	0.152	O	I			2.36
8.417	0.99	0.35	0.156	O	I			2.42
8.500	0.99	0.35	0.161	O	I			2.47
8.583	1.03	0.35	0.165	O	I			2.53
8.667	1.05	0.35	0.170	O	I			2.58
8.750	1.06	0.35	0.175	O	I			2.64
8.833	1.09	0.35	0.180	O	I			2.71

8.917	1.12	0.35	0.185	O		I			2.77
9.000	1.12	0.35	0.190	O		I			2.84
9.083	1.19	0.35	0.196	O		I			2.90
9.167	1.25	0.35	0.202	O		I			2.98
9.250	1.26	0.35	0.208	O		I			3.05
9.333	1.29	0.35	0.214	O		I			3.13
9.417	1.32	0.35	0.221	O		I			3.21
9.500	1.32	0.35	0.228	O		I			3.30
9.583	1.36	0.35	0.234	O		I			3.38
9.667	1.38	0.35	0.241	O		I			3.47
9.750	1.39	0.35	0.249	O		I			3.55
9.833	1.42	0.35	0.256	O		I			3.64
9.917	1.45	0.35	0.263	O		I			3.74
10.000	1.45	0.35	0.271	O		I			3.83
10.083	1.21	0.35	0.278	O		I			3.91
10.167	1.03	0.35	0.283	O	I				3.98
10.250	0.99	0.35	0.288	O	I				4.03
10.333	0.99	0.35	0.292	O	I				4.09
10.417	0.99	0.35	0.296	O	I				4.14
10.500	0.99	0.35	0.301	O	I				4.20
10.583	1.17	0.35	0.306	O		I			4.26
10.667	1.30	0.35	0.312	O		I			4.33
10.750	1.32	0.35	0.318	O		I			4.42
10.833	1.32	0.35	0.325	O		I			4.50
10.917	1.32	0.35	0.332	O		I			4.58
11.000	1.32	0.35	0.339	O		I			4.66
11.083	1.29	0.35	0.345	O		I			4.74
11.167	1.26	0.35	0.351	O		I			4.82
11.250	1.26	0.35	0.358	O		I			4.90
11.333	1.26	0.35	0.364	O		I			4.98
11.417	1.26	0.35	0.370	O		I			5.05
11.500	1.26	0.35	0.376	O		I			5.13
11.583	1.19	0.35	0.382	O		I			5.21
11.667	1.13	0.35	0.388	O		I			5.27
11.750	1.12	0.35	0.393	O		I			5.34
11.833	1.16	0.35	0.399	O		I			5.41
11.917	1.18	0.35	0.404	O		I			5.48
12.000	1.19	0.35	0.410	O		I			5.55
12.083	1.43	0.35	0.417	O		I			5.63
12.167	1.62	0.35	0.425	O		I			5.73
12.250	1.65	0.35	0.434	O		I			5.84
12.333	1.69	0.35	0.443	O		I			5.95
12.417	1.71	0.35	0.452	O		I			6.07
12.500	1.72	0.35	0.462	O		I			6.18
12.583	1.79	0.35	0.471	O		I			6.30
12.667	1.84	0.35	0.481	O		I			6.43
12.750	1.85	0.35	0.492	O		I			6.55
12.833	1.89	0.35	0.502	O		I			6.68
12.917	1.91	0.35	0.513	O		I			6.81
13.000	1.92	0.35	0.523	O		I			6.95
13.083	2.09	0.35	0.535	O		I			7.09
13.167	2.22	0.35	0.547	O		I			7.24
13.250	2.25	0.35	0.560	O		I			7.40
13.333	2.25	0.35	0.573	O		I			7.56
13.417	2.25	0.35	0.586	O		I			7.72
13.500	2.25	0.35	0.599	O		I			7.88
13.583	1.86	0.36	0.611	O		I			8.04
13.667	1.58	0.38	0.621	O		I			8.22
13.750	1.52	0.40	0.629	O		I			8.38
13.833	1.52	0.42	0.636	O		I			8.52



18.917	0.14	0.43	0.640	I O				8.60
19.000	0.13	0.42	0.638	I O				8.57
19.083	0.17	0.42	0.637	I O				8.53
19.167	0.19	0.41	0.635	I O				8.50
19.250	0.20	0.41	0.633	I O				8.47
19.333	0.23	0.41	0.632	I O				8.44
19.417	0.26	0.40	0.631	I O				8.42
19.500	0.26	0.40	0.630	I O				8.40
19.583	0.23	0.40	0.629	I O				8.38
19.667	0.20	0.40	0.628	I O				8.36
19.750	0.20	0.39	0.626	I O				8.33
19.833	0.16	0.39	0.625	I O				8.31
19.917	0.14	0.39	0.623	I O				8.27
20.000	0.13	0.38	0.622	I O				8.24
20.083	0.17	0.38	0.620	I O				8.21
20.167	0.19	0.37	0.619	I O				8.19
20.250	0.20	0.37	0.617	I O				8.16
20.333	0.20	0.37	0.616	I O				8.14
20.417	0.20	0.37	0.615	I O				8.12
20.500	0.20	0.36	0.614	I O				8.09
20.583	0.20	0.36	0.613	I O				8.07
20.667	0.20	0.36	0.612	I O				8.05
20.750	0.20	0.35	0.611	I O				8.03
20.833	0.16	0.35	0.609	I O				8.01
20.917	0.14	0.35	0.608	I O				7.99
21.000	0.13	0.35	0.607	I O				7.97
21.083	0.17	0.35	0.605	I O				7.95
21.167	0.19	0.35	0.604	I O				7.94
21.250	0.20	0.35	0.603	I O				7.93
21.333	0.16	0.35	0.602	I O				7.91
21.417	0.14	0.35	0.600	I O				7.89
21.500	0.13	0.35	0.599	I O				7.88
21.583	0.17	0.35	0.598	I O				7.86
21.667	0.19	0.35	0.596	I O				7.84
21.750	0.20	0.35	0.595	I O				7.83
21.833	0.16	0.35	0.594	I O				7.82
21.917	0.14	0.35	0.593	I O				7.80
22.000	0.13	0.35	0.591	I O				7.78
22.083	0.17	0.35	0.590	I O				7.76
22.167	0.19	0.35	0.589	I O				7.75
22.250	0.20	0.35	0.588	I O				7.74
22.333	0.16	0.35	0.587	I O				7.72
22.417	0.14	0.35	0.585	I O				7.71
22.500	0.13	0.35	0.584	I O				7.69
22.583	0.13	0.35	0.582	I O				7.67
22.667	0.13	0.35	0.581	I O				7.65
22.750	0.13	0.35	0.579	I O				7.63
22.833	0.13	0.35	0.578	I O				7.61
22.917	0.13	0.35	0.576	I O				7.60
23.000	0.13	0.35	0.575	I O				7.58
23.083	0.13	0.35	0.573	I O				7.56
23.167	0.13	0.35	0.572	I O				7.54
23.250	0.13	0.35	0.570	I O				7.52
23.333	0.13	0.35	0.569	I O				7.50
23.417	0.13	0.35	0.567	I O				7.48
23.500	0.13	0.35	0.566	I O				7.47
23.583	0.13	0.35	0.564	I O				7.45
23.667	0.13	0.35	0.563	I O				7.43
23.750	0.13	0.35	0.561	I O				7.41
23.833	0.13	0.35	0.560	I O				7.39

23.917	0.13	0.35	0.558	|I	O	|	|	|	7.37
24.000	0.13	0.35	0.557	|I	O	|	|	|	7.35
24.083	0.06	0.35	0.555	I	O	|	|	|	7.33
24.167	0.01	0.35	0.553	I	O	|	|	|	7.31
24.250	0.00	0.35	0.550	I	O	|	|	|	7.28
24.333	0.00	0.35	0.548	I	O	|	|	|	7.25
24.417	0.00	0.35	0.546	I	O	|	|	|	7.22
24.500	0.00	0.35	0.543	I	O	|	|	|	7.19
24.583	0.00	0.35	0.541	I	O	|	|	|	7.16
24.667	0.00	0.35	0.538	I	O	|	|	|	7.13
24.750	0.00	0.35	0.536	I	O	|	|	|	7.10
24.833	0.00	0.35	0.534	I	O	|	|	|	7.07
24.917	0.00	0.35	0.531	I	O	|	|	|	7.04
25.000	0.00	0.35	0.529	I	O	|	|	|	7.01
25.083	0.00	0.35	0.526	I	O	|	|	|	6.98
25.167	0.00	0.35	0.524	I	O	|	|	|	6.95
25.250	0.00	0.35	0.521	I	O	|	|	|	6.92
25.333	0.00	0.35	0.519	I	O	|	|	|	6.89
25.417	0.00	0.35	0.517	I	O	|	|	|	6.86
25.500	0.00	0.35	0.514	I	O	|	|	|	6.83
25.583	0.00	0.35	0.512	I	O	|	|	|	6.80
25.667	0.00	0.35	0.509	I	O	|	|	|	6.77
25.750	0.00	0.35	0.507	I	O	|	|	|	6.74
25.833	0.00	0.35	0.505	I	O	|	|	|	6.71
25.917	0.00	0.35	0.502	I	O	|	|	|	6.68
26.000	0.00	0.35	0.500	I	O	|	|	|	6.65
26.083	0.00	0.35	0.497	I	O	|	|	|	6.62
26.167	0.00	0.35	0.495	I	O	|	|	|	6.59
26.250	0.00	0.35	0.493	I	O	|	|	|	6.56
26.333	0.00	0.35	0.490	I	O	|	|	|	6.53
26.417	0.00	0.35	0.488	I	O	|	|	|	6.50
26.500	0.00	0.35	0.485	I	O	|	|	|	6.47
26.583	0.00	0.35	0.483	I	O	|	|	|	6.44
26.667	0.00	0.35	0.480	I	O	|	|	|	6.41
26.750	0.00	0.35	0.478	I	O	|	|	|	6.39
26.833	0.00	0.35	0.476	I	O	|	|	|	6.36
26.917	0.00	0.35	0.473	I	O	|	|	|	6.33
27.000	0.00	0.35	0.471	I	O	|	|	|	6.30
27.083	0.00	0.35	0.468	I	O	|	|	|	6.27
27.167	0.00	0.35	0.466	I	O	|	|	|	6.24
27.250	0.00	0.35	0.464	I	O	|	|	|	6.21
27.333	0.00	0.35	0.461	I	O	|	|	|	6.18
27.417	0.00	0.35	0.459	I	O	|	|	|	6.15
27.500	0.00	0.35	0.456	I	O	|	|	|	6.12
27.583	0.00	0.35	0.454	I	O	|	|	|	6.09
27.667	0.00	0.35	0.452	I	O	|	|	|	6.06
27.750	0.00	0.35	0.449	I	O	|	|	|	6.03
27.833	0.00	0.35	0.447	I	O	|	|	|	6.00
27.917	0.00	0.35	0.444	I	O	|	|	|	5.97
28.000	0.00	0.35	0.442	I	O	|	|	|	5.94
28.083	0.00	0.35	0.440	I	O	|	|	|	5.91
28.167	0.00	0.35	0.437	I	O	|	|	|	5.88
28.250	0.00	0.35	0.435	I	O	|	|	|	5.85
28.333	0.00	0.35	0.432	I	O	|	|	|	5.82
28.417	0.00	0.35	0.430	I	O	|	|	|	5.79
28.500	0.00	0.35	0.427	I	O	|	|	|	5.76
28.583	0.00	0.35	0.425	I	O	|	|	|	5.73
28.667	0.00	0.35	0.423	I	O	|	|	|	5.70
28.750	0.00	0.35	0.420	I	O	|	|	|	5.67
28.833	0.00	0.35	0.418	I	O	|	|	|	5.64

28.917	0.00	0.35	0.415	I	O	|	|	|	|	5.61
29.000	0.00	0.35	0.413	I	O	|	|	|	|	5.58
29.083	0.00	0.35	0.411	I	O	|	|	|	|	5.55
29.167	0.00	0.35	0.408	I	O	|	|	|	|	5.52
29.250	0.00	0.35	0.406	I	O	|	|	|	|	5.49
29.333	0.00	0.35	0.403	I	O	|	|	|	|	5.46
29.417	0.00	0.35	0.401	I	O	|	|	|	|	5.43
29.500	0.00	0.35	0.399	I	O	|	|	|	|	5.40
29.583	0.00	0.35	0.396	I	O	|	|	|	|	5.37
29.667	0.00	0.35	0.394	I	O	|	|	|	|	5.34
29.750	0.00	0.35	0.391	I	O	|	|	|	|	5.31
29.833	0.00	0.35	0.389	I	O	|	|	|	|	5.29
29.917	0.00	0.35	0.386	I	O	|	|	|	|	5.26
30.000	0.00	0.35	0.384	I	O	|	|	|	|	5.23
30.083	0.00	0.35	0.382	I	O	|	|	|	|	5.20
30.167	0.00	0.35	0.379	I	O	|	|	|	|	5.17
30.250	0.00	0.35	0.377	I	O	|	|	|	|	5.14
30.333	0.00	0.35	0.374	I	O	|	|	|	|	5.11
30.417	0.00	0.35	0.372	I	O	|	|	|	|	5.08
30.500	0.00	0.35	0.370	I	O	|	|	|	|	5.05
30.583	0.00	0.35	0.367	I	O	|	|	|	|	5.02
30.667	0.00	0.35	0.365	I	O	|	|	|	|	4.99
30.750	0.00	0.35	0.362	I	O	|	|	|	|	4.96
30.833	0.00	0.35	0.360	I	O	|	|	|	|	4.93
30.917	0.00	0.35	0.358	I	O	|	|	|	|	4.90
31.000	0.00	0.35	0.355	I	O	|	|	|	|	4.87
31.083	0.00	0.35	0.353	I	O	|	|	|	|	4.84
31.167	0.00	0.35	0.350	I	O	|	|	|	|	4.81
31.250	0.00	0.35	0.348	I	O	|	|	|	|	4.78
31.333	0.00	0.35	0.346	I	O	|	|	|	|	4.75
31.417	0.00	0.35	0.343	I	O	|	|	|	|	4.72
31.500	0.00	0.35	0.341	I	O	|	|	|	|	4.69
31.583	0.00	0.35	0.338	I	O	|	|	|	|	4.66
31.667	0.00	0.35	0.336	I	O	|	|	|	|	4.63
31.750	0.00	0.35	0.333	I	O	|	|	|	|	4.60
31.833	0.00	0.35	0.331	I	O	|	|	|	|	4.57
31.917	0.00	0.35	0.329	I	O	|	|	|	|	4.54
32.000	0.00	0.35	0.326	I	O	|	|	|	|	4.51
32.083	0.00	0.35	0.324	I	O	|	|	|	|	4.48
32.167	0.00	0.35	0.321	I	O	|	|	|	|	4.45
32.250	0.00	0.35	0.319	I	O	|	|	|	|	4.42
32.333	0.00	0.35	0.317	I	O	|	|	|	|	4.39
32.417	0.00	0.35	0.314	I	O	|	|	|	|	4.36
32.500	0.00	0.35	0.312	I	O	|	|	|	|	4.33
32.583	0.00	0.35	0.309	I	O	|	|	|	|	4.30
32.667	0.00	0.35	0.307	I	O	|	|	|	|	4.27
32.750	0.00	0.35	0.305	I	O	|	|	|	|	4.24
32.833	0.00	0.35	0.302	I	O	|	|	|	|	4.21
32.917	0.00	0.35	0.300	I	O	|	|	|	|	4.19
33.000	0.00	0.35	0.297	I	O	|	|	|	|	4.16
33.083	0.00	0.35	0.295	I	O	|	|	|	|	4.13
33.167	0.00	0.35	0.292	I	O	|	|	|	|	4.10
33.250	0.00	0.35	0.290	I	O	|	|	|	|	4.07
33.333	0.00	0.35	0.288	I	O	|	|	|	|	4.04
33.417	0.00	0.35	0.285	I	O	|	|	|	|	4.01
33.500	0.00	0.35	0.283	I	O	|	|	|	|	3.98
33.583	0.00	0.35	0.280	I	O	|	|	|	|	3.95
33.667	0.00	0.35	0.278	I	O	|	|	|	|	3.92
33.750	0.00	0.35	0.276	I	O	|	|	|	|	3.89
33.833	0.00	0.35	0.273	I	O	|	|	|	|	3.86

33.917	0.00	0.35	0.271	I	O	|	|	|	|	3.83
34.000	0.00	0.35	0.268	I	O	|	|	|	|	3.80
34.083	0.00	0.35	0.266	I	O	|	|	|	|	3.77
34.167	0.00	0.35	0.264	I	O	|	|	|	|	3.74
34.250	0.00	0.35	0.261	I	O	|	|	|	|	3.71
34.333	0.00	0.35	0.259	I	O	|	|	|	|	3.68
34.417	0.00	0.35	0.256	I	O	|	|	|	|	3.65
34.500	0.00	0.35	0.254	I	O	|	|	|	|	3.62
34.583	0.00	0.35	0.251	I	O	|	|	|	|	3.59
34.667	0.00	0.35	0.249	I	O	|	|	|	|	3.56
34.750	0.00	0.35	0.247	I	O	|	|	|	|	3.53
34.833	0.00	0.35	0.244	I	O	|	|	|	|	3.50
34.917	0.00	0.35	0.242	I	O	|	|	|	|	3.47
35.000	0.00	0.35	0.239	I	O	|	|	|	|	3.44
35.083	0.00	0.35	0.237	I	O	|	|	|	|	3.41
35.167	0.00	0.35	0.235	I	O	|	|	|	|	3.38
35.250	0.00	0.35	0.232	I	O	|	|	|	|	3.35
35.333	0.00	0.35	0.230	I	O	|	|	|	|	3.32
35.417	0.00	0.35	0.227	I	O	|	|	|	|	3.29
35.500	0.00	0.35	0.225	I	O	|	|	|	|	3.26
35.583	0.00	0.35	0.223	I	O	|	|	|	|	3.23
35.667	0.00	0.35	0.220	I	O	|	|	|	|	3.20
35.750	0.00	0.35	0.218	I	O	|	|	|	|	3.17
35.833	0.00	0.35	0.215	I	O	|	|	|	|	3.14
35.917	0.00	0.35	0.213	I	O	|	|	|	|	3.11
36.000	0.00	0.35	0.211	I	O	|	|	|	|	3.09
36.083	0.00	0.35	0.208	I	O	|	|	|	|	3.06
36.167	0.00	0.35	0.206	I	O	|	|	|	|	3.03
36.250	0.00	0.35	0.203	I	O	|	|	|	|	3.00
36.333	0.00	0.35	0.201	I	O	|	|	|	|	2.97
36.417	0.00	0.35	0.198	I	O	|	|	|	|	2.94
36.500	0.00	0.35	0.196	I	O	|	|	|	|	2.91
36.583	0.00	0.35	0.194	I	O	|	|	|	|	2.88
36.667	0.00	0.35	0.191	I	O	|	|	|	|	2.85
36.750	0.00	0.35	0.189	I	O	|	|	|	|	2.82
36.833	0.00	0.35	0.186	I	O	|	|	|	|	2.79
36.917	0.00	0.35	0.184	I	O	|	|	|	|	2.76
37.000	0.00	0.35	0.182	I	O	|	|	|	|	2.73
37.083	0.00	0.35	0.179	I	O	|	|	|	|	2.70
37.167	0.00	0.35	0.177	I	O	|	|	|	|	2.67
37.250	0.00	0.35	0.174	I	O	|	|	|	|	2.64
37.333	0.00	0.35	0.172	I	O	|	|	|	|	2.61
37.417	0.00	0.35	0.170	I	O	|	|	|	|	2.58
37.500	0.00	0.35	0.167	I	O	|	|	|	|	2.55
37.583	0.00	0.35	0.165	I	O	|	|	|	|	2.52
37.667	0.00	0.35	0.162	I	O	|	|	|	|	2.49
37.750	0.00	0.35	0.160	I	O	|	|	|	|	2.46
37.833	0.00	0.35	0.157	I	O	|	|	|	|	2.43
37.917	0.00	0.35	0.155	I	O	|	|	|	|	2.40
38.000	0.00	0.35	0.153	I	O	|	|	|	|	2.37
38.083	0.00	0.35	0.150	I	O	|	|	|	|	2.34
38.167	0.00	0.35	0.148	I	O	|	|	|	|	2.31
38.250	0.00	0.35	0.145	I	O	|	|	|	|	2.28
38.333	0.00	0.35	0.143	I	O	|	|	|	|	2.25
38.417	0.00	0.35	0.141	I	O	|	|	|	|	2.22
38.500	0.00	0.35	0.138	I	O	|	|	|	|	2.19
38.583	0.00	0.35	0.136	I	O	|	|	|	|	2.16
38.667	0.00	0.35	0.133	I	O	|	|	|	|	2.13
38.750	0.00	0.35	0.131	I	O	|	|	|	|	2.10
38.833	0.00	0.35	0.129	I	O	|	|	|	|	2.07

38.917	0.00	0.35	0.126	I	O	|	|	|	2.04
39.000	0.00	0.35	0.124	I	O	|	|	|	2.01
39.083	0.00	0.35	0.121	I	O	|	|	|	1.99
39.167	0.00	0.35	0.119	I	O	|	|	|	1.96
39.250	0.00	0.35	0.117	I	O	|	|	|	1.93
39.333	0.00	0.35	0.114	I	O	|	|	|	1.90
39.417	0.00	0.35	0.112	I	O	|	|	|	1.87
39.500	0.00	0.35	0.109	I	O	|	|	|	1.84
39.583	0.00	0.35	0.107	I	O	|	|	|	1.81
39.667	0.00	0.35	0.104	I	O	|	|	|	1.78
39.750	0.00	0.35	0.102	I	O	|	|	|	1.75
39.833	0.00	0.35	0.100	I	O	|	|	|	1.72
39.917	0.00	0.35	0.097	I	O	|	|	|	1.69
40.000	0.00	0.35	0.095	I	O	|	|	|	1.66
40.083	0.00	0.35	0.092	I	O	|	|	|	1.63
40.167	0.00	0.35	0.090	I	O	|	|	|	1.60
40.250	0.00	0.35	0.088	I	O	|	|	|	1.57
40.333	0.00	0.35	0.085	I	O	|	|	|	1.54
40.417	0.00	0.35	0.083	I	O	|	|	|	1.51
40.500	0.00	0.34	0.080	I	O	|	|	|	1.47
40.583	0.00	0.33	0.078	I	O	|	|	|	1.43
40.667	0.00	0.32	0.076	I	O	|	|	|	1.39
40.750	0.00	0.31	0.074	I	O	|	|	|	1.35
40.833	0.00	0.31	0.071	I	O	|	|	|	1.31
40.917	0.00	0.30	0.069	I	O	|	|	|	1.27
41.000	0.00	0.29	0.067	I	O	|	|	|	1.23
41.083	0.00	0.28	0.065	I	O	|	|	|	1.20
41.167	0.00	0.27	0.064	I	O	|	|	|	1.16
41.250	0.00	0.26	0.062	I	O	|	|	|	1.13
41.333	0.00	0.26	0.060	I	O	|	|	|	1.10
41.417	0.00	0.25	0.058	I	O	|	|	|	1.06
41.500	0.00	0.24	0.056	I	O	|	|	|	1.03
41.583	0.00	0.23	0.055	I	O	|	|	|	1.00
41.667	0.00	0.23	0.053	I	O	|	|	|	0.97
41.750	0.00	0.22	0.052	I	O	|	|	|	0.95
41.833	0.00	0.21	0.050	I	O	|	|	|	0.92
41.917	0.00	0.21	0.049	I	O	|	|	|	0.89
42.000	0.00	0.20	0.047	I	O	|	|	|	0.87
42.083	0.00	0.20	0.046	I	O	|	|	|	0.84
42.167	0.00	0.19	0.045	I	O	|	|	|	0.82
42.250	0.00	0.19	0.043	I	O	|	|	|	0.79
42.333	0.00	0.18	0.042	I	O	|	|	|	0.77
42.417	0.00	0.17	0.041	I	O	|	|	|	0.75
42.500	0.00	0.17	0.040	I	O	|	|	|	0.73
42.583	0.00	0.16	0.039	I	O	|	|	|	0.71
42.667	0.00	0.16	0.037	I	O	|	|	|	0.68
42.750	0.00	0.16	0.036	I	O	|	|	|	0.66
42.833	0.00	0.15	0.035	I	O	|	|	|	0.65
42.917	0.00	0.15	0.034	I	O	|	|	|	0.63
43.000	0.00	0.14	0.033	I	O	|	|	|	0.61
43.083	0.00	0.14	0.032	I	O	|	|	|	0.59
43.167	0.00	0.13	0.031	I	O	|	|	|	0.57
43.250	0.00	0.13	0.030	I	O	|	|	|	0.56
43.333	0.00	0.13	0.030	I	O	|	|	|	0.54
43.417	0.00	0.12	0.029	I	O	|	|	|	0.53
43.500	0.00	0.12	0.028	I	O	|	|	|	0.51
43.583	0.00	0.12	0.027	I	O	|	|	|	0.50
43.667	0.00	0.11	0.026	I	O	|	|	|	0.48
43.750	0.00	0.11	0.026	I	O	|	|	|	0.47
43.833	0.00	0.11	0.025	I	O	|	|	|	0.45

43.917	0.00	0.10	0.024	IO				0.44
44.000	0.00	0.10	0.023	IO				0.43
44.083	0.00	0.10	0.023	IO				0.42
44.167	0.00	0.09	0.022	IO				0.40
44.250	0.00	0.09	0.021	IO				0.39
44.333	0.00	0.09	0.021	IO				0.38
44.417	0.00	0.09	0.020	IO				0.37
44.500	0.00	0.08	0.020	IO				0.36
44.583	0.00	0.08	0.019	IO				0.35
44.667	0.00	0.08	0.018	IO				0.34
44.750	0.00	0.08	0.018	IO				0.33
44.833	0.00	0.07	0.017	IO				0.32
44.917	0.00	0.07	0.017	IO				0.31
45.000	0.00	0.07	0.016	O				0.30
45.083	0.00	0.07	0.016	O				0.29
45.167	0.00	0.07	0.015	O				0.28
45.250	0.00	0.06	0.015	O				0.28
45.333	0.00	0.06	0.015	O				0.27
45.417	0.00	0.06	0.014	O				0.26
45.500	0.00	0.06	0.014	O				0.25
45.583	0.00	0.06	0.013	O				0.24
45.667	0.00	0.06	0.013	O				0.24
45.750	0.00	0.05	0.013	O				0.23
45.833	0.00	0.05	0.012	O				0.22
45.917	0.00	0.05	0.012	O				0.22
46.000	0.00	0.05	0.012	O				0.21
46.083	0.00	0.05	0.011	O				0.21
46.167	0.00	0.05	0.011	O				0.20
46.250	0.00	0.05	0.011	O				0.19
46.333	0.00	0.04	0.010	O				0.19
46.417	0.00	0.04	0.010	O				0.18
46.500	0.00	0.04	0.010	O				0.18
46.583	0.00	0.04	0.009	O				0.17
46.667	0.00	0.04	0.009	O				0.17
46.750	0.00	0.04	0.009	O				0.16
46.833	0.00	0.04	0.009	O				0.16
46.917	0.00	0.04	0.008	O				0.15
47.000	0.00	0.03	0.008	O				0.15
47.083	0.00	0.03	0.008	O				0.14
47.167	0.00	0.03	0.008	O				0.14
47.250	0.00	0.03	0.007	O				0.14
47.333	0.00	0.03	0.007	O				0.13
47.417	0.00	0.03	0.007	O				0.13
47.500	0.00	0.03	0.007	O				0.12
47.583	0.00	0.03	0.007	O				0.12
47.667	0.00	0.03	0.006	O				0.12
47.750	0.00	0.03	0.006	O				0.11
47.833	0.00	0.03	0.006	O				0.11
47.917	0.00	0.03	0.006	O				0.11
48.000	0.00	0.02	0.006	O				0.10
48.083	0.00	0.02	0.006	O				0.10
48.167	0.00	0.02	0.005	O				0.10
48.250	0.00	0.02	0.005	O				0.10
48.333	0.00	0.02	0.005	O				0.09
48.417	0.00	0.02	0.005	O				0.09
48.500	0.00	0.02	0.005	O				0.09
48.583	0.00	0.02	0.005	O				0.08
48.667	0.00	0.02	0.005	O				0.08
48.750	0.00	0.02	0.004	O				0.08
48.833	0.00	0.02	0.004	O				0.08

48.917	0.00	0.02	0.004	O	|	|	|	0.08
49.000	0.00	0.02	0.004	O	|	|	|	0.07
49.083	0.00	0.02	0.004	O	|	|	|	0.07
49.167	0.00	0.02	0.004	O	|	|	|	0.07
49.250	0.00	0.02	0.004	O	|	|	|	0.07
49.333	0.00	0.02	0.004	O	|	|	|	0.07
49.417	0.00	0.01	0.003	O	|	|	|	0.06
49.500	0.00	0.01	0.003	O	|	|	|	0.06
49.583	0.00	0.01	0.003	O	|	|	|	0.06
49.667	0.00	0.01	0.003	O	|	|	|	0.06
49.750	0.00	0.01	0.003	O	|	|	|	0.06
49.833	0.00	0.01	0.003	O	|	|	|	0.05
49.917	0.00	0.01	0.003	O	|	|	|	0.05
50.000	0.00	0.01	0.003	O	|	|	|	0.05
50.083	0.00	0.01	0.003	O	|	|	|	0.05
50.167	0.00	0.01	0.003	O	|	|	|	0.05
50.250	0.00	0.01	0.003	O	|	|	|	0.05
50.333	0.00	0.01	0.003	O	|	|	|	0.05
50.417	0.00	0.01	0.002	O	|	|	|	0.04
50.500	0.00	0.01	0.002	O	|	|	|	0.04
50.583	0.00	0.01	0.002	O	|	|	|	0.04
50.667	0.00	0.01	0.002	O	|	|	|	0.04
50.750	0.00	0.01	0.002	O	|	|	|	0.04
50.833	0.00	0.01	0.002	O	|	|	|	0.04
50.917	0.00	0.01	0.002	O	|	|	|	0.04
51.000	0.00	0.01	0.002	O	|	|	|	0.04
51.083	0.00	0.01	0.002	O	|	|	|	0.04
51.167	0.00	0.01	0.002	O	|	|	|	0.03
51.250	0.00	0.01	0.002	O	|	|	|	0.03
51.333	0.00	0.01	0.002	O	|	|	|	0.03
51.417	0.00	0.01	0.002	O	|	|	|	0.03
51.500	0.00	0.01	0.002	O	|	|	|	0.03
51.583	0.00	0.01	0.002	O	|	|	|	0.03
51.667	0.00	0.01	0.002	O	|	|	|	0.03
51.750	0.00	0.01	0.002	O	|	|	|	0.03
51.833	0.00	0.01	0.001	O	|	|	|	0.03
51.917	0.00	0.01	0.001	O	|	|	|	0.03
52.000	0.00	0.01	0.001	O	|	|	|	0.03
52.083	0.00	0.01	0.001	O	|	|	|	0.02
52.167	0.00	0.01	0.001	O	|	|	|	0.02
52.250	0.00	0.01	0.001	O	|	|	|	0.02
52.333	0.00	0.01	0.001	O	|	|	|	0.02
52.417	0.00	0.01	0.001	O	|	|	|	0.02
52.500	0.00	0.00	0.001	O	|	|	|	0.02
52.583	0.00	0.00	0.001	O	|	|	|	0.02
52.667	0.00	0.00	0.001	O	|	|	|	0.02
52.750	0.00	0.00	0.001	O	|	|	|	0.02
52.833	0.00	0.00	0.001	O	|	|	|	0.02
52.917	0.00	0.00	0.001	O	|	|	|	0.02
53.000	0.00	0.00	0.001	O	|	|	|	0.02
53.083	0.00	0.00	0.001	O	|	|	|	0.02
53.167	0.00	0.00	0.001	O	|	|	|	0.02
53.250	0.00	0.00	0.001	O	|	|	|	0.02
53.333	0.00	0.00	0.001	O	|	|	|	0.02
53.417	0.00	0.00	0.001	O	|	|	|	0.02
53.500	0.00	0.00	0.001	O	|	|	|	0.01
53.583	0.00	0.00	0.001	O	|	|	|	0.01
53.667	0.00	0.00	0.001	O	|	|	|	0.01
53.750	0.00	0.00	0.001	O	|	|	|	0.01
53.833	0.00	0.00	0.001	O	|	|	|	0.01

53.917	0.00	0.00	0.001	O	|	|	|	|	0.01
54.000	0.00	0.00	0.001	O	|	|	|	|	0.01
54.083	0.00	0.00	0.001	O	|	|	|	|	0.01
54.167	0.00	0.00	0.001	O	|	|	|	|	0.01
54.250	0.00	0.00	0.001	O	|	|	|	|	0.01
54.333	0.00	0.00	0.001	O	|	|	|	|	0.01
54.417	0.00	0.00	0.001	O	|	|	|	|	0.01
54.500	0.00	0.00	0.001	O	|	|	|	|	0.01
54.583	0.00	0.00	0.001	O	|	|	|	|	0.01
54.667	0.00	0.00	0.001	O	|	|	|	|	0.01
54.750	0.00	0.00	0.001	O	|	|	|	|	0.01
54.833	0.00	0.00	0.001	O	|	|	|	|	0.01
54.917	0.00	0.00	0.000	O	|	|	|	|	0.01
55.000	0.00	0.00	0.000	O	|	|	|	|	0.01
55.083	0.00	0.00	0.000	O	|	|	|	|	0.01
55.167	0.00	0.00	0.000	O	|	|	|	|	0.01
55.250	0.00	0.00	0.000	O	|	|	|	|	0.01
55.333	0.00	0.00	0.000	O	|	|	|	|	0.01
55.417	0.00	0.00	0.000	O	|	|	|	|	0.01
55.500	0.00	0.00	0.000	O	|	|	|	|	0.01
55.583	0.00	0.00	0.000	O	|	|	|	|	0.01
55.667	0.00	0.00	0.000	O	|	|	|	|	0.01
55.750	0.00	0.00	0.000	O	|	|	|	|	0.01
55.833	0.00	0.00	0.000	O	|	|	|	|	0.01
55.917	0.00	0.00	0.000	O	|	|	|	|	0.01
56.000	0.00	0.00	0.000	O	|	|	|	|	0.01
56.083	0.00	0.00	0.000	O	|	|	|	|	0.01
56.167	0.00	0.00	0.000	O	|	|	|	|	0.01
56.250	0.00	0.00	0.000	O	|	|	|	|	0.01
56.333	0.00	0.00	0.000	O	|	|	|	|	0.01
56.417	0.00	0.00	0.000	O	|	|	|	|	0.01
56.500	0.00	0.00	0.000	O	|	|	|	|	0.01
56.583	0.00	0.00	0.000	O	|	|	|	|	0.01
56.667	0.00	0.00	0.000	O	|	|	|	|	0.00
56.750	0.00	0.00	0.000	O	|	|	|	|	0.00
56.833	0.00	0.00	0.000	O	|	|	|	|	0.00
56.917	0.00	0.00	0.000	O	|	|	|	|	0.00
57.000	0.00	0.00	0.000	O	|	|	|	|	0.00
57.083	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 685
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.399 (CFS)
Total volume = 1.365 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
2-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.780 (CFS)
Total volume = 0.252 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.2 4.39 6.58 8.78	Depth (Ft.)
0.083	0.83	0.02	0.003	O I | | | |	0.04
0.167	1.35	0.06	0.010	O I | | | |	0.15
0.250	1.61	0.12	0.020	O I | | | |	0.29
0.333	1.71	0.19	0.030	O I | | | |	0.44
0.417	1.78	0.25	0.040	O I | | | |	0.59
0.500	1.95	0.32	0.051	|O I| | | |	0.75
0.583	2.34	0.40	0.064	|O I | | |	0.94
0.667	2.90	0.49	0.079	|O | I | | |	1.16
0.750	4.25	0.62	0.099	| O | I| | |	1.46
0.833	8.78	0.64	0.140	| O | | | I	1.90
0.917	5.93	0.64	0.186	| O | | I | |	2.38
1.000	2.45	0.64	0.211	| O I | | |	2.64
1.083	0.70	0.64	0.217	| O | | | |	2.70
1.167	0.08	0.64	0.215	I O | | | |	2.68
1.250	0.00	0.64	0.211	I O | | | |	2.64
1.333	0.00	0.64	0.207	I O | | | |	2.59
1.417	0.00	0.64	0.202	I O | | | |	2.55
1.500	0.00	0.64	0.198	I O | | | |	2.50
1.583	0.00	0.64	0.193	I O | | | |	2.46
1.667	0.00	0.64	0.189	I O | | | |	2.41
1.750	0.00	0.64	0.185	I O | | | |	2.36
1.833	0.00	0.64	0.180	I O | | | |	2.32
1.917	0.00	0.64	0.176	I O | | | |	2.27
2.000	0.00	0.64	0.171	I O | | | |	2.23
2.083	0.00	0.64	0.167	I O | | | |	2.18
2.167	0.00	0.64	0.163	I O | | | |	2.13
2.250	0.00	0.64	0.158	I O | | | |	2.09
2.333	0.00	0.64	0.154	I O | | | |	2.04
2.417	0.00	0.64	0.149	I O | | | |	2.00
2.500	0.00	0.64	0.145	I O | | | |	1.95
2.583	0.00	0.64	0.141	I O | | | |	1.90
2.667	0.00	0.64	0.136	I O | | | |	1.86
2.750	0.00	0.64	0.132	I O | | | |	1.81
2.833	0.00	0.64	0.127	I O | | | |	1.77
2.917	0.00	0.64	0.123	I O | | | |	1.72
3.000	0.00	0.64	0.119	I O | | | |	1.67
3.083	0.00	0.64	0.114	I O | | | |	1.63
3.167	0.00	0.64	0.110	I O | | | |	1.58
3.250	0.00	0.64	0.105	I O | | | |	1.53
3.333	0.00	0.63	0.101	I O | | | |	1.48
3.417	0.00	0.61	0.097	I O | | | |	1.42
3.500	0.00	0.58	0.093	I O | | | |	1.36
3.583	0.00	0.56	0.089	I O | | | |	1.30
3.667	0.00	0.53	0.085	IO | | | |	1.25
3.750	0.00	0.51	0.081	IO | | | |	1.20
3.833	0.00	0.49	0.078	IO | | | |	1.15

3.917	0.00	0.47	0.075	IO				1.10
4.000	0.00	0.45	0.071	IO				1.05
4.083	0.00	0.43	0.068	IO				1.01
4.167	0.00	0.41	0.066	IO				0.96
4.250	0.00	0.39	0.063	IO				0.92
4.333	0.00	0.38	0.060	IO				0.88
4.417	0.00	0.36	0.058	IO				0.85
4.500	0.00	0.35	0.055	IO				0.81
4.583	0.00	0.33	0.053	IO				0.78
4.667	0.00	0.32	0.051	IO				0.74
4.750	0.00	0.30	0.048	IO				0.71
4.833	0.00	0.29	0.046	IO				0.68
4.917	0.00	0.28	0.044	IO				0.65
5.000	0.00	0.27	0.043	O				0.63
5.083	0.00	0.26	0.041	O				0.60
5.167	0.00	0.24	0.039	O				0.57
5.250	0.00	0.23	0.037	O				0.55
5.333	0.00	0.22	0.036	O				0.53
5.417	0.00	0.21	0.034	O				0.50
5.500	0.00	0.21	0.033	O				0.48
5.583	0.00	0.20	0.031	O				0.46
5.667	0.00	0.19	0.030	O				0.44
5.750	0.00	0.18	0.029	O				0.42
5.833	0.00	0.17	0.028	O				0.41
5.917	0.00	0.17	0.026	O				0.39
6.000	0.00	0.16	0.025	O				0.37
6.083	0.00	0.15	0.024	O				0.36
6.167	0.00	0.15	0.023	O				0.34
6.250	0.00	0.14	0.022	O				0.33
6.333	0.00	0.13	0.021	O				0.31
6.417	0.00	0.13	0.020	O				0.30
6.500	0.00	0.12	0.020	O				0.29
6.583	0.00	0.12	0.019	O				0.28
6.667	0.00	0.11	0.018	O				0.26
6.750	0.00	0.11	0.017	O				0.25
6.833	0.00	0.10	0.016	O				0.24
6.917	0.00	0.10	0.016	O				0.23
7.000	0.00	0.09	0.015	O				0.22
7.083	0.00	0.09	0.014	O				0.21
7.167	0.00	0.09	0.014	O				0.20
7.250	0.00	0.08	0.013	O				0.19
7.333	0.00	0.08	0.013	O				0.19
7.417	0.00	0.08	0.012	O				0.18
7.500	0.00	0.07	0.012	O				0.17
7.583	0.00	0.07	0.011	O				0.16
7.667	0.00	0.07	0.011	O				0.16
7.750	0.00	0.06	0.010	O				0.15
7.833	0.00	0.06	0.010	O				0.14
7.917	0.00	0.06	0.009	O				0.14
8.000	0.00	0.06	0.009	O				0.13
8.083	0.00	0.05	0.009	O				0.13
8.167	0.00	0.05	0.008	O				0.12
8.250	0.00	0.05	0.008	O				0.12
8.333	0.00	0.05	0.008	O				0.11
8.417	0.00	0.05	0.007	O				0.11
8.500	0.00	0.04	0.007	O				0.10
8.583	0.00	0.04	0.007	O				0.10
8.667	0.00	0.04	0.006	O				0.09
8.750	0.00	0.04	0.006	O				0.09
8.833	0.00	0.04	0.006	O				0.09

8.917	0.00	0.03	0.006	O	|	|	|	0.08
9.000	0.00	0.03	0.005	O	|	|	|	0.08
9.083	0.00	0.03	0.005	O	|	|	|	0.08
9.167	0.00	0.03	0.005	O	|	|	|	0.07
9.250	0.00	0.03	0.005	O	|	|	|	0.07
9.333	0.00	0.03	0.004	O	|	|	|	0.07
9.417	0.00	0.03	0.004	O	|	|	|	0.06
9.500	0.00	0.03	0.004	O	|	|	|	0.06
9.583	0.00	0.02	0.004	O	|	|	|	0.06
9.667	0.00	0.02	0.004	O	|	|	|	0.06
9.750	0.00	0.02	0.004	O	|	|	|	0.05
9.833	0.00	0.02	0.003	O	|	|	|	0.05
9.917	0.00	0.02	0.003	O	|	|	|	0.05
10.000	0.00	0.02	0.003	O	|	|	|	0.05
10.083	0.00	0.02	0.003	O	|	|	|	0.04
10.167	0.00	0.02	0.003	O	|	|	|	0.04
10.250	0.00	0.02	0.003	O	|	|	|	0.04
10.333	0.00	0.02	0.003	O	|	|	|	0.04
10.417	0.00	0.02	0.003	O	|	|	|	0.04
10.500	0.00	0.02	0.002	O	|	|	|	0.04
10.583	0.00	0.01	0.002	O	|	|	|	0.03
10.667	0.00	0.01	0.002	O	|	|	|	0.03
10.750	0.00	0.01	0.002	O	|	|	|	0.03
10.833	0.00	0.01	0.002	O	|	|	|	0.03
10.917	0.00	0.01	0.002	O	|	|	|	0.03
11.000	0.00	0.01	0.002	O	|	|	|	0.03
11.083	0.00	0.01	0.002	O	|	|	|	0.03
11.167	0.00	0.01	0.002	O	|	|	|	0.03
11.250	0.00	0.01	0.002	O	|	|	|	0.02
11.333	0.00	0.01	0.002	O	|	|	|	0.02
11.417	0.00	0.01	0.002	O	|	|	|	0.02
11.500	0.00	0.01	0.001	O	|	|	|	0.02
11.583	0.00	0.01	0.001	O	|	|	|	0.02
11.667	0.00	0.01	0.001	O	|	|	|	0.02
11.750	0.00	0.01	0.001	O	|	|	|	0.02
11.833	0.00	0.01	0.001	O	|	|	|	0.02
11.917	0.00	0.01	0.001	O	|	|	|	0.02
12.000	0.00	0.01	0.001	O	|	|	|	0.02
12.083	0.00	0.01	0.001	O	|	|	|	0.02
12.167	0.00	0.01	0.001	O	|	|	|	0.02
12.250	0.00	0.01	0.001	O	|	|	|	0.01
12.333	0.00	0.01	0.001	O	|	|	|	0.01
12.417	0.00	0.01	0.001	O	|	|	|	0.01
12.500	0.00	0.01	0.001	O	|	|	|	0.01
12.583	0.00	0.01	0.001	O	|	|	|	0.01
12.667	0.00	0.01	0.001	O	|	|	|	0.01
12.750	0.00	0.00	0.001	O	|	|	|	0.01
12.833	0.00	0.00	0.001	O	|	|	|	0.01
12.917	0.00	0.00	0.001	O	|	|	|	0.01
13.000	0.00	0.00	0.001	O	|	|	|	0.01
13.083	0.00	0.00	0.001	O	|	|	|	0.01
13.167	0.00	0.00	0.001	O	|	|	|	0.01
13.250	0.00	0.00	0.001	O	|	|	|	0.01
13.333	0.00	0.00	0.001	O	|	|	|	0.01
13.417	0.00	0.00	0.001	O	|	|	|	0.01
13.500	0.00	0.00	0.001	O	|	|	|	0.01
13.583	0.00	0.00	0.000	O	|	|	|	0.01
13.667	0.00	0.00	0.000	O	|	|	|	0.01
13.750	0.00	0.00	0.000	O	|	|	|	0.01
13.833	0.00	0.00	0.000	O	|	|	|	0.01

13.917	0.00	0.00	0.000	O	|	|	|	|	0.01
14.000	0.00	0.00	0.000	O	|	|	|	|	0.01
14.083	0.00	0.00	0.000	O	|	|	|	|	0.01
14.167	0.00	0.00	0.000	O	|	|	|	|	0.01
14.250	0.00	0.00	0.000	O	|	|	|	|	0.01
14.333	0.00	0.00	0.000	O	|	|	|	|	0.00
14.417	0.00	0.00	0.000	O	|	|	|	|	0.00
14.500	0.00	0.00	0.000	O	|	|	|	|	0.00
14.583	0.00	0.00	0.000	O	|	|	|	|	0.00
14.667	0.00	0.00	0.000	O	|	|	|	|	0.00
14.750	0.00	0.00	0.000	O	|	|	|	|	0.00
14.833	0.00	0.00	0.000	O	|	|	|	|	0.00
14.917	0.00	0.00	0.000	O	|	|	|	|	0.00
15.000	0.00	0.00	0.000	O	|	|	|	|	0.00
15.083	0.00	0.00	0.000	O	|	|	|	|	0.00
15.167	0.00	0.00	0.000	O	|	|	|	|	0.00
15.250	0.00	0.00	0.000	O	|	|	|	|	0.00
15.333	0.00	0.00	0.000	O	|	|	|	|	0.00
15.417	0.00	0.00	0.000	O	|	|	|	|	0.00
15.500	0.00	0.00	0.000	O	|	|	|	|	0.00
15.583	0.00	0.00	0.000	O	|	|	|	|	0.00
15.667	0.00	0.00	0.000	O	|	|	|	|	0.00
15.750	0.00	0.00	0.000	O	|	|	|	|	0.00
15.833	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 190
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.252 (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
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Study date: 10/25/24

DEXTER VILLAGE
AREA C
2-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte

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

Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5.271 (CFS)
Total volume = 0.396 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.3	2.64	3.95	5.27	Depth (Ft.)
0.083	0.41	0.01	0.001	O I	|	|	|	|	0.02
0.167	0.67	0.03	0.005	O I	|	|	|	|	0.07
0.250	0.64	0.06	0.009	O I	|	|	|	|	0.14
0.333	0.73	0.08	0.013	O I	|	|	|	|	0.20
0.417	0.80	0.11	0.018	O I	|	|	|	|	0.26
0.500	0.91	0.14	0.023	O I	|	|	|	|	0.34
0.583	0.87	0.18	0.028	|O I	|	|	|	|	0.41
0.667	0.92	0.21	0.033	|O I	|	|	|	|	0.48
0.750	0.97	0.24	0.038	|O I	|	|	|	|	0.56
0.833	0.88	0.27	0.042	|O I	|	|	|	|	0.62
0.917	0.85	0.29	0.047	|O I	|	|	|	|	0.68
1.000	0.93	0.32	0.051	|O I	|	|	|	|	0.74
1.083	1.10	0.35	0.055	| O I	|	|	|	|	0.81
1.167	1.18	0.38	0.061	| O I	|	|	|	|	0.89
1.250	1.19	0.41	0.066	| O I	|	|	|	|	0.97
1.333	1.13	0.45	0.071	| O I	|	|	|	|	1.04
1.417	1.28	0.48	0.076	| O I	|	|	|	|	1.12
1.500	1.42	0.51	0.082	| O I	|	|	|	|	1.21
1.583	1.36	0.55	0.088	| O I	|	|	|	|	1.29
1.667	1.40	0.59	0.094	| O I	|	|	|	|	1.38
1.750	1.65	0.63	0.100	| O |I	|	|	|	|	1.47
1.833	1.71	0.64	0.107	| O | I	|	|	|	|	1.55
1.917	1.62	0.64	0.114	| O |I	|	|	|	|	1.63
2.000	1.61	0.64	0.121	| O |I	|	|	|	|	1.70
2.083	1.66	0.64	0.128	| O | I	|	|	|	|	1.77
2.167	2.03	0.64	0.136	| O | I	|	|	|	|	1.86
2.250	2.59	0.64	0.147	| O | I	|	|	|	|	1.98
2.333	2.26	0.64	0.160	| O | I	|	|	|	|	2.10
2.417	3.42	0.64	0.175	| O | I	|	|	|	|	2.26
2.500	4.53	0.64	0.198	| O | I	|	|	|	|	2.50
2.583	5.27	0.64	0.227	| O | I	|	|	|	|	2.81
2.667	4.41	0.64	0.256	| O | I	|	|	|	|	3.11
2.750	2.24	0.64	0.275	| O | I	|	|	|	|	3.31
2.833	1.15	0.64	0.282	| O I	|	|	|	|	3.38
2.917	0.98	0.64	0.285	| O I	|	|	|	|	3.41
3.000	0.59	0.64	0.286	| O	|	|	|	|	3.42
3.083	0.17	0.64	0.284	|I O	|	|	|	|	3.40
3.167	0.02	0.64	0.280	I O	|	|	|	|	3.37
3.250	0.00	0.64	0.276	I O	|	|	|	|	3.32
3.333	0.00	0.64	0.272	I O	|	|	|	|	3.27
3.417	0.00	0.64	0.267	I O	|	|	|	|	3.23
3.500	0.00	0.64	0.263	I O	|	|	|	|	3.18
3.583	0.00	0.64	0.258	I O	|	|	|	|	3.14
3.667	0.00	0.64	0.254	I O	|	|	|	|	3.09
3.750	0.00	0.64	0.250	I O	|	|	|	|	3.04
3.833	0.00	0.64	0.245	I O	|	|	|	|	3.00

3.917	0.00	0.64	0.241	I O	|	|	|	2.95
4.000	0.00	0.64	0.236	I O	|	|	|	2.91
4.083	0.00	0.64	0.232	I O	|	|	|	2.86
4.167	0.00	0.64	0.228	I O	|	|	|	2.81
4.250	0.00	0.64	0.223	I O	|	|	|	2.77
4.333	0.00	0.64	0.219	I O	|	|	|	2.72
4.417	0.00	0.64	0.214	I O	|	|	|	2.67
4.500	0.00	0.64	0.210	I O	|	|	|	2.63
4.583	0.00	0.64	0.205	I O	|	|	|	2.58
4.667	0.00	0.64	0.201	I O	|	|	|	2.54
4.750	0.00	0.64	0.197	I O	|	|	|	2.49
4.833	0.00	0.64	0.192	I O	|	|	|	2.44
4.917	0.00	0.64	0.188	I O	|	|	|	2.40
5.000	0.00	0.64	0.183	I O	|	|	|	2.35
5.083	0.00	0.64	0.179	I O	|	|	|	2.31
5.167	0.00	0.64	0.175	I O	|	|	|	2.26
5.250	0.00	0.64	0.170	I O	|	|	|	2.21
5.333	0.00	0.64	0.166	I O	|	|	|	2.17
5.417	0.00	0.64	0.161	I O	|	|	|	2.12
5.500	0.00	0.64	0.157	I O	|	|	|	2.08
5.583	0.00	0.64	0.153	I O	|	|	|	2.03
5.667	0.00	0.64	0.148	I O	|	|	|	1.98
5.750	0.00	0.64	0.144	I O	|	|	|	1.94
5.833	0.00	0.64	0.139	I O	|	|	|	1.89
5.917	0.00	0.64	0.135	I O	|	|	|	1.84
6.000	0.00	0.64	0.131	I O	|	|	|	1.80
6.083	0.00	0.64	0.126	I O	|	|	|	1.75
6.167	0.00	0.64	0.122	I O	|	|	|	1.71
6.250	0.00	0.64	0.117	I O	|	|	|	1.66
6.333	0.00	0.64	0.113	I O	|	|	|	1.61
6.417	0.00	0.64	0.108	I O	|	|	|	1.57
6.500	0.00	0.64	0.104	I O	|	|	|	1.52
6.583	0.00	0.63	0.100	I O	|	|	|	1.47
6.667	0.00	0.60	0.096	I O	|	|	|	1.40
6.750	0.00	0.57	0.091	I O	|	|	|	1.35
6.833	0.00	0.55	0.088	I O	|	|	|	1.29
6.917	0.00	0.53	0.084	I O	|	|	|	1.23
7.000	0.00	0.50	0.080	I O	|	|	|	1.18
7.083	0.00	0.48	0.077	I O	|	|	|	1.13
7.167	0.00	0.46	0.074	I O	|	|	|	1.08
7.250	0.00	0.44	0.071	I O	|	|	|	1.04
7.333	0.00	0.42	0.068	I O	|	|	|	0.99
7.417	0.00	0.41	0.065	I O	|	|	|	0.95
7.500	0.00	0.39	0.062	I O	|	|	|	0.91
7.583	0.00	0.37	0.059	I O	|	|	|	0.87
7.667	0.00	0.36	0.057	I O	|	|	|	0.84
7.750	0.00	0.34	0.054	I O	|	|	|	0.80
7.833	0.00	0.33	0.052	IO	|	|	|	0.77
7.917	0.00	0.31	0.050	IO	|	|	|	0.73
8.000	0.00	0.30	0.048	IO	|	|	|	0.70
8.083	0.00	0.29	0.046	IO	|	|	|	0.67
8.167	0.00	0.28	0.044	IO	|	|	|	0.65
8.250	0.00	0.26	0.042	IO	|	|	|	0.62
8.333	0.00	0.25	0.040	IO	|	|	|	0.59
8.417	0.00	0.24	0.039	IO	|	|	|	0.57
8.500	0.00	0.23	0.037	IO	|	|	|	0.54
8.583	0.00	0.22	0.035	IO	|	|	|	0.52
8.667	0.00	0.21	0.034	IO	|	|	|	0.50
8.750	0.00	0.20	0.032	IO	|	|	|	0.48
8.833	0.00	0.19	0.031	IO	|	|	|	0.46

8.917	0.00	0.19	0.030	IO				0.44
9.000	0.00	0.18	0.028	IO				0.42
9.083	0.00	0.17	0.027	IO				0.40
9.167	0.00	0.16	0.026	O				0.38
9.250	0.00	0.16	0.025	O				0.37
9.333	0.00	0.15	0.024	O				0.35
9.417	0.00	0.14	0.023	O				0.34
9.500	0.00	0.14	0.022	O				0.32
9.583	0.00	0.13	0.021	O				0.31
9.667	0.00	0.13	0.020	O				0.30
9.750	0.00	0.12	0.019	O				0.28
9.833	0.00	0.12	0.018	O				0.27
9.917	0.00	0.11	0.018	O				0.26
10.000	0.00	0.11	0.017	O				0.25
10.083	0.00	0.10	0.016	O				0.24
10.167	0.00	0.10	0.016	O				0.23
10.250	0.00	0.09	0.015	O				0.22
10.333	0.00	0.09	0.014	O				0.21
10.417	0.00	0.09	0.014	O				0.20
10.500	0.00	0.08	0.013	O				0.19
10.583	0.00	0.08	0.013	O				0.18
10.667	0.00	0.08	0.012	O				0.18
10.750	0.00	0.07	0.011	O				0.17
10.833	0.00	0.07	0.011	O				0.16
10.917	0.00	0.07	0.011	O				0.15
11.000	0.00	0.06	0.010	O				0.15
11.083	0.00	0.06	0.010	O				0.14
11.167	0.00	0.06	0.009	O				0.14
11.250	0.00	0.06	0.009	O				0.13
11.333	0.00	0.05	0.008	O				0.12
11.417	0.00	0.05	0.008	O				0.12
11.500	0.00	0.05	0.008	O				0.11
11.583	0.00	0.05	0.007	O				0.11
11.667	0.00	0.04	0.007	O				0.11
11.750	0.00	0.04	0.007	O				0.10
11.833	0.00	0.04	0.007	O				0.10
11.917	0.00	0.04	0.006	O				0.09
12.000	0.00	0.04	0.006	O				0.09
12.083	0.00	0.04	0.006	O				0.08
12.167	0.00	0.03	0.006	O				0.08
12.250	0.00	0.03	0.005	O				0.08
12.333	0.00	0.03	0.005	O				0.07
12.417	0.00	0.03	0.005	O				0.07
12.500	0.00	0.03	0.005	O				0.07
12.583	0.00	0.03	0.004	O				0.07
12.667	0.00	0.03	0.004	O				0.06
12.750	0.00	0.03	0.004	O				0.06
12.833	0.00	0.02	0.004	O				0.06
12.917	0.00	0.02	0.004	O				0.05
13.000	0.00	0.02	0.004	O				0.05
13.083	0.00	0.02	0.003	O				0.05
13.167	0.00	0.02	0.003	O				0.05
13.250	0.00	0.02	0.003	O				0.05
13.333	0.00	0.02	0.003	O				0.04
13.417	0.00	0.02	0.003	O				0.04
13.500	0.00	0.02	0.003	O				0.04
13.583	0.00	0.02	0.003	O				0.04
13.667	0.00	0.02	0.003	O				0.04
13.750	0.00	0.02	0.002	O				0.04
13.833	0.00	0.01	0.002	O				0.03

13.917	0.00	0.01	0.002	O				0.03
14.000	0.00	0.01	0.002	O				0.03
14.083	0.00	0.01	0.002	O				0.03
14.167	0.00	0.01	0.002	O				0.03
14.250	0.00	0.01	0.002	O				0.03
14.333	0.00	0.01	0.002	O				0.03
14.417	0.00	0.01	0.002	O				0.03
14.500	0.00	0.01	0.002	O				0.02
14.583	0.00	0.01	0.002	O				0.02
14.667	0.00	0.01	0.002	O				0.02
14.750	0.00	0.01	0.001	O				0.02
14.833	0.00	0.01	0.001	O				0.02
14.917	0.00	0.01	0.001	O				0.02
15.000	0.00	0.01	0.001	O				0.02
15.083	0.00	0.01	0.001	O				0.02
15.167	0.00	0.01	0.001	O				0.02
15.250	0.00	0.01	0.001	O				0.02
15.333	0.00	0.01	0.001	O				0.02
15.417	0.00	0.01	0.001	O				0.02
15.500	0.00	0.01	0.001	O				0.01
15.583	0.00	0.01	0.001	O				0.01
15.667	0.00	0.01	0.001	O				0.01
15.750	0.00	0.01	0.001	O				0.01
15.833	0.00	0.01	0.001	O				0.01
15.917	0.00	0.00	0.001	O				0.01
16.000	0.00	0.00	0.001	O				0.01
16.083	0.00	0.00	0.001	O				0.01
16.167	0.00	0.00	0.001	O				0.01
16.250	0.00	0.00	0.001	O				0.01
16.333	0.00	0.00	0.001	O				0.01
16.417	0.00	0.00	0.001	O				0.01
16.500	0.00	0.00	0.001	O				0.01
16.583	0.00	0.00	0.001	O				0.01
16.667	0.00	0.00	0.001	O				0.01
16.750	0.00	0.00	0.001	O				0.01
16.833	0.00	0.00	0.000	O				0.01
16.917	0.00	0.00	0.000	O				0.01
17.000	0.00	0.00	0.000	O				0.01
17.083	0.00	0.00	0.000	O				0.01
17.167	0.00	0.00	0.000	O				0.01
17.250	0.00	0.00	0.000	O				0.01
17.333	0.00	0.00	0.000	O				0.01
17.417	0.00	0.00	0.000	O				0.01
17.500	0.00	0.00	0.000	O				0.01
17.583	0.00	0.00	0.000	O				0.00
17.667	0.00	0.00	0.000	O				0.00
17.750	0.00	0.00	0.000	O				0.00
17.833	0.00	0.00	0.000	O				0.00
17.917	0.00	0.00	0.000	O				0.00
18.000	0.00	0.00	0.000	O				0.00
18.083	0.00	0.00	0.000	O				0.00
18.167	0.00	0.00	0.000	O				0.00
18.250	0.00	0.00	0.000	O				0.00
18.333	0.00	0.00	0.000	O				0.00
18.417	0.00	0.00	0.000	O				0.00
18.500	0.00	0.00	0.000	O				0.00
18.583	0.00	0.00	0.000	O				0.00
18.667	0.00	0.00	0.000	O				0.00
18.750	0.00	0.00	0.000	O				0.00
18.833	0.00	0.00	0.000	O				0.00

18.917	0.00	0.00	0.000	O	|	|	|	|	0.00
19.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 228
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.396 (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: 10/25/24

DEXTER VILLAGE
AREA C
2-YR
6HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.825 (CFS)
Total volume = 0.540 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.2 2.41 3.62 4.82	Depth (Ft.)
0.083	0.22	0.00	0.001	OI | | | |	0.01
0.167	0.40	0.02	0.003	O I | | | |	0.04
0.250	0.45	0.04	0.006	O I | | | |	0.08
0.333	0.46	0.05	0.008	O I | | | |	0.12
0.417	0.46	0.07	0.011	O I | | | |	0.16
0.500	0.50	0.09	0.014	O I | | | |	0.20
0.583	0.53	0.11	0.017	O I | | | |	0.25
0.667	0.53	0.12	0.020	O I | | | |	0.29
0.750	0.53	0.14	0.022	O I | | | |	0.33
0.833	0.53	0.16	0.025	|O I | | | |	0.37
0.917	0.53	0.17	0.028	|O I | | | |	0.40
1.000	0.58	0.19	0.030	|O I | | | |	0.44
1.083	0.60	0.21	0.033	|O I | | | |	0.48
1.167	0.61	0.22	0.035	|O I | | | |	0.52
1.250	0.61	0.24	0.038	|O I | | | |	0.56
1.333	0.61	0.25	0.041	|O I | | | |	0.60
1.417	0.61	0.27	0.043	|O I | | | |	0.63
1.500	0.61	0.28	0.045	|O I | | | |	0.66
1.583	0.61	0.30	0.047	|O I | | | |	0.70
1.667	0.61	0.31	0.049	| O I | | | |	0.73
1.750	0.61	0.32	0.051	| O I | | | |	0.76
1.833	0.61	0.33	0.053	| O I | | | |	0.79
1.917	0.61	0.35	0.055	| O I | | | |	0.81
2.000	0.65	0.36	0.057	| O I | | | |	0.84
2.083	0.63	0.37	0.059	| O I | | | |	0.87
2.167	0.66	0.38	0.061	| O I | | | |	0.90
2.250	0.68	0.39	0.063	| O I | | | |	0.92
2.333	0.68	0.41	0.065	| O I | | | |	0.95
2.417	0.68	0.42	0.067	| O I | | | |	0.98
2.500	0.68	0.43	0.068	| O I | | | |	1.01
2.583	0.68	0.44	0.070	| O I | | | |	1.03
2.667	0.68	0.45	0.072	| O I | | | |	1.06
2.750	0.73	0.46	0.073	| OI | | | |	1.08
2.833	0.75	0.47	0.075	| O I | | | |	1.11
2.917	0.76	0.48	0.077	| O I | | | |	1.14
3.000	0.76	0.50	0.079	| O I | | | |	1.16
3.083	0.76	0.51	0.081	| O I | | | |	1.19
3.167	0.80	0.52	0.083	| O I | | | |	1.22
3.250	0.83	0.53	0.085	| O I | | | |	1.25
3.333	0.83	0.54	0.087	| O I | | | |	1.28
3.417	0.88	0.56	0.089	| O I | | | |	1.31
3.500	0.95	0.57	0.091	| O I | | | |	1.34
3.583	1.03	0.59	0.094	| O I | | | |	1.38
3.667	1.06	0.61	0.097	| O I| | | |	1.43
3.750	1.11	0.63	0.100	| O I| | | |	1.48
3.833	1.13	0.64	0.104	| O I| | | |	1.52

3.917	1.18	0.64	0.107	|	O	I|			1.55
4.000	1.21	0.64	0.111	|	O	I			1.60
4.083	1.26	0.64	0.115	|	O	I			1.64
4.167	1.33	0.64	0.120	|	O	I			1.69
4.250	1.41	0.64	0.125	|	O	|I			1.74
4.333	1.48	0.64	0.130	|	O	|I			1.80
4.417	1.56	0.64	0.136	|	O	| I			1.86
4.500	1.59	0.64	0.143	|	O	| I			1.93
4.583	1.64	0.64	0.149	|	O	| I			2.00
4.667	1.71	0.64	0.157	|	O	| I			2.07
4.750	1.79	0.64	0.164	|	O	| I			2.15
4.833	1.82	0.64	0.172	|	O	| I			2.23
4.917	1.87	0.64	0.180	|	O	| I			2.32
5.000	1.94	0.64	0.189	|	O	| I			2.41
5.083	2.19	0.64	0.199	|	O	| I			2.51
5.167	2.65	0.64	0.211	|	O	|	I		2.64
5.250	3.08	0.64	0.227	|	O	|	I		2.80
5.333	3.45	0.64	0.245	|	O	|	I		2.99
5.417	3.95	0.64	0.266	|	O	|	I		3.21
5.500	4.82	0.64	0.292	|	O	|	I		3.48
5.583	2.97	0.64	0.314	|	O	|	I		3.72
5.667	1.20	0.64	0.324	|	O	I|			3.82
5.750	0.59	0.64	0.326	|	IO	|			3.84
5.833	0.42	0.64	0.325	| I	O	|			3.83
5.917	0.29	0.64	0.323	|I	O	|			3.81
6.000	0.19	0.64	0.320	|I	O	|			3.78
6.083	0.07	0.64	0.317	I	O	|			3.74
6.167	0.01	0.64	0.312	I	O	|			3.70
6.250	0.00	0.64	0.308	I	O	|			3.65
6.333	0.00	0.64	0.304	I	O	|			3.61
6.417	0.00	0.64	0.299	I	O	|			3.56
6.500	0.00	0.64	0.295	I	O	|			3.52
6.583	0.00	0.64	0.290	I	O	|			3.47
6.667	0.00	0.64	0.286	I	O	|			3.42
6.750	0.00	0.64	0.282	I	O	|			3.38
6.833	0.00	0.64	0.277	I	O	|			3.33
6.917	0.00	0.64	0.273	I	O	|			3.29
7.000	0.00	0.64	0.268	I	O	|			3.24
7.083	0.00	0.64	0.264	I	O	|			3.19
7.167	0.00	0.64	0.260	I	O	|			3.15
7.250	0.00	0.64	0.255	I	O	|			3.10
7.333	0.00	0.64	0.251	I	O	|			3.06
7.417	0.00	0.64	0.246	I	O	|			3.01
7.500	0.00	0.64	0.242	I	O	|			2.96
7.583	0.00	0.64	0.237	I	O	|			2.92
7.667	0.00	0.64	0.233	I	O	|			2.87
7.750	0.00	0.64	0.229	I	O	|			2.82
7.833	0.00	0.64	0.224	I	O	|			2.78
7.917	0.00	0.64	0.220	I	O	|			2.73
8.000	0.00	0.64	0.215	I	O	|			2.69
8.083	0.00	0.64	0.211	I	O	|			2.64
8.167	0.00	0.64	0.207	I	O	|			2.59
8.250	0.00	0.64	0.202	I	O	|			2.55
8.333	0.00	0.64	0.198	I	O	|			2.50
8.417	0.00	0.64	0.193	I	O	|			2.46
8.500	0.00	0.64	0.189	I	O	|			2.41
8.583	0.00	0.64	0.185	I	O	|			2.36
8.667	0.00	0.64	0.180	I	O	|			2.32
8.750	0.00	0.64	0.176	I	O	|			2.27
8.833	0.00	0.64	0.171	I	O	|			2.23

8.917	0.00	0.64	0.167	I	O	|	|	|	2.18
9.000	0.00	0.64	0.163	I	O	|	|	|	2.13
9.083	0.00	0.64	0.158	I	O	|	|	|	2.09
9.167	0.00	0.64	0.154	I	O	|	|	|	2.04
9.250	0.00	0.64	0.149	I	O	|	|	|	2.00
9.333	0.00	0.64	0.145	I	O	|	|	|	1.95
9.417	0.00	0.64	0.141	I	O	|	|	|	1.90
9.500	0.00	0.64	0.136	I	O	|	|	|	1.86
9.583	0.00	0.64	0.132	I	O	|	|	|	1.81
9.667	0.00	0.64	0.127	I	O	|	|	|	1.76
9.750	0.00	0.64	0.123	I	O	|	|	|	1.72
9.833	0.00	0.64	0.118	I	O	|	|	|	1.67
9.917	0.00	0.64	0.114	I	O	|	|	|	1.63
10.000	0.00	0.64	0.110	I	O	|	|	|	1.58
10.083	0.00	0.64	0.105	I	O	|	|	|	1.53
10.167	0.00	0.63	0.101	I	O	|	|	|	1.48
10.250	0.00	0.61	0.097	I	O	|	|	|	1.42
10.333	0.00	0.58	0.093	I	O	|	|	|	1.36
10.417	0.00	0.56	0.089	I	O	|	|	|	1.30
10.500	0.00	0.53	0.085	I	O	|	|	|	1.25
10.583	0.00	0.51	0.081	I	O	|	|	|	1.20
10.667	0.00	0.49	0.078	I	O	|	|	|	1.14
10.750	0.00	0.47	0.075	I	O	|	|	|	1.10
10.833	0.00	0.45	0.071	I	O	|	|	|	1.05
10.917	0.00	0.43	0.068	I	O	|	|	|	1.01
11.000	0.00	0.41	0.065	I	O	|	|	|	0.96
11.083	0.00	0.39	0.063	I	O	|	|	|	0.92
11.167	0.00	0.38	0.060	I	O	|	|	|	0.88
11.250	0.00	0.36	0.058	I	O	|	|	|	0.85
11.333	0.00	0.35	0.055	I	O	|	|	|	0.81
11.417	0.00	0.33	0.053	I	O	|	|	|	0.78
11.500	0.00	0.32	0.051	I	O	|	|	|	0.74
11.583	0.00	0.30	0.048	I	O	|	|	|	0.71
11.667	0.00	0.29	0.046	I	O	|	|	|	0.68
11.750	0.00	0.28	0.044	I	O	|	|	|	0.65
11.833	0.00	0.27	0.042	I	O	|	|	|	0.62
11.917	0.00	0.26	0.041	I	O	|	|	|	0.60
12.000	0.00	0.24	0.039	I	O	|	|	|	0.57
12.083	0.00	0.23	0.037	I	O	|	|	|	0.55
12.167	0.00	0.22	0.036	I	O	|	|	|	0.53
12.250	0.00	0.21	0.034	I	O	|	|	|	0.50
12.333	0.00	0.21	0.033	I	O	|	|	|	0.48
12.417	0.00	0.20	0.031	I	O	|	|	|	0.46
12.500	0.00	0.19	0.030	I	O	|	|	|	0.44
12.583	0.00	0.18	0.029	I	O	|	|	|	0.42
12.667	0.00	0.17	0.028	I	O	|	|	|	0.41
12.750	0.00	0.17	0.026	I	O	|	|	|	0.39
12.833	0.00	0.16	0.025	I	O	|	|	|	0.37
12.917	0.00	0.15	0.024	I	O	|	|	|	0.36
13.000	0.00	0.15	0.023	O		|	|	|	0.34
13.083	0.00	0.14	0.022	O		|	|	|	0.33
13.167	0.00	0.13	0.021	O		|	|	|	0.31
13.250	0.00	0.13	0.020	O		|	|	|	0.30
13.333	0.00	0.12	0.020	O		|	|	|	0.29
13.417	0.00	0.12	0.019	O		|	|	|	0.27
13.500	0.00	0.11	0.018	O		|	|	|	0.26
13.583	0.00	0.11	0.017	O		|	|	|	0.25
13.667	0.00	0.10	0.016	O		|	|	|	0.24
13.750	0.00	0.10	0.016	O		|	|	|	0.23
13.833	0.00	0.09	0.015	O		|	|	|	0.22

13.917	0.00	0.09	0.014	O	|	|	|	0.21
14.000	0.00	0.09	0.014	O	|	|	|	0.20
14.083	0.00	0.08	0.013	O	|	|	|	0.19
14.167	0.00	0.08	0.013	O	|	|	|	0.19
14.250	0.00	0.08	0.012	O	|	|	|	0.18
14.333	0.00	0.07	0.012	O	|	|	|	0.17
14.417	0.00	0.07	0.011	O	|	|	|	0.16
14.500	0.00	0.07	0.011	O	|	|	|	0.16
14.583	0.00	0.06	0.010	O	|	|	|	0.15
14.667	0.00	0.06	0.010	O	|	|	|	0.14
14.750	0.00	0.06	0.009	O	|	|	|	0.14
14.833	0.00	0.06	0.009	O	|	|	|	0.13
14.917	0.00	0.05	0.009	O	|	|	|	0.13
15.000	0.00	0.05	0.008	O	|	|	|	0.12
15.083	0.00	0.05	0.008	O	|	|	|	0.12
15.167	0.00	0.05	0.008	O	|	|	|	0.11
15.250	0.00	0.05	0.007	O	|	|	|	0.11
15.333	0.00	0.04	0.007	O	|	|	|	0.10
15.417	0.00	0.04	0.007	O	|	|	|	0.10
15.500	0.00	0.04	0.006	O	|	|	|	0.09
15.583	0.00	0.04	0.006	O	|	|	|	0.09
15.667	0.00	0.04	0.006	O	|	|	|	0.09
15.750	0.00	0.03	0.006	O	|	|	|	0.08
15.833	0.00	0.03	0.005	O	|	|	|	0.08
15.917	0.00	0.03	0.005	O	|	|	|	0.08
16.000	0.00	0.03	0.005	O	|	|	|	0.07
16.083	0.00	0.03	0.005	O	|	|	|	0.07
16.167	0.00	0.03	0.004	O	|	|	|	0.07
16.250	0.00	0.03	0.004	O	|	|	|	0.06
16.333	0.00	0.03	0.004	O	|	|	|	0.06
16.417	0.00	0.02	0.004	O	|	|	|	0.06
16.500	0.00	0.02	0.004	O	|	|	|	0.06
16.583	0.00	0.02	0.004	O	|	|	|	0.05
16.667	0.00	0.02	0.003	O	|	|	|	0.05
16.750	0.00	0.02	0.003	O	|	|	|	0.05
16.833	0.00	0.02	0.003	O	|	|	|	0.05
16.917	0.00	0.02	0.003	O	|	|	|	0.04
17.000	0.00	0.02	0.003	O	|	|	|	0.04
17.083	0.00	0.02	0.003	O	|	|	|	0.04
17.167	0.00	0.02	0.003	O	|	|	|	0.04
17.250	0.00	0.02	0.003	O	|	|	|	0.04
17.333	0.00	0.02	0.002	O	|	|	|	0.04
17.417	0.00	0.01	0.002	O	|	|	|	0.03
17.500	0.00	0.01	0.002	O	|	|	|	0.03
17.583	0.00	0.01	0.002	O	|	|	|	0.03
17.667	0.00	0.01	0.002	O	|	|	|	0.03
17.750	0.00	0.01	0.002	O	|	|	|	0.03
17.833	0.00	0.01	0.002	O	|	|	|	0.03
17.917	0.00	0.01	0.002	O	|	|	|	0.03
18.000	0.00	0.01	0.002	O	|	|	|	0.03
18.083	0.00	0.01	0.002	O	|	|	|	0.02
18.167	0.00	0.01	0.002	O	|	|	|	0.02
18.250	0.00	0.01	0.002	O	|	|	|	0.02
18.333	0.00	0.01	0.001	O	|	|	|	0.02
18.417	0.00	0.01	0.001	O	|	|	|	0.02
18.500	0.00	0.01	0.001	O	|	|	|	0.02
18.583	0.00	0.01	0.001	O	|	|	|	0.02
18.667	0.00	0.01	0.001	O	|	|	|	0.02
18.750	0.00	0.01	0.001	O	|	|	|	0.02
18.833	0.00	0.01	0.001	O	|	|	|	0.02

18.917	0.00	0.01	0.001	O	|	|	|	|	0.02
19.000	0.00	0.01	0.001	O	|	|	|	|	0.02
19.083	0.00	0.01	0.001	O	|	|	|	|	0.01
19.167	0.00	0.01	0.001	O	|	|	|	|	0.01
19.250	0.00	0.01	0.001	O	|	|	|	|	0.01
19.333	0.00	0.01	0.001	O	|	|	|	|	0.01
19.417	0.00	0.01	0.001	O	|	|	|	|	0.01
19.500	0.00	0.01	0.001	O	|	|	|	|	0.01
19.583	0.00	0.00	0.001	O	|	|	|	|	0.01
19.667	0.00	0.00	0.001	O	|	|	|	|	0.01
19.750	0.00	0.00	0.001	O	|	|	|	|	0.01
19.833	0.00	0.00	0.001	O	|	|	|	|	0.01
19.917	0.00	0.00	0.001	O	|	|	|	|	0.01
20.000	0.00	0.00	0.001	O	|	|	|	|	0.01
20.083	0.00	0.00	0.001	O	|	|	|	|	0.01
20.167	0.00	0.00	0.001	O	|	|	|	|	0.01
20.250	0.00	0.00	0.001	O	|	|	|	|	0.01
20.333	0.00	0.00	0.001	O	|	|	|	|	0.01
20.417	0.00	0.00	0.000	O	|	|	|	|	0.01
20.500	0.00	0.00	0.000	O	|	|	|	|	0.01
20.583	0.00	0.00	0.000	O	|	|	|	|	0.01
20.667	0.00	0.00	0.000	O	|	|	|	|	0.01
20.750	0.00	0.00	0.000	O	|	|	|	|	0.01
20.833	0.00	0.00	0.000	O	|	|	|	|	0.01
20.917	0.00	0.00	0.000	O	|	|	|	|	0.01
21.000	0.00	0.00	0.000	O	|	|	|	|	0.01
21.083	0.00	0.00	0.000	O	|	|	|	|	0.01
21.167	0.00	0.00	0.000	O	|	|	|	|	0.00
21.250	0.00	0.00	0.000	O	|	|	|	|	0.00
21.333	0.00	0.00	0.000	O	|	|	|	|	0.00
21.417	0.00	0.00	0.000	O	|	|	|	|	0.00
21.500	0.00	0.00	0.000	O	|	|	|	|	0.00
21.583	0.00	0.00	0.000	O	|	|	|	|	0.00
21.667	0.00	0.00	0.000	O	|	|	|	|	0.00
21.750	0.00	0.00	0.000	O	|	|	|	|	0.00
21.833	0.00	0.00	0.000	O	|	|	|	|	0.00
21.917	0.00	0.00	0.000	O	|	|	|	|	0.00
22.000	0.00	0.00	0.000	O	|	|	|	|	0.00
22.083	0.00	0.00	0.000	O	|	|	|	|	0.00
22.167	0.00	0.00	0.000	O	|	|	|	|	0.00
22.250	0.00	0.00	0.000	O	|	|	|	|	0.00
22.333	0.00	0.00	0.000	O	|	|	|	|	0.00
22.417	0.00	0.00	0.000	O	|	|	|	|	0.00
22.500	0.00	0.00	0.000	O	|	|	|	|	0.00
22.583	0.00	0.00	0.000	O	|	|	|	|	0.00
22.667	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 272
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.540 (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
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Study date: 10/25/24

DEXTER VILLAGE
AREA C
2-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte

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

Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.536 (CFS)
Total volume = 0.933 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.4	0.77	1.15	1.54	Depth (Ft.)
0.083	0.05	0.00	0.000	OI	|	|	|	|	0.00
0.167	0.09	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.09	0.01	0.001	OI	|	|	|	|	0.02
0.333	0.12	0.01	0.002	O I	|	|	|	|	0.03
0.417	0.13	0.02	0.003	O I	|	|	|	|	0.04
0.500	0.14	0.02	0.003	O I	|	|	|	|	0.05
0.583	0.14	0.03	0.004	O I	|	|	|	|	0.06
0.667	0.14	0.03	0.005	O I	|	|	|	|	0.07
0.750	0.14	0.04	0.006	O I	|	|	|	|	0.08
0.833	0.16	0.04	0.006	O I	|	|	|	|	0.09
0.917	0.18	0.05	0.007	O I	|	|	|	|	0.11
1.000	0.18	0.05	0.008	O I	|	|	|	|	0.12
1.083	0.15	0.06	0.009	O I	|	|	|	|	0.13
1.167	0.14	0.06	0.010	OI	|	|	|	|	0.14
1.250	0.14	0.06	0.010	OI	|	|	|	|	0.15
1.333	0.14	0.07	0.011	OI	|	|	|	|	0.16
1.417	0.14	0.07	0.011	OI	|	|	|	|	0.16
1.500	0.14	0.07	0.011	OI	|	|	|	|	0.17
1.583	0.14	0.07	0.012	OI	|	|	|	|	0.18
1.667	0.14	0.08	0.012	OI	|	|	|	|	0.18
1.750	0.14	0.08	0.013	OI	|	|	|	|	0.19
1.833	0.16	0.08	0.013	O I	|	|	|	|	0.19
1.917	0.18	0.09	0.014	O I	|	|	|	|	0.20
2.000	0.18	0.09	0.014	O I	|	|	|	|	0.21
2.083	0.18	0.09	0.015	O I	|	|	|	|	0.22
2.167	0.18	0.10	0.016	OI	|	|	|	|	0.23
2.250	0.18	0.10	0.016	OI	|	|	|	|	0.24
2.333	0.18	0.10	0.017	OI	|	|	|	|	0.25
2.417	0.18	0.11	0.017	OI	|	|	|	|	0.25
2.500	0.18	0.11	0.018	OI	|	|	|	|	0.26
2.583	0.21	0.11	0.018	O I	|	|	|	|	0.27
2.667	0.22	0.12	0.019	O I	|	|	|	|	0.28
2.750	0.23	0.12	0.020	O I	|	|	|	|	0.29
2.833	0.23	0.13	0.020	O I	|	|	|	|	0.30
2.917	0.23	0.13	0.021	O I	|	|	|	|	0.31
3.000	0.23	0.14	0.022	O I	|	|	|	|	0.32
3.083	0.23	0.14	0.022	O I	|	|	|	|	0.33
3.167	0.23	0.14	0.023	O I	|	|	|	|	0.34
3.250	0.23	0.15	0.023	OI	|	|	|	|	0.34
3.333	0.23	0.15	0.024	OI	|	|	|	|	0.35
3.417	0.23	0.15	0.024	OI	|	|	|	|	0.36
3.500	0.23	0.16	0.025	OI	|	|	|	|	0.37
3.583	0.23	0.16	0.025	OI	|	|	|	|	0.37
3.667	0.23	0.16	0.026	OI	|	|	|	|	0.38
3.750	0.23	0.16	0.026	OI	|	|	|	|	0.39
3.833	0.25	0.17	0.027	O I	|	|	|	|	0.39

3.917	0.27	0.17	0.027	O I				0.40
4.000	0.27	0.18	0.028	O I				0.41
4.083	0.27	0.18	0.029	O I				0.42
4.167	0.27	0.18	0.029	O I				0.43
4.250	0.27	0.19	0.030	O I				0.44
4.333	0.30	0.19	0.031	O I				0.45
4.417	0.31	0.20	0.031	O I				0.46
4.500	0.32	0.20	0.032	O I				0.47
4.583	0.32	0.21	0.033	O I				0.48
4.667	0.32	0.21	0.034	O I				0.49
4.750	0.32	0.22	0.034	O I				0.50
4.833	0.34	0.22	0.035	O I				0.52
4.917	0.36	0.23	0.036	O I				0.53
5.000	0.36	0.23	0.037	O I				0.54
5.083	0.31	0.24	0.038	O I				0.55
5.167	0.28	0.24	0.038	OI				0.56
5.250	0.27	0.24	0.038	OI				0.56
5.333	0.30	0.24	0.038	OI				0.57
5.417	0.31	0.24	0.039	OI				0.57
5.500	0.32	0.25	0.039	OI				0.58
5.583	0.34	0.25	0.040	O I				0.59
5.667	0.36	0.25	0.041	O I				0.60
5.750	0.36	0.26	0.041	O I				0.61
5.833	0.36	0.26	0.042	O I				0.62
5.917	0.36	0.27	0.043	O I				0.63
6.000	0.36	0.27	0.043	O I				0.64
6.083	0.39	0.28	0.044	O I				0.65
6.167	0.40	0.28	0.045	O I				0.66
6.250	0.41	0.29	0.046	O I				0.67
6.333	0.41	0.29	0.046	O I				0.68
6.417	0.41	0.30	0.047	O I				0.69
6.500	0.41	0.30	0.048	O I				0.71
6.583	0.43	0.31	0.049	O I				0.72
6.667	0.45	0.31	0.050	O I				0.73
6.750	0.45	0.32	0.051	O I				0.74
6.833	0.45	0.32	0.052	O I				0.76
6.917	0.45	0.33	0.052	O I				0.77
7.000	0.45	0.33	0.053	O I				0.78
7.083	0.45	0.34	0.054	O I				0.79
7.167	0.45	0.34	0.055	O I				0.81
7.250	0.45	0.35	0.056	O I				0.82
7.333	0.48	0.35	0.056	O I				0.83
7.417	0.49	0.36	0.057	O I				0.84
7.500	0.50	0.36	0.058	O I				0.85
7.583	0.52	0.37	0.059	O I				0.87
7.667	0.54	0.38	0.060	O I				0.88
7.750	0.54	0.38	0.061	O I				0.90
7.833	0.57	0.39	0.062	O I				0.92
7.917	0.58	0.40	0.064	O I				0.94
8.000	0.59	0.41	0.065	O I				0.95
8.083	0.64	0.42	0.066	O I				0.98
8.167	0.67	0.43	0.068	O I				1.00
8.250	0.68	0.44	0.070	O I				1.02
8.333	0.68	0.45	0.071	O I				1.05
8.417	0.68	0.46	0.073	O I				1.07
8.500	0.68	0.47	0.074	O I				1.09
8.583	0.70	0.48	0.076	O I				1.11
8.667	0.72	0.49	0.077	O I				1.14
8.750	0.72	0.50	0.079	O I				1.16
8.833	0.75	0.51	0.081	O I				1.19

8.917	0.77	0.52	0.082	|	| O I|	|	|	1.21
9.000	0.77	0.53	0.084	|	| O I	|	|	1.24
9.083	0.82	0.54	0.086	|	| O |I	|	|	1.26
9.167	0.85	0.55	0.088	|	| O |I	|	|	1.29
9.250	0.86	0.56	0.090	|	| O |I	|	|	1.32
9.333	0.88	0.58	0.092	|	| O | I	|	|	1.35
9.417	0.90	0.59	0.094	|	| O | I	|	|	1.38
9.500	0.90	0.60	0.096	|	| O | I	|	|	1.41
9.583	0.93	0.62	0.098	|	| O | I	|	|	1.45
9.667	0.95	0.63	0.100	|	| O | I	|	|	1.48
9.750	0.95	0.64	0.103	|	| O | I	|	|	1.51
9.833	0.98	0.64	0.105	|	| O | I	|	|	1.53
9.917	0.99	0.64	0.107	|	| O | I	|	|	1.55
10.000	0.99	0.64	0.110	|	| O | I	|	|	1.58
10.083	0.81	0.64	0.111	|	| O I	|	|	1.60
10.167	0.69	0.64	0.112	|	| OI |	|	|	1.61
10.250	0.68	0.64	0.112	|	| OI |	|	|	1.61
10.333	0.68	0.64	0.113	|	| OI |	|	|	1.61
10.417	0.68	0.64	0.113	|	| OI |	|	|	1.61
10.500	0.68	0.64	0.113	|	| OI |	|	|	1.62
10.583	0.81	0.64	0.114	|	| O I	|	|	1.63
10.667	0.89	0.64	0.115	|	| O | I	|	|	1.64
10.750	0.90	0.64	0.117	|	| O | I	|	|	1.66
10.833	0.90	0.64	0.119	|	| O | I	|	|	1.68
10.917	0.90	0.64	0.121	|	| O | I	|	|	1.70
11.000	0.90	0.64	0.123	|	| O | I	|	|	1.72
11.083	0.88	0.64	0.124	|	| O | I	|	|	1.73
11.167	0.86	0.64	0.126	|	| O |I	|	|	1.75
11.250	0.86	0.64	0.127	|	| O |I	|	|	1.77
11.333	0.86	0.64	0.129	|	| O |I	|	|	1.78
11.417	0.86	0.64	0.130	|	| O |I	|	|	1.80
11.500	0.86	0.64	0.132	|	| O |I	|	|	1.81
11.583	0.80	0.64	0.133	|	| O I	|	|	1.83
11.667	0.77	0.64	0.134	|	| O I	|	|	1.84
11.750	0.77	0.64	0.135	|	| O I	|	|	1.85
11.833	0.79	0.64	0.136	|	| O I	|	|	1.86
11.917	0.81	0.64	0.137	|	| O I	|	|	1.87
12.000	0.81	0.64	0.138	|	| O I	|	|	1.88
12.083	1.00	0.64	0.140	|	| O | I	|	|	1.90
12.167	1.11	0.64	0.143	|	| O | I|	|	|	1.93
12.250	1.13	0.64	0.146	|	| O | I|	|	|	1.97
12.333	1.16	0.64	0.150	|	| O | I	|	|	2.00
12.417	1.17	0.64	0.154	|	| O | I	|	|	2.04
12.500	1.17	0.64	0.157	|	| O | I	|	|	2.08
12.583	1.23	0.64	0.161	|	| O | |I	|	|	2.12
12.667	1.26	0.64	0.165	|	| O | | I	|	|	2.16
12.750	1.26	0.64	0.170	|	| O | | I	|	|	2.21
12.833	1.29	0.64	0.174	|	| O | | I	|	|	2.25
12.917	1.31	0.64	0.178	|	| O | | I	|	|	2.30
13.000	1.31	0.64	0.183	|	| O | | I	|	|	2.35
13.083	1.44	0.64	0.188	|	| O | | I	|	|	2.40
13.167	1.52	0.64	0.194	|	| O | | I		|	|	2.46
13.250	1.54	0.64	0.200	|	| O | | I	|	|	2.53
13.333	1.54	0.64	0.206	|	| O | | I	|	|	2.59
13.417	1.54	0.64	0.212	|	| O | | I	|	|	2.65
13.500	1.54	0.64	0.219	|	| O | | I	|	|	2.72
13.583	1.24	0.64	0.224	|	| O | |I	|	|	2.77
13.667	1.06	0.64	0.227	|	| O | I	|	|	2.81
13.750	1.04	0.64	0.230	|	| O | I	|	|	2.84
13.833	1.04	0.64	0.233	|	| O | I	|	|	2.87

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13.917    1.04    0.64      0.236  |        |     O  |     I  |        |     2.90
14.000    1.04    0.64      0.238  |        |     O  |     I  |        |     2.93
14.083    1.15    0.64      0.241  |        |     O  |       I|        |     2.96
14.167    1.21    0.64      0.245  |        |     O  |        |I       |     3.00
14.250    1.22    0.64      0.249  |        |     O  |        |I       |     3.04
14.333    1.19    0.64      0.253  |        |     O  |        I        |     3.08
14.417    1.18    0.64      0.257  |        |     O  |        I        |     3.12
14.500    1.17    0.64      0.260  |        |     O  |        I        |     3.16
14.583    1.17    0.64      0.264  |        |     O  |        I        |     3.20
14.667    1.17    0.64      0.268  |        |     O  |        I        |     3.23
14.750    1.17    0.64      0.271  |        |     O  |        I        |     3.27
14.833    1.15    0.64      0.275  |        |     O  |       I|        |     3.31
14.917    1.13    0.64      0.279  |        |     O  |       I|        |     3.35
15.000    1.13    0.64      0.282  |        |     O  |       I|        |     3.38
15.083    1.10    0.64      0.285  |        |     O  |      I |        |     3.42
15.167    1.09    0.64      0.288  |        |     O  |      I |        |     3.45
15.250    1.08    0.64      0.291  |        |     O  |      I |        |     3.48
15.333    1.06    0.64      0.294  |        |     O  |      I |        |     3.51
15.417    1.04    0.64      0.297  |        |     O  |     I  |        |     3.54
15.500    1.04    0.64      0.300  |        |     O  |     I  |        |     3.57
15.583    0.93    0.64      0.302  |        |     O  |   I    |        |     3.60
15.667    0.87    0.64      0.304  |        |     O  |  I     |        |     3.61
15.750    0.86    0.64      0.306  |        |     O  |I       |        |     3.63
15.833    0.86    0.64      0.307  |        |     O  |I       |        |     3.65
15.917    0.86    0.64      0.309  |        |     O  |I       |        |     3.66
16.000    0.86    0.64      0.310  |        |     O  |I       |        |     3.68
16.083    0.46    0.64      0.310  |        |I    O  |        |        |     3.68
16.167    0.22    0.64      0.308  |    I   |     O  |        |        |     3.66
16.250    0.18    0.64      0.305  |   I    |     O  |        |        |     3.62
16.333    0.18    0.64      0.302  |   I    |     O  |        |        |     3.59
16.417    0.18    0.64      0.299  |   I    |     O  |        |        |     3.56
16.500    0.18    0.64      0.296  |   I    |     O  |        |        |     3.53
16.583    0.15    0.64      0.292  |   I    |     O  |        |        |     3.49
16.667    0.14    0.64      0.289  |  I     |     O  |        |        |     3.46
16.750    0.14    0.64      0.286  |  I     |     O  |        |        |     3.42
16.833    0.14    0.64      0.282  |  I     |     O  |        |        |     3.38
16.917    0.14    0.64      0.279  |  I     |     O  |        |        |     3.35
17.000    0.14    0.64      0.275  |  I     |     O  |        |        |     3.31
17.083    0.19    0.64      0.272  |   I    |     O  |        |        |     3.28
17.167    0.22    0.64      0.269  |    I   |     O  |        |        |     3.24
17.250    0.23    0.64      0.266  |    I   |     O  |        |        |     3.21
17.333    0.23    0.64      0.263  |    I   |     O  |        |        |     3.18
17.417    0.23    0.64      0.260  |    I   |     O  |        |        |     3.16
17.500    0.23    0.64      0.257  |    I   |     O  |        |        |     3.13
17.583    0.23    0.64      0.255  |    I   |     O  |        |        |     3.10
17.667    0.23    0.64      0.252  |    I   |     O  |        |        |     3.07
17.750    0.23    0.64      0.249  |    I   |     O  |        |        |     3.04
17.833    0.20    0.64      0.246  |    I   |     O  |        |        |     3.00
17.917    0.18    0.64      0.243  |   I    |     O  |        |        |     2.97
18.000    0.18    0.64      0.240  |   I    |     O  |        |        |     2.94
18.083    0.18    0.64      0.236  |   I    |     O  |        |        |     2.91
18.167    0.18    0.64      0.233  |   I    |     O  |        |        |     2.87
18.250    0.18    0.64      0.230  |   I    |     O  |        |        |     2.84
18.333    0.18    0.64      0.227  |   I    |     O  |        |        |     2.81
18.417    0.18    0.64      0.224  |   I    |     O  |        |        |     2.77
18.500    0.18    0.64      0.221  |   I    |     O  |        |        |     2.74
18.583    0.15    0.64      0.217  |   I    |     O  |        |        |     2.71
18.667    0.14    0.64      0.214  |  I     |     O  |        |        |     2.67
18.750    0.14    0.64      0.211  |  I     |     O  |        |        |     2.64
18.833    0.11    0.64      0.207  |  I     |     O  |        |        |     2.60
```

18.917	0.09	0.64	0.203	I	O			2.56
19.000	0.09	0.64	0.199	I	O			2.52
19.083	0.12	0.64	0.196	I	O			2.48
19.167	0.13	0.64	0.192	I	O			2.44
19.250	0.14	0.64	0.189	I	O			2.41
19.333	0.16	0.64	0.185	I	O			2.37
19.417	0.18	0.64	0.182	I	O			2.34
19.500	0.18	0.64	0.179	I	O			2.30
19.583	0.15	0.64	0.176	I	O			2.27
19.667	0.14	0.64	0.172	I	O			2.24
19.750	0.14	0.64	0.169	I	O			2.20
19.833	0.11	0.64	0.165	I	O			2.16
19.917	0.09	0.64	0.162	I	O			2.12
20.000	0.09	0.64	0.158	I	O			2.08
20.083	0.12	0.64	0.154	I	O			2.04
20.167	0.13	0.64	0.151	I	O			2.01
20.250	0.14	0.64	0.147	I	O			1.97
20.333	0.14	0.64	0.144	I	O			1.93
20.417	0.14	0.64	0.140	I	O			1.90
20.500	0.14	0.64	0.137	I	O			1.86
20.583	0.14	0.64	0.133	I	O			1.83
20.667	0.14	0.64	0.130	I	O			1.79
20.750	0.14	0.64	0.126	I	O			1.75
20.833	0.11	0.64	0.123	I	O			1.72
20.917	0.09	0.64	0.119	I	O			1.68
21.000	0.09	0.64	0.115	I	O			1.64
21.083	0.12	0.64	0.111	I	O			1.60
21.167	0.13	0.64	0.108	I	O			1.56
21.250	0.14	0.64	0.104	I	O			1.53
21.333	0.11	0.63	0.101	I	O			1.48
21.417	0.09	0.61	0.097	I	O			1.43
21.500	0.09	0.59	0.094	I	O			1.38
21.583	0.12	0.57	0.091	I	O			1.33
21.667	0.13	0.55	0.088	I	O			1.29
21.750	0.14	0.53	0.085	I	O			1.25
21.833	0.11	0.51	0.082	I	O			1.21
21.917	0.09	0.50	0.079	I	O			1.16
22.000	0.09	0.48	0.076	I	O			1.12
22.083	0.12	0.46	0.074	I	O			1.09
22.167	0.13	0.45	0.072	I	O			1.05
22.250	0.14	0.44	0.070	I	O			1.02
22.333	0.11	0.42	0.067	I	O			0.99
22.417	0.09	0.41	0.065	I	O			0.96
22.500	0.09	0.40	0.063	I	O			0.93
22.583	0.09	0.38	0.061	I	O			0.90
22.667	0.09	0.37	0.059	I	O			0.87
22.750	0.09	0.36	0.057	I	O			0.84
22.833	0.09	0.35	0.055	I	O			0.81
22.917	0.09	0.34	0.054	I	O			0.79
23.000	0.09	0.33	0.052	I	O			0.76
23.083	0.09	0.32	0.050	I	O			0.74
23.167	0.09	0.31	0.049	I	O			0.72
23.250	0.09	0.30	0.047	I	O			0.70
23.333	0.09	0.29	0.046	I	O			0.68
23.417	0.09	0.28	0.045	I	O			0.66
23.500	0.09	0.27	0.043	I	O			0.64
23.583	0.09	0.26	0.042	I	O			0.62
23.667	0.09	0.26	0.041	I	O			0.60
23.750	0.09	0.25	0.040	I	O			0.59
23.833	0.09	0.24	0.039	I	O			0.57

23.917	0.09	0.24	0.038	|I O	|	|	|	0.56
24.000	0.09	0.23	0.037	|I O	|	|	|	0.54
24.083	0.04	0.22	0.036	I O	|	|	|	0.52
24.167	0.00	0.22	0.034	I O	|	|	|	0.50
24.250	0.00	0.21	0.033	I O	|	|	|	0.48
24.333	0.00	0.20	0.031	I O	|	|	|	0.46
24.417	0.00	0.19	0.030	I O	|	|	|	0.44
24.500	0.00	0.18	0.029	I O	|	|	|	0.42
24.583	0.00	0.17	0.028	I O	|	|	|	0.41
24.667	0.00	0.17	0.026	I O	|	|	|	0.39
24.750	0.00	0.16	0.025	I O	|	|	|	0.37
24.833	0.00	0.15	0.024	I O	|	|	|	0.36
24.917	0.00	0.15	0.023	I O	|	|	|	0.34
25.000	0.00	0.14	0.022	I O	|	|	|	0.33
25.083	0.00	0.13	0.021	I O	|	|	|	0.31
25.167	0.00	0.13	0.020	I O	|	|	|	0.30
25.250	0.00	0.12	0.020	I O	|	|	|	0.29
25.333	0.00	0.12	0.019	I O	|	|	|	0.28
25.417	0.00	0.11	0.018	I O	|	|	|	0.26
25.500	0.00	0.11	0.017	I O	|	|	|	0.25
25.583	0.00	0.10	0.016	I O	|	|	|	0.24
25.667	0.00	0.10	0.016	I O	|	|	|	0.23
25.750	0.00	0.09	0.015	IO	|	|	|	0.22
25.833	0.00	0.09	0.014	IO	|	|	|	0.21
25.917	0.00	0.09	0.014	IO	|	|	|	0.20
26.000	0.00	0.08	0.013	IO	|	|	|	0.19
26.083	0.00	0.08	0.013	IO	|	|	|	0.19
26.167	0.00	0.08	0.012	IO	|	|	|	0.18
26.250	0.00	0.07	0.012	IO	|	|	|	0.17
26.333	0.00	0.07	0.011	IO	|	|	|	0.16
26.417	0.00	0.07	0.011	IO	|	|	|	0.16
26.500	0.00	0.06	0.010	IO	|	|	|	0.15
26.583	0.00	0.06	0.010	IO	|	|	|	0.14
26.667	0.00	0.06	0.009	IO	|	|	|	0.14
26.750	0.00	0.06	0.009	IO	|	|	|	0.13
26.833	0.00	0.05	0.009	IO	|	|	|	0.13
26.917	0.00	0.05	0.008	IO	|	|	|	0.12
27.000	0.00	0.05	0.008	IO	|	|	|	0.12
27.083	0.00	0.05	0.008	O	|	|	|	0.11
27.167	0.00	0.05	0.007	O	|	|	|	0.11
27.250	0.00	0.04	0.007	O	|	|	|	0.10
27.333	0.00	0.04	0.007	O	|	|	|	0.10
27.417	0.00	0.04	0.006	O	|	|	|	0.09
27.500	0.00	0.04	0.006	O	|	|	|	0.09
27.583	0.00	0.04	0.006	O	|	|	|	0.09
27.667	0.00	0.04	0.006	O	|	|	|	0.08
27.750	0.00	0.03	0.005	O	|	|	|	0.08
27.833	0.00	0.03	0.005	O	|	|	|	0.08
27.917	0.00	0.03	0.005	O	|	|	|	0.07
28.000	0.00	0.03	0.005	O	|	|	|	0.07
28.083	0.00	0.03	0.004	O	|	|	|	0.07
28.167	0.00	0.03	0.004	O	|	|	|	0.06
28.250	0.00	0.03	0.004	O	|	|	|	0.06
28.333	0.00	0.02	0.004	O	|	|	|	0.06
28.417	0.00	0.02	0.004	O	|	|	|	0.06
28.500	0.00	0.02	0.004	O	|	|	|	0.05
28.583	0.00	0.02	0.003	O	|	|	|	0.05
28.667	0.00	0.02	0.003	O	|	|	|	0.05
28.750	0.00	0.02	0.003	O	|	|	|	0.05
28.833	0.00	0.02	0.003	O	|	|	|	0.04

28.917	0.00	0.02	0.003	O	|	|	|	0.04
29.000	0.00	0.02	0.003	O	|	|	|	0.04
29.083	0.00	0.02	0.003	O	|	|	|	0.04
29.167	0.00	0.02	0.003	O	|	|	|	0.04
29.250	0.00	0.02	0.002	O	|	|	|	0.04
29.333	0.00	0.01	0.002	O	|	|	|	0.03
29.417	0.00	0.01	0.002	O	|	|	|	0.03
29.500	0.00	0.01	0.002	O	|	|	|	0.03
29.583	0.00	0.01	0.002	O	|	|	|	0.03
29.667	0.00	0.01	0.002	O	|	|	|	0.03
29.750	0.00	0.01	0.002	O	|	|	|	0.03
29.833	0.00	0.01	0.002	O	|	|	|	0.03
29.917	0.00	0.01	0.002	O	|	|	|	0.03
30.000	0.00	0.01	0.002	O	|	|	|	0.02
30.083	0.00	0.01	0.002	O	|	|	|	0.02
30.167	0.00	0.01	0.002	O	|	|	|	0.02
30.250	0.00	0.01	0.001	O	|	|	|	0.02
30.333	0.00	0.01	0.001	O	|	|	|	0.02
30.417	0.00	0.01	0.001	O	|	|	|	0.02
30.500	0.00	0.01	0.001	O	|	|	|	0.02
30.583	0.00	0.01	0.001	O	|	|	|	0.02
30.667	0.00	0.01	0.001	O	|	|	|	0.02
30.750	0.00	0.01	0.001	O	|	|	|	0.02
30.833	0.00	0.01	0.001	O	|	|	|	0.02
30.917	0.00	0.01	0.001	O	|	|	|	0.02
31.000	0.00	0.01	0.001	O	|	|	|	0.01
31.083	0.00	0.01	0.001	O	|	|	|	0.01
31.167	0.00	0.01	0.001	O	|	|	|	0.01
31.250	0.00	0.01	0.001	O	|	|	|	0.01
31.333	0.00	0.01	0.001	O	|	|	|	0.01
31.417	0.00	0.01	0.001	O	|	|	|	0.01
31.500	0.00	0.00	0.001	O	|	|	|	0.01
31.583	0.00	0.00	0.001	O	|	|	|	0.01
31.667	0.00	0.00	0.001	O	|	|	|	0.01
31.750	0.00	0.00	0.001	O	|	|	|	0.01
31.833	0.00	0.00	0.001	O	|	|	|	0.01
31.917	0.00	0.00	0.001	O	|	|	|	0.01
32.000	0.00	0.00	0.001	O	|	|	|	0.01
32.083	0.00	0.00	0.001	O	|	|	|	0.01
32.167	0.00	0.00	0.001	O	|	|	|	0.01
32.250	0.00	0.00	0.001	O	|	|	|	0.01
32.333	0.00	0.00	0.000	O	|	|	|	0.01
32.417	0.00	0.00	0.000	O	|	|	|	0.01
32.500	0.00	0.00	0.000	O	|	|	|	0.01
32.583	0.00	0.00	0.000	O	|	|	|	0.01
32.667	0.00	0.00	0.000	O	|	|	|	0.01
32.750	0.00	0.00	0.000	O	|	|	|	0.01
32.833	0.00	0.00	0.000	O	|	|	|	0.01
32.917	0.00	0.00	0.000	O	|	|	|	0.01
33.000	0.00	0.00	0.000	O	|	|	|	0.01
33.083	0.00	0.00	0.000	O	|	|	|	0.00
33.167	0.00	0.00	0.000	O	|	|	|	0.00
33.250	0.00	0.00	0.000	O	|	|	|	0.00
33.333	0.00	0.00	0.000	O	|	|	|	0.00
33.417	0.00	0.00	0.000	O	|	|	|	0.00
33.500	0.00	0.00	0.000	O	|	|	|	0.00
33.583	0.00	0.00	0.000	O	|	|	|	0.00
33.667	0.00	0.00	0.000	O	|	|	|	0.00
33.750	0.00	0.00	0.000	O	|	|	|	0.00
33.833	0.00	0.00	0.000	O	|	|	|	0.00

33.917	0.00	0.00	0.000	O	|	|	|	0.00
34.000	0.00	0.00	0.000	O	|	|	|	0.00
34.083	0.00	0.00	0.000	O	|	|	|	0.00
34.167	0.00	0.00	0.000	O	|	|	|	0.00
34.250	0.00	0.00	0.000	O	|	|	|	0.00
34.333	0.00	0.00	0.000	O	|	|	|	0.00
34.417	0.00	0.00	0.000	O	|	|	|	0.00
34.500	0.00	0.00	0.000	O	|	|	|	0.00
34.583	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 415
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.933 (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

****

5-YEAR STORM

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
5-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte

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

Number of intervals = 16
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 9.956 (CFS)
Total volume = 0.359 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 16
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.5 4.98 7.47 9.96	Depth (Ft.)
0.083	0.83	0.02	0.003	O I | | | | |	0.03
0.167	1.76	0.06	0.011	O I | | | | |	0.14
0.250	2.15	0.13	0.024	O I | | | | |	0.29
0.333	2.42	0.21	0.039	O I| | | | |	0.47
0.417	2.55	0.30	0.054	O I | | | |	0.65
0.500	2.79	0.39	0.070	|O I | | |	0.84
0.583	3.38	0.46	0.088	|O | I | | |	1.04
0.667	4.15	0.46	0.111	|O | I | | |	1.20
0.750	5.53	0.46	0.141	|O | I | |	1.42
0.833	9.96	0.46	0.191	|O | | | I	1.78
0.917	9.27	0.46	0.255	|O | | | I |	2.24
1.000	4.49	0.46	0.299	|O | I | | |	2.56
1.083	2.09	0.46	0.318	|O I | | | |	2.70
1.167	0.62	0.46	0.324	|O | | | |	2.75
1.250	0.15	0.46	0.324	IO | | | |	2.74
1.333	0.04	0.46	0.321	IO | | | |	2.72
1.417	0.00	0.46	0.318	IO | | | |	2.70
1.500	0.00	0.46	0.315	IO | | | |	2.68
1.583	0.00	0.46	0.312	IO | | | |	2.66
1.667	0.00	0.46	0.309	IO | | | |	2.63
1.750	0.00	0.46	0.306	IO | | | |	2.61
1.833	0.00	0.46	0.302	IO | | | |	2.59
1.917	0.00	0.46	0.299	IO | | | |	2.56
2.000	0.00	0.46	0.296	IO | | | |	2.54
2.083	0.00	0.46	0.293	IO | | | |	2.52
2.167	0.00	0.46	0.290	IO | | | |	2.50
2.250	0.00	0.46	0.287	IO | | | |	2.47
2.333	0.00	0.46	0.283	IO | | | |	2.45
2.417	0.00	0.46	0.280	IO | | | |	2.43
2.500	0.00	0.46	0.277	IO | | | |	2.40
2.583	0.00	0.46	0.274	IO | | | |	2.38
2.667	0.00	0.46	0.271	IO | | | |	2.36
2.750	0.00	0.46	0.268	IO | | | |	2.34
2.833	0.00	0.46	0.264	IO | | | |	2.31
2.917	0.00	0.46	0.261	IO | | | |	2.29
3.000	0.00	0.46	0.258	IO | | | |	2.27
3.083	0.00	0.46	0.255	IO | | | |	2.24
3.167	0.00	0.46	0.252	IO | | | |	2.22
3.250	0.00	0.46	0.249	IO | | | |	2.20
3.333	0.00	0.46	0.245	IO | | | |	2.18
3.417	0.00	0.46	0.242	IO | | | |	2.15
3.500	0.00	0.46	0.239	IO | | | |	2.13
3.583	0.00	0.46	0.236	IO | | | |	2.11
3.667	0.00	0.46	0.233	IO | | | |	2.08
3.750	0.00	0.46	0.230	IO | | | |	2.06

3.833	0.00	0.46	0.226	IO				2.04
3.917	0.00	0.46	0.223	IO				2.01
4.000	0.00	0.46	0.220	IO				1.99
4.083	0.00	0.46	0.217	IO				1.97
4.167	0.00	0.46	0.214	IO				1.95
4.250	0.00	0.46	0.211	IO				1.92
4.333	0.00	0.46	0.207	IO				1.90
4.417	0.00	0.46	0.204	IO				1.88
4.500	0.00	0.46	0.201	IO				1.85
4.583	0.00	0.46	0.198	IO				1.83
4.667	0.00	0.46	0.195	IO				1.81
4.750	0.00	0.46	0.192	IO				1.79
4.833	0.00	0.46	0.188	IO				1.76
4.917	0.00	0.46	0.185	IO				1.74
5.000	0.00	0.46	0.182	IO				1.72
5.083	0.00	0.46	0.179	IO				1.69
5.167	0.00	0.46	0.176	IO				1.67
5.250	0.00	0.46	0.173	IO				1.65
5.333	0.00	0.46	0.169	IO				1.63
5.417	0.00	0.46	0.166	IO				1.60
5.500	0.00	0.46	0.163	IO				1.58
5.583	0.00	0.46	0.160	IO				1.56
5.667	0.00	0.46	0.157	IO				1.53
5.750	0.00	0.46	0.154	IO				1.51
5.833	0.00	0.46	0.150	IO				1.49
5.917	0.00	0.46	0.147	IO				1.46
6.000	0.00	0.46	0.144	IO				1.44
6.083	0.00	0.46	0.141	IO				1.42
6.167	0.00	0.46	0.138	IO				1.40
6.250	0.00	0.46	0.135	IO				1.37
6.333	0.00	0.46	0.131	IO				1.35
6.417	0.00	0.46	0.128	IO				1.33
6.500	0.00	0.46	0.125	IO				1.30
6.583	0.00	0.46	0.122	IO				1.28
6.667	0.00	0.46	0.119	IO				1.26
6.750	0.00	0.46	0.116	IO				1.24
6.833	0.00	0.46	0.112	IO				1.21
6.917	0.00	0.46	0.109	IO				1.19
7.000	0.00	0.46	0.106	IO				1.17
7.083	0.00	0.46	0.103	IO				1.14
7.167	0.00	0.46	0.100	IO				1.12
7.250	0.00	0.46	0.097	IO				1.10
7.333	0.00	0.46	0.093	IO				1.07
7.417	0.00	0.46	0.090	IO				1.05
7.500	0.00	0.46	0.087	IO				1.03
7.583	0.00	0.46	0.084	IO				1.01
7.667	0.00	0.45	0.081	IO				0.97
7.750	0.00	0.43	0.078	IO				0.94
7.833	0.00	0.41	0.075	IO				0.90
7.917	0.00	0.40	0.072	IO				0.87
8.000	0.00	0.38	0.069	IO				0.83
8.083	0.00	0.37	0.067	IO				0.80
8.167	0.00	0.36	0.064	IO				0.77
8.250	0.00	0.34	0.062	IO				0.74
8.333	0.00	0.33	0.059	IO				0.72
8.417	0.00	0.32	0.057	IO				0.69
8.500	0.00	0.31	0.055	O				0.66
8.583	0.00	0.29	0.053	O				0.64
8.667	0.00	0.28	0.051	O				0.62
8.750	0.00	0.27	0.049	O				0.59

8.833	0.00	0.26	0.047	O	|	|	|	0.57
8.917	0.00	0.25	0.046	O	|	|	|	0.55
9.000	0.00	0.24	0.044	O	|	|	|	0.53
9.083	0.00	0.23	0.042	O	|	|	|	0.51
9.167	0.00	0.23	0.041	O	|	|	|	0.49
9.250	0.00	0.22	0.039	O	|	|	|	0.47
9.333	0.00	0.21	0.038	O	|	|	|	0.45
9.417	0.00	0.20	0.036	O	|	|	|	0.44
9.500	0.00	0.19	0.035	O	|	|	|	0.42
9.583	0.00	0.19	0.034	O	|	|	|	0.40
9.667	0.00	0.18	0.032	O	|	|	|	0.39
9.750	0.00	0.17	0.031	O	|	|	|	0.37
9.833	0.00	0.17	0.030	O	|	|	|	0.36
9.917	0.00	0.16	0.029	O	|	|	|	0.35
10.000	0.00	0.15	0.028	O	|	|	|	0.33
10.083	0.00	0.15	0.027	O	|	|	|	0.32
10.167	0.00	0.14	0.026	O	|	|	|	0.31
10.250	0.00	0.14	0.025	O	|	|	|	0.30
10.333	0.00	0.13	0.024	O	|	|	|	0.29
10.417	0.00	0.13	0.023	O	|	|	|	0.28
10.500	0.00	0.12	0.022	O	|	|	|	0.27
10.583	0.00	0.12	0.021	O	|	|	|	0.26
10.667	0.00	0.11	0.020	O	|	|	|	0.25
10.750	0.00	0.11	0.020	O	|	|	|	0.24
10.833	0.00	0.10	0.019	O	|	|	|	0.23
10.917	0.00	0.10	0.018	O	|	|	|	0.22
11.000	0.00	0.10	0.018	O	|	|	|	0.21
11.083	0.00	0.09	0.017	O	|	|	|	0.20
11.167	0.00	0.09	0.016	O	|	|	|	0.20
11.250	0.00	0.09	0.016	O	|	|	|	0.19
11.333	0.00	0.08	0.015	O	|	|	|	0.18
11.417	0.00	0.08	0.014	O	|	|	|	0.17
11.500	0.00	0.08	0.014	O	|	|	|	0.17
11.583	0.00	0.07	0.013	O	|	|	|	0.16
11.667	0.00	0.07	0.013	O	|	|	|	0.16
11.750	0.00	0.07	0.012	O	|	|	|	0.15
11.833	0.00	0.07	0.012	O	|	|	|	0.14
11.917	0.00	0.06	0.012	O	|	|	|	0.14
12.000	0.00	0.06	0.011	O	|	|	|	0.13
12.083	0.00	0.06	0.011	O	|	|	|	0.13
12.167	0.00	0.06	0.010	O	|	|	|	0.12
12.250	0.00	0.05	0.010	O	|	|	|	0.12
12.333	0.00	0.05	0.010	O	|	|	|	0.11
12.417	0.00	0.05	0.009	O	|	|	|	0.11
12.500	0.00	0.05	0.009	O	|	|	|	0.11
12.583	0.00	0.05	0.008	O	|	|	|	0.10
12.667	0.00	0.05	0.008	O	|	|	|	0.10
12.750	0.00	0.04	0.008	O	|	|	|	0.09
12.833	0.00	0.04	0.008	O	|	|	|	0.09
12.917	0.00	0.04	0.007	O	|	|	|	0.09
13.000	0.00	0.04	0.007	O	|	|	|	0.08
13.083	0.00	0.04	0.007	O	|	|	|	0.08
13.167	0.00	0.04	0.006	O	|	|	|	0.08
13.250	0.00	0.03	0.006	O	|	|	|	0.08
13.333	0.00	0.03	0.006	O	|	|	|	0.07
13.417	0.00	0.03	0.006	O	|	|	|	0.07
13.500	0.00	0.03	0.006	O	|	|	|	0.07
13.583	0.00	0.03	0.005	O	|	|	|	0.06
13.667	0.00	0.03	0.005	O	|	|	|	0.06
13.750	0.00	0.03	0.005	O	|	|	|	0.06

13.833	0.00	0.03	0.005	O					0.06
13.917	0.00	0.03	0.005	O					0.06
14.000	0.00	0.02	0.004	O					0.05
14.083	0.00	0.02	0.004	O					0.05
14.167	0.00	0.02	0.004	O					0.05
14.250	0.00	0.02	0.004	O					0.05
14.333	0.00	0.02	0.004	O					0.05
14.417	0.00	0.02	0.004	O					0.04
14.500	0.00	0.02	0.004	O					0.04
14.583	0.00	0.02	0.003	O					0.04
14.667	0.00	0.02	0.003	O					0.04
14.750	0.00	0.02	0.003	O					0.04
14.833	0.00	0.02	0.003	O					0.04
14.917	0.00	0.02	0.003	O					0.04
15.000	0.00	0.02	0.003	O					0.03
15.083	0.00	0.01	0.003	O					0.03
15.167	0.00	0.01	0.003	O					0.03
15.250	0.00	0.01	0.003	O					0.03
15.333	0.00	0.01	0.002	O					0.03
15.417	0.00	0.01	0.002	O					0.03
15.500	0.00	0.01	0.002	O					0.03
15.583	0.00	0.01	0.002	O					0.03
15.667	0.00	0.01	0.002	O					0.02
15.750	0.00	0.01	0.002	O					0.02
15.833	0.00	0.01	0.002	O					0.02
15.917	0.00	0.01	0.002	O					0.02
16.000	0.00	0.01	0.002	O					0.02
16.083	0.00	0.01	0.002	O					0.02
16.167	0.00	0.01	0.002	O					0.02
16.250	0.00	0.01	0.002	O					0.02
16.333	0.00	0.01	0.002	O					0.02
16.417	0.00	0.01	0.001	O					0.02
16.500	0.00	0.01	0.001	O					0.02
16.583	0.00	0.01	0.001	O					0.02
16.667	0.00	0.01	0.001	O					0.02
16.750	0.00	0.01	0.001	O					0.02
16.833	0.00	0.01	0.001	O					0.01
16.917	0.00	0.01	0.001	O					0.01
17.000	0.00	0.01	0.001	O					0.01
17.083	0.00	0.01	0.001	O					0.01
17.167	0.00	0.01	0.001	O					0.01
17.250	0.00	0.01	0.001	O					0.01
17.333	0.00	0.01	0.001	O					0.01
17.417	0.00	0.01	0.001	O					0.01
17.500	0.00	0.00	0.001	O					0.01
17.583	0.00	0.00	0.001	O					0.01
17.667	0.00	0.00	0.001	O					0.01
17.750	0.00	0.00	0.001	O					0.01
17.833	0.00	0.00	0.001	O					0.01
17.917	0.00	0.00	0.001	O					0.01
18.000	0.00	0.00	0.001	O					0.01
18.083	0.00	0.00	0.001	O					0.01
18.167	0.00	0.00	0.001	O					0.01
18.250	0.00	0.00	0.001	O					0.01
18.333	0.00	0.00	0.001	O					0.01
18.417	0.00	0.00	0.001	O					0.01
18.500	0.00	0.00	0.001	O					0.01
18.583	0.00	0.00	0.001	O					0.01
18.667	0.00	0.00	0.001	O					0.01
18.750	0.00	0.00	0.001	O					0.01

18.833	0.00	0.00	0.000	O	|	|	|	|	0.01
18.917	0.00	0.00	0.000	O	|	|	|	|	0.01
19.000	0.00	0.00	0.000	O	|	|	|	|	0.01
19.083	0.00	0.00	0.000	O	|	|	|	|	0.01
19.167	0.00	0.00	0.000	O	|	|	|	|	0.01
19.250	0.00	0.00	0.000	O	|	|	|	|	0.00
19.333	0.00	0.00	0.000	O	|	|	|	|	0.00
19.417	0.00	0.00	0.000	O	|	|	|	|	0.00
19.500	0.00	0.00	0.000	O	|	|	|	|	0.00
19.583	0.00	0.00	0.000	O	|	|	|	|	0.00
19.667	0.00	0.00	0.000	O	|	|	|	|	0.00
19.750	0.00	0.00	0.000	O	|	|	|	|	0.00
19.833	0.00	0.00	0.000	O	|	|	|	|	0.00
19.917	0.00	0.00	0.000	O	|	|	|	|	0.00
20.000	0.00	0.00	0.000	O	|	|	|	|	0.00
20.083	0.00	0.00	0.000	O	|	|	|	|	0.00
20.167	0.00	0.00	0.000	O	|	|	|	|	0.00
20.250	0.00	0.00	0.000	O	|	|	|	|	0.00
20.333	0.00	0.00	0.000	O	|	|	|	|	0.00
20.417	0.00	0.00	0.000	O	|	|	|	|	0.00
20.500	0.00	0.00	0.000	O	|	|	|	|	0.00
20.583	0.00	0.00	0.000	O	|	|	|	|	0.00
20.667	0.00	0.00	0.000	O	|	|	|	|	0.00
20.750	0.00	0.00	0.000	O	|	|	|	|	0.00
20.833	0.00	0.00	0.000	O	|	|	|	|	0.00
20.917	0.00	0.00	0.000	O	|	|	|	|	0.00
21.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 252
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.359 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
5-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 40
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.179 (CFS)
Total volume = 0.592 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 40
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.8	3.59	5.38	7.18	Depth (Ft.)
0.083	0.43	0.01	0.001	OI	|	|	|	|	0.02
0.167	0.90	0.03	0.006	O I	|	|	|	|	0.07
0.250	0.93	0.07	0.012	O I	|	|	|	|	0.14
0.333	1.03	0.10	0.018	O I	|	|	|	|	0.22
0.417	1.18	0.14	0.025	O I	|	|	|	|	0.30
0.500	1.30	0.18	0.032	O I	|	|	|	|	0.39
0.583	1.32	0.22	0.040	O I	|	|	|	|	0.48
0.667	1.34	0.26	0.047	|O I	|	|	|	|	0.57
0.750	1.43	0.30	0.055	|O I	|	|	|	|	0.66
0.833	1.35	0.35	0.062	|O I	|	|	|	|	0.75
0.917	1.28	0.38	0.069	|O I	|	|	|	|	0.83
1.000	1.36	0.42	0.075	|O I	|	|	|	|	0.91
1.083	1.57	0.46	0.082	| O I	|	|	|	|	0.99
1.167	1.72	0.46	0.090	| O I	|	|	|	|	1.05
1.250	1.76	0.46	0.099	| O I	|	|	|	|	1.12
1.333	1.71	0.46	0.108	| O I	|	|	|	|	1.18
1.417	1.84	0.46	0.117	| O I	|	|	|	|	1.25
1.500	2.08	0.46	0.128	| O |I	|	|	|	|	1.32
1.583	2.05	0.46	0.139	| O |I	|	|	|	|	1.40
1.667	2.07	0.46	0.150	| O |I	|	|	|	|	1.48
1.750	2.36	0.46	0.162	| O | I	|	|	|	|	1.57
1.833	2.53	0.46	0.175	| O | I	|	|	|	|	1.67
1.917	2.44	0.46	0.189	| O | I	|	|	|	|	1.77
2.000	2.41	0.46	0.203	| O | I	|	|	|	|	1.87
2.083	2.46	0.46	0.216	| O | I	|	|	|	|	1.97
2.167	2.96	0.46	0.232	| O | I	|	|	|	|	2.08
2.250	3.82	0.46	0.252	| O | |I	|	|	|	|	2.22
2.333	3.65	0.46	0.275	| O | I	|	|	|	|	2.39
2.417	4.52	0.46	0.300	| O | | I	|	|	|	|	2.57
2.500	6.24	0.46	0.333	| O | | | I	|	|	|	|	2.81
2.583	7.18	0.46	0.377	| O | | | | I	|	|	|	|	3.12
2.667	6.76	0.46	0.421	| O | | | | I |	|	|	|	|	3.45
2.750	4.23	0.46	0.456	| O | | | I |	|	|	|	|	3.70
2.833	2.26	0.46	0.475	| O | | I |	|	|	|	|	3.84
2.917	1.74	0.46	0.486	| O | I	|	|	|	|	3.91
3.000	1.14	0.46	0.493	| O I	|	|	|	|	3.96
3.083	0.44	0.46	0.495	|IO	|	|	|	|	3.98
3.167	0.13	0.46	0.494	I O	|	|	|	|	3.97
3.250	0.04	0.46	0.491	I O	|	|	|	|	3.95
3.333	0.01	0.46	0.488	I O	|	|	|	|	3.93
3.417	0.00	0.46	0.485	I O	|	|	|	|	3.91
3.500	0.00	0.46	0.482	I O	|	|	|	|	3.88
3.583	0.00	0.46	0.478	I O	|	|	|	|	3.86
3.667	0.00	0.46	0.475	I O	|	|	|	|	3.84
3.750	0.00	0.46	0.472	I O	|	|	|	|	3.82

3.833	0.00	0.46	0.469	I	O	|	|	|	| 3.79
3.917	0.00	0.46	0.466	I	O	|	|	|	| 3.77
4.000	0.00	0.46	0.463	I	O	|	|	|	| 3.75
4.083	0.00	0.46	0.459	I	O	|	|	|	| 3.72
4.167	0.00	0.46	0.456	I	O	|	|	|	| 3.70
4.250	0.00	0.46	0.453	I	O	|	|	|	| 3.68
4.333	0.00	0.46	0.450	I	O	|	|	|	| 3.66
4.417	0.00	0.46	0.447	I	O	|	|	|	| 3.63
4.500	0.00	0.46	0.444	I	O	|	|	|	| 3.61
4.583	0.00	0.46	0.440	I	O	|	|	|	| 3.59
4.667	0.00	0.46	0.437	I	O	|	|	|	| 3.56
4.750	0.00	0.46	0.434	I	O	|	|	|	| 3.54
4.833	0.00	0.46	0.431	I	O	|	|	|	| 3.52
4.917	0.00	0.46	0.428	I	O	|	|	|	| 3.49
5.000	0.00	0.46	0.425	I	O	|	|	|	| 3.47
5.083	0.00	0.46	0.421	I	O	|	|	|	| 3.45
5.167	0.00	0.46	0.418	I	O	|	|	|	| 3.43
5.250	0.00	0.46	0.415	I	O	|	|	|	| 3.40
5.333	0.00	0.46	0.412	I	O	|	|	|	| 3.38
5.417	0.00	0.46	0.409	I	O	|	|	|	| 3.36
5.500	0.00	0.46	0.406	I	O	|	|	|	| 3.33
5.583	0.00	0.46	0.402	I	O	|	|	|	| 3.31
5.667	0.00	0.46	0.399	I	O	|	|	|	| 3.29
5.750	0.00	0.46	0.396	I	O	|	|	|	| 3.27
5.833	0.00	0.46	0.393	I	O	|	|	|	| 3.24
5.917	0.00	0.46	0.390	I	O	|	|	|	| 3.22
6.000	0.00	0.46	0.387	I	O	|	|	|	| 3.20
6.083	0.00	0.46	0.383	I	O	|	|	|	| 3.17
6.167	0.00	0.46	0.380	I	O	|	|	|	| 3.15
6.250	0.00	0.46	0.377	I	O	|	|	|	| 3.13
6.333	0.00	0.46	0.374	I	O	|	|	|	| 3.11
6.417	0.00	0.46	0.371	I	O	|	|	|	| 3.08
6.500	0.00	0.46	0.368	I	O	|	|	|	| 3.06
6.583	0.00	0.46	0.364	I	O	|	|	|	| 3.04
6.667	0.00	0.46	0.361	I	O	|	|	|	| 3.01
6.750	0.00	0.46	0.358	I	O	|	|	|	| 2.99
6.833	0.00	0.46	0.355	I	O	|	|	|	| 2.97
6.917	0.00	0.46	0.352	I	O	|	|	|	| 2.94
7.000	0.00	0.46	0.349	I	O	|	|	|	| 2.92
7.083	0.00	0.46	0.345	I	O	|	|	|	| 2.90
7.167	0.00	0.46	0.342	I	O	|	|	|	| 2.88
7.250	0.00	0.46	0.339	I	O	|	|	|	| 2.85
7.333	0.00	0.46	0.336	I	O	|	|	|	| 2.83
7.417	0.00	0.46	0.333	I	O	|	|	|	| 2.81
7.500	0.00	0.46	0.330	I	O	|	|	|	| 2.78
7.583	0.00	0.46	0.326	I	O	|	|	|	| 2.76
7.667	0.00	0.46	0.323	I	O	|	|	|	| 2.74
7.750	0.00	0.46	0.320	I	O	|	|	|	| 2.72
7.833	0.00	0.46	0.317	I	O	|	|	|	| 2.69
7.917	0.00	0.46	0.314	I	O	|	|	|	| 2.67
8.000	0.00	0.46	0.311	I	O	|	|	|	| 2.65
8.083	0.00	0.46	0.307	I	O	|	|	|	| 2.62
8.167	0.00	0.46	0.304	I	O	|	|	|	| 2.60
8.250	0.00	0.46	0.301	I	O	|	|	|	| 2.58
8.333	0.00	0.46	0.298	I	O	|	|	|	| 2.55
8.417	0.00	0.46	0.295	I	O	|	|	|	| 2.53
8.500	0.00	0.46	0.292	I	O	|	|	|	| 2.51
8.583	0.00	0.46	0.288	I	O	|	|	|	| 2.49
8.667	0.00	0.46	0.285	I	O	|	|	|	| 2.46
8.750	0.00	0.46	0.282	I	O	|	|	|	| 2.44

8.833	0.00	0.46	0.279	I O	|	|	|	|	2.42
8.917	0.00	0.46	0.276	I O	|	|	|	|	2.39
9.000	0.00	0.46	0.273	I O	|	|	|	|	2.37
9.083	0.00	0.46	0.269	I O	|	|	|	|	2.35
9.167	0.00	0.46	0.266	I O	|	|	|	|	2.33
9.250	0.00	0.46	0.263	I O	|	|	|	|	2.30
9.333	0.00	0.46	0.260	I O	|	|	|	|	2.28
9.417	0.00	0.46	0.257	I O	|	|	|	|	2.26
9.500	0.00	0.46	0.254	I O	|	|	|	|	2.23
9.583	0.00	0.46	0.250	I O	|	|	|	|	2.21
9.667	0.00	0.46	0.247	I O	|	|	|	|	2.19
9.750	0.00	0.46	0.244	I O	|	|	|	|	2.17
9.833	0.00	0.46	0.241	I O	|	|	|	|	2.14
9.917	0.00	0.46	0.238	I O	|	|	|	|	2.12
10.000	0.00	0.46	0.235	I O	|	|	|	|	2.10
10.083	0.00	0.46	0.231	I O	|	|	|	|	2.07
10.167	0.00	0.46	0.228	I O	|	|	|	|	2.05
10.250	0.00	0.46	0.225	I O	|	|	|	|	2.03
10.333	0.00	0.46	0.222	I O	|	|	|	|	2.00
10.417	0.00	0.46	0.219	I O	|	|	|	|	1.98
10.500	0.00	0.46	0.216	I O	|	|	|	|	1.96
10.583	0.00	0.46	0.212	I O	|	|	|	|	1.94
10.667	0.00	0.46	0.209	I O	|	|	|	|	1.91
10.750	0.00	0.46	0.206	I O	|	|	|	|	1.89
10.833	0.00	0.46	0.203	I O	|	|	|	|	1.87
10.917	0.00	0.46	0.200	I O	|	|	|	|	1.84
11.000	0.00	0.46	0.197	I O	|	|	|	|	1.82
11.083	0.00	0.46	0.193	I O	|	|	|	|	1.80
11.167	0.00	0.46	0.190	I O	|	|	|	|	1.78
11.250	0.00	0.46	0.187	I O	|	|	|	|	1.75
11.333	0.00	0.46	0.184	I O	|	|	|	|	1.73
11.417	0.00	0.46	0.181	I O	|	|	|	|	1.71
11.500	0.00	0.46	0.178	I O	|	|	|	|	1.68
11.583	0.00	0.46	0.174	I O	|	|	|	|	1.66
11.667	0.00	0.46	0.171	I O	|	|	|	|	1.64
11.750	0.00	0.46	0.168	I O	|	|	|	|	1.62
11.833	0.00	0.46	0.165	I O	|	|	|	|	1.59
11.917	0.00	0.46	0.162	I O	|	|	|	|	1.57
12.000	0.00	0.46	0.158	I O	|	|	|	|	1.55
12.083	0.00	0.46	0.155	I O	|	|	|	|	1.52
12.167	0.00	0.46	0.152	I O	|	|	|	|	1.50
12.250	0.00	0.46	0.149	I O	|	|	|	|	1.48
12.333	0.00	0.46	0.146	I O	|	|	|	|	1.45
12.417	0.00	0.46	0.143	I O	|	|	|	|	1.43
12.500	0.00	0.46	0.139	I O	|	|	|	|	1.41
12.583	0.00	0.46	0.136	I O	|	|	|	|	1.39
12.667	0.00	0.46	0.133	I O	|	|	|	|	1.36
12.750	0.00	0.46	0.130	I O	|	|	|	|	1.34
12.833	0.00	0.46	0.127	I O	|	|	|	|	1.32
12.917	0.00	0.46	0.124	I O	|	|	|	|	1.29
13.000	0.00	0.46	0.120	I O	|	|	|	|	1.27
13.083	0.00	0.46	0.117	I O	|	|	|	|	1.25
13.167	0.00	0.46	0.114	I O	|	|	|	|	1.23
13.250	0.00	0.46	0.111	I O	|	|	|	|	1.20
13.333	0.00	0.46	0.108	I O	|	|	|	|	1.18
13.417	0.00	0.46	0.105	I O	|	|	|	|	1.16
13.500	0.00	0.46	0.101	I O	|	|	|	|	1.13
13.583	0.00	0.46	0.098	I O	|	|	|	|	1.11
13.667	0.00	0.46	0.095	I O	|	|	|	|	1.09
13.750	0.00	0.46	0.092	I O	|	|	|	|	1.06

13.833	0.00	0.46	0.089	I O	|	|	|	1.04
13.917	0.00	0.46	0.086	I O	|	|	|	1.02
14.000	0.00	0.46	0.082	I O	|	|	|	0.99
14.083	0.00	0.44	0.079	IO	|	|	|	0.96
14.167	0.00	0.42	0.076	IO	|	|	|	0.92
14.250	0.00	0.41	0.074	IO	|	|	|	0.89
14.333	0.00	0.39	0.071	IO	|	|	|	0.85
14.417	0.00	0.38	0.068	IO	|	|	|	0.82
14.500	0.00	0.36	0.066	IO	|	|	|	0.79
14.583	0.00	0.35	0.063	IO	|	|	|	0.76
14.667	0.00	0.34	0.061	IO	|	|	|	0.73
14.750	0.00	0.32	0.058	IO	|	|	|	0.70
14.833	0.00	0.31	0.056	IO	|	|	|	0.68
14.917	0.00	0.30	0.054	IO	|	|	|	0.65
15.000	0.00	0.29	0.052	IO	|	|	|	0.63
15.083	0.00	0.28	0.050	IO	|	|	|	0.60
15.167	0.00	0.27	0.048	IO	|	|	|	0.58
15.250	0.00	0.26	0.047	IO	|	|	|	0.56
15.333	0.00	0.25	0.045	IO	|	|	|	0.54
15.417	0.00	0.24	0.043	IO	|	|	|	0.52
15.500	0.00	0.23	0.041	IO	|	|	|	0.50
15.583	0.00	0.22	0.040	O	|	|	|	0.48
15.667	0.00	0.21	0.038	O	|	|	|	0.46
15.750	0.00	0.21	0.037	O	|	|	|	0.45
15.833	0.00	0.20	0.036	O	|	|	|	0.43
15.917	0.00	0.19	0.034	O	|	|	|	0.41
16.000	0.00	0.18	0.033	O	|	|	|	0.40
16.083	0.00	0.18	0.032	O	|	|	|	0.38
16.167	0.00	0.17	0.031	O	|	|	|	0.37
16.250	0.00	0.16	0.029	O	|	|	|	0.35
16.333	0.00	0.16	0.028	O	|	|	|	0.34
16.417	0.00	0.15	0.027	O	|	|	|	0.33
16.500	0.00	0.15	0.026	O	|	|	|	0.32
16.583	0.00	0.14	0.025	O	|	|	|	0.30
16.667	0.00	0.13	0.024	O	|	|	|	0.29
16.750	0.00	0.13	0.023	O	|	|	|	0.28
16.833	0.00	0.12	0.023	O	|	|	|	0.27
16.917	0.00	0.12	0.022	O	|	|	|	0.26
17.000	0.00	0.12	0.021	O	|	|	|	0.25
17.083	0.00	0.11	0.020	O	|	|	|	0.24
17.167	0.00	0.11	0.019	O	|	|	|	0.23
17.250	0.00	0.10	0.019	O	|	|	|	0.22
17.333	0.00	0.10	0.018	O	|	|	|	0.22
17.417	0.00	0.10	0.017	O	|	|	|	0.21
17.500	0.00	0.09	0.017	O	|	|	|	0.20
17.583	0.00	0.09	0.016	O	|	|	|	0.19
17.667	0.00	0.09	0.015	O	|	|	|	0.19
17.750	0.00	0.08	0.015	O	|	|	|	0.18
17.833	0.00	0.08	0.014	O	|	|	|	0.17
17.917	0.00	0.08	0.014	O	|	|	|	0.17
18.000	0.00	0.07	0.013	O	|	|	|	0.16
18.083	0.00	0.07	0.013	O	|	|	|	0.15
18.167	0.00	0.07	0.012	O	|	|	|	0.15
18.250	0.00	0.07	0.012	O	|	|	|	0.14
18.333	0.00	0.06	0.011	O	|	|	|	0.14
18.417	0.00	0.06	0.011	O	|	|	|	0.13
18.500	0.00	0.06	0.010	O	|	|	|	0.13
18.583	0.00	0.06	0.010	O	|	|	|	0.12
18.667	0.00	0.05	0.010	O	|	|	|	0.12
18.750	0.00	0.05	0.009	O	|	|	|	0.11

18.833	0.00	0.05	0.009	O	|	|	|	0.11
18.917	0.00	0.05	0.009	O	|	|	|	0.10
19.000	0.00	0.05	0.008	O	|	|	|	0.10
19.083	0.00	0.04	0.008	O	|	|	|	0.10
19.167	0.00	0.04	0.008	O	|	|	|	0.09
19.250	0.00	0.04	0.007	O	|	|	|	0.09
19.333	0.00	0.04	0.007	O	|	|	|	0.09
19.417	0.00	0.04	0.007	O	|	|	|	0.08
19.500	0.00	0.04	0.007	O	|	|	|	0.08
19.583	0.00	0.04	0.006	O	|	|	|	0.08
19.667	0.00	0.03	0.006	O	|	|	|	0.07
19.750	0.00	0.03	0.006	O	|	|	|	0.07
19.833	0.00	0.03	0.006	O	|	|	|	0.07
19.917	0.00	0.03	0.005	O	|	|	|	0.07
20.000	0.00	0.03	0.005	O	|	|	|	0.06
20.083	0.00	0.03	0.005	O	|	|	|	0.06
20.167	0.00	0.03	0.005	O	|	|	|	0.06
20.250	0.00	0.03	0.005	O	|	|	|	0.06
20.333	0.00	0.03	0.005	O	|	|	|	0.05
20.417	0.00	0.02	0.004	O	|	|	|	0.05
20.500	0.00	0.02	0.004	O	|	|	|	0.05
20.583	0.00	0.02	0.004	O	|	|	|	0.05
20.667	0.00	0.02	0.004	O	|	|	|	0.05
20.750	0.00	0.02	0.004	O	|	|	|	0.05
20.833	0.00	0.02	0.004	O	|	|	|	0.04
20.917	0.00	0.02	0.003	O	|	|	|	0.04
21.000	0.00	0.02	0.003	O	|	|	|	0.04
21.083	0.00	0.02	0.003	O	|	|	|	0.04
21.167	0.00	0.02	0.003	O	|	|	|	0.04
21.250	0.00	0.02	0.003	O	|	|	|	0.04
21.333	0.00	0.02	0.003	O	|	|	|	0.03
21.417	0.00	0.02	0.003	O	|	|	|	0.03
21.500	0.00	0.01	0.003	O	|	|	|	0.03
21.583	0.00	0.01	0.003	O	|	|	|	0.03
21.667	0.00	0.01	0.002	O	|	|	|	0.03
21.750	0.00	0.01	0.002	O	|	|	|	0.03
21.833	0.00	0.01	0.002	O	|	|	|	0.03
21.917	0.00	0.01	0.002	O	|	|	|	0.03
22.000	0.00	0.01	0.002	O	|	|	|	0.03
22.083	0.00	0.01	0.002	O	|	|	|	0.02
22.167	0.00	0.01	0.002	O	|	|	|	0.02
22.250	0.00	0.01	0.002	O	|	|	|	0.02
22.333	0.00	0.01	0.002	O	|	|	|	0.02
22.417	0.00	0.01	0.002	O	|	|	|	0.02
22.500	0.00	0.01	0.002	O	|	|	|	0.02
22.583	0.00	0.01	0.002	O	|	|	|	0.02
22.667	0.00	0.01	0.002	O	|	|	|	0.02
22.750	0.00	0.01	0.001	O	|	|	|	0.02
22.833	0.00	0.01	0.001	O	|	|	|	0.02
22.917	0.00	0.01	0.001	O	|	|	|	0.02
23.000	0.00	0.01	0.001	O	|	|	|	0.02
23.083	0.00	0.01	0.001	O	|	|	|	0.02
23.167	0.00	0.01	0.001	O	|	|	|	0.01
23.250	0.00	0.01	0.001	O	|	|	|	0.01
23.333	0.00	0.01	0.001	O	|	|	|	0.01
23.417	0.00	0.01	0.001	O	|	|	|	0.01
23.500	0.00	0.01	0.001	O	|	|	|	0.01
23.583	0.00	0.01	0.001	O	|	|	|	0.01
23.667	0.00	0.01	0.001	O	|	|	|	0.01
23.750	0.00	0.01	0.001	O	|	|	|	0.01

23.833	0.00	0.01	0.001	O	|	|	|	|	0.01
23.917	0.00	0.00	0.001	O	|	|	|	|	0.01
24.000	0.00	0.00	0.001	O	|	|	|	|	0.01
24.083	0.00	0.00	0.001	O	|	|	|	|	0.01
24.167	0.00	0.00	0.001	O	|	|	|	|	0.01
24.250	0.00	0.00	0.001	O	|	|	|	|	0.01
24.333	0.00	0.00	0.001	O	|	|	|	|	0.01
24.417	0.00	0.00	0.001	O	|	|	|	|	0.01
24.500	0.00	0.00	0.001	O	|	|	|	|	0.01
24.583	0.00	0.00	0.001	O	|	|	|	|	0.01
24.667	0.00	0.00	0.001	O	|	|	|	|	0.01
24.750	0.00	0.00	0.001	O	|	|	|	|	0.01
24.833	0.00	0.00	0.001	O	|	|	|	|	0.01
24.917	0.00	0.00	0.001	O	|	|	|	|	0.01
25.000	0.00	0.00	0.001	O	|	|	|	|	0.01
25.083	0.00	0.00	0.001	O	|	|	|	|	0.01
25.167	0.00	0.00	0.000	O	|	|	|	|	0.01
25.250	0.00	0.00	0.000	O	|	|	|	|	0.01
25.333	0.00	0.00	0.000	O	|	|	|	|	0.01
25.417	0.00	0.00	0.000	O	|	|	|	|	0.01
25.500	0.00	0.00	0.000	O	|	|	|	|	0.01
25.583	0.00	0.00	0.000	O	|	|	|	|	0.00
25.667	0.00	0.00	0.000	O	|	|	|	|	0.00
25.750	0.00	0.00	0.000	O	|	|	|	|	0.00
25.833	0.00	0.00	0.000	O	|	|	|	|	0.00
25.917	0.00	0.00	0.000	O	|	|	|	|	0.00
26.000	0.00	0.00	0.000	O	|	|	|	|	0.00
26.083	0.00	0.00	0.000	O	|	|	|	|	0.00
26.167	0.00	0.00	0.000	O	|	|	|	|	0.00
26.250	0.00	0.00	0.000	O	|	|	|	|	0.00
26.333	0.00	0.00	0.000	O	|	|	|	|	0.00
26.417	0.00	0.00	0.000	O	|	|	|	|	0.00
26.500	0.00	0.00	0.000	O	|	|	|	|	0.00
26.583	0.00	0.00	0.000	O	|	|	|	|	0.00
26.667	0.00	0.00	0.000	O	|	|	|	|	0.00
26.750	0.00	0.00	0.000	O	|	|	|	|	0.00
26.833	0.00	0.00	0.000	O	|	|	|	|	0.00
26.917	0.00	0.00	0.000	O	|	|	|	|	0.00
27.000	0.00	0.00	0.000	O	|	|	|	|	0.00
27.083	0.00	0.00	0.000	O	|	|	|	|	0.00
27.167	0.00	0.00	0.000	O	|	|	|	|	0.00
27.250	0.00	0.00	0.000	O	|	|	|	|	0.00
27.333	0.00	0.00	0.000	O	|	|	|	|	0.00
27.417	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 329
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.592 (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
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Study date: 10/28/24

DEXTER VILLAGE
AREA A
5-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 76
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.656 (CFS)
Total volume = 0.811 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 76
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.7 3.33 4.99 6.66	Depth (Ft.)
0.083	0.23	0.00	0.001	OI | | | |	0.01
0.167	0.53	0.02	0.003	O I | | | |	0.04
0.250	0.63	0.04	0.007	O I | | | |	0.09
0.333	0.67	0.06	0.011	O I | | | |	0.14
0.417	0.68	0.09	0.015	O I | | | |	0.19
0.500	0.73	0.11	0.020	O I | | | |	0.24
0.583	0.78	0.13	0.024	O I | | | |	0.29
0.667	0.79	0.16	0.028	O I | | | |	0.34
0.750	0.79	0.18	0.033	O I | | | |	0.39
0.833	0.79	0.20	0.037	O I | | | |	0.44
0.917	0.79	0.23	0.041	|O I | | | |	0.49
1.000	0.84	0.25	0.045	|O I | | | |	0.54
1.083	0.89	0.27	0.049	|O I | | | |	0.59
1.167	0.90	0.29	0.053	|O I | | | |	0.64
1.250	0.91	0.32	0.057	|O I | | | |	0.69
1.333	0.91	0.34	0.061	|O I | | | |	0.74
1.417	0.91	0.36	0.065	|O I | | | |	0.78
1.500	0.91	0.38	0.069	|O I | | | |	0.83
1.583	0.91	0.40	0.072	|O I | | | |	0.87
1.667	0.91	0.42	0.076	| O I | | | |	0.91
1.750	0.91	0.44	0.079	| O I | | | |	0.95
1.833	0.91	0.46	0.082	| O I | | | |	0.99
1.917	0.91	0.46	0.085	| O I | | | |	1.02
2.000	0.95	0.46	0.089	| O I | | | |	1.04
2.083	0.96	0.46	0.092	| O I | | | |	1.06
2.167	0.96	0.46	0.095	| O I | | | |	1.09
2.250	1.01	0.46	0.099	| O I | | | |	1.12
2.333	1.02	0.46	0.103	| O I | | | |	1.14
2.417	1.02	0.46	0.107	| O I | | | |	1.17
2.500	1.02	0.46	0.111	| O I | | | |	1.20
2.583	1.02	0.46	0.114	| O I | | | |	1.23
2.667	1.02	0.46	0.118	| O I | | | |	1.26
2.750	1.07	0.46	0.122	| O I | | | |	1.28
2.833	1.12	0.46	0.127	| O I | | | |	1.32
2.917	1.13	0.46	0.131	| O I | | | |	1.35
3.000	1.13	0.46	0.136	| O I | | | |	1.38
3.083	1.13	0.46	0.141	| O I | | | |	1.42
3.167	1.18	0.46	0.145	| O I | | | |	1.45
3.250	1.23	0.46	0.150	| O I | | | |	1.49
3.333	1.24	0.46	0.156	| O I | | | |	1.53
3.417	1.29	0.46	0.161	| O I | | | |	1.57
3.500	1.39	0.46	0.167	| O I | | | |	1.61
3.583	1.50	0.46	0.174	| O I| | | |	1.66
3.667	1.56	0.46	0.182	| O I| | | |	1.71
3.750	1.63	0.46	0.189	| O I| | | |	1.77

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3.833    1.68    0.46      0.198  | O     I       |       |       |     1.83
3.917    1.74    0.46      0.206  | O     I       |       |       |     1.89
4.000    1.80    0.46      0.215  | O     I       |       |       |     1.96
4.083    1.86    0.46      0.225  | O     I       |       |       |     2.03
4.167    1.96    0.46      0.235  | O     |I      |       |       |     2.10
4.250    2.07    0.46      0.245  | O     |I      |       |       |     2.17
4.333    2.18    0.46      0.257  | O     | I     |       |       |     2.26
4.417    2.29    0.46      0.269  | O     |  I    |       |       |     2.35
4.500    2.36    0.46      0.282  | O     |  I    |       |       |     2.44
4.583    2.42    0.46      0.295  | O     |  I    |       |       |     2.54
4.667    2.52    0.46      0.309  | O     |   I   |       |       |     2.64
4.750    2.63    0.46      0.324  | O     |   I   |       |       |     2.74
4.833    2.70    0.46      0.339  | O     |   I   |       |       |     2.85
4.917    2.77    0.46      0.354  | O     |    I  |       |       |     2.96
5.000    2.91    0.46      0.371  | O     |    I  |       |       |     3.08
5.083    3.30    0.46      0.389  | O     |      I|       |       |     3.21
5.167    3.97    0.46      0.411  | O     |       |  I    |       |     3.37
5.250    4.58    0.46      0.437  | O     |       |     I |       |     3.56
5.333    5.08    0.46      0.467  | O     |       |       I       |     3.78
5.417    5.68    0.46      0.501  | O     |       |       |  I    |     4.03
5.500    6.66    0.46      0.541  | O     |       |       |       I     4.31
5.583    5.15    0.46      0.578  | O     |       |       I       |     4.58
5.667    2.42    0.46      0.601  | O     |  I    |       |       |     4.75
5.750    1.33    0.46      0.611  | O   I |       |       |       |     4.82
5.833    0.84    0.46      0.615  | O I   |       |       |       |     4.85
5.917    0.53    0.46      0.617  | O     |       |       |       |     4.86
6.000    0.34    0.46      0.616  |IO     |       |       |       |     4.86
6.083    0.17    0.46      0.615  I O     |       |       |       |     4.85
6.167    0.04    0.46      0.612  I O     |       |       |       |     4.83
6.250    0.01    0.46      0.610  I O     |       |       |       |     4.81
6.333    0.00    0.46      0.606  I O     |       |       |       |     4.79
6.417    0.00    0.46      0.603  I O     |       |       |       |     4.76
6.500    0.00    0.46      0.600  I O     |       |       |       |     4.74
6.583    0.00    0.46      0.597  I O     |       |       |       |     4.72
6.667    0.00    0.46      0.594  I O     |       |       |       |     4.70
6.750    0.00    0.46      0.591  I O     |       |       |       |     4.67
6.833    0.00    0.46      0.587  I O     |       |       |       |     4.65
6.917    0.00    0.46      0.584  I O     |       |       |       |     4.63
7.000    0.00    0.46      0.581  I O     |       |       |       |     4.60
7.083    0.00    0.46      0.578  I O     |       |       |       |     4.58
7.167    0.00    0.46      0.575  I O     |       |       |       |     4.56
7.250    0.00    0.46      0.572  I O     |       |       |       |     4.54
7.333    0.00    0.46      0.568  I O     |       |       |       |     4.51
7.417    0.00    0.46      0.565  I O     |       |       |       |     4.49
7.500    0.00    0.46      0.562  I O     |       |       |       |     4.47
7.583    0.00    0.46      0.559  I O     |       |       |       |     4.44
7.667    0.00    0.46      0.556  I O     |       |       |       |     4.42
7.750    0.00    0.46      0.553  I O     |       |       |       |     4.40
7.833    0.00    0.46      0.549  I O     |       |       |       |     4.37
7.917    0.00    0.46      0.546  I O     |       |       |       |     4.35
8.000    0.00    0.46      0.543  I O     |       |       |       |     4.33
8.083    0.00    0.46      0.540  I O     |       |       |       |     4.31
8.167    0.00    0.46      0.537  I O     |       |       |       |     4.28
8.250    0.00    0.46      0.534  I O     |       |       |       |     4.26
8.333    0.00    0.46      0.530  I O     |       |       |       |     4.24
8.417    0.00    0.46      0.527  I O     |       |       |       |     4.21
8.500    0.00    0.46      0.524  I O     |       |       |       |     4.19
8.583    0.00    0.46      0.521  I O     |       |       |       |     4.17
8.667    0.00    0.46      0.518  I O     |       |       |       |     4.15
8.750    0.00    0.46      0.515  I O     |       |       |       |     4.12
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8.833	0.00	0.46	0.511	I	O	|	|	|	4.10
8.917	0.00	0.46	0.508	I	O	|	|	|	4.08
9.000	0.00	0.46	0.505	I	O	|	|	|	4.05
9.083	0.00	0.46	0.502	I	O	|	|	|	4.03
9.167	0.00	0.46	0.499	I	O	|	|	|	4.01
9.250	0.00	0.46	0.496	I	O	|	|	|	3.99
9.333	0.00	0.46	0.492	I	O	|	|	|	3.96
9.417	0.00	0.46	0.489	I	O	|	|	|	3.94
9.500	0.00	0.46	0.486	I	O	|	|	|	3.92
9.583	0.00	0.46	0.483	I	O	|	|	|	3.89
9.667	0.00	0.46	0.480	I	O	|	|	|	3.87
9.750	0.00	0.46	0.477	I	O	|	|	|	3.85
9.833	0.00	0.46	0.473	I	O	|	|	|	3.82
9.917	0.00	0.46	0.470	I	O	|	|	|	3.80
10.000	0.00	0.46	0.467	I	O	|	|	|	3.78
10.083	0.00	0.46	0.464	I	O	|	|	|	3.76
10.167	0.00	0.46	0.461	I	O	|	|	|	3.73
10.250	0.00	0.46	0.458	I	O	|	|	|	3.71
10.333	0.00	0.46	0.454	I	O	|	|	|	3.69
10.417	0.00	0.46	0.451	I	O	|	|	|	3.66
10.500	0.00	0.46	0.448	I	O	|	|	|	3.64
10.583	0.00	0.46	0.445	I	O	|	|	|	3.62
10.667	0.00	0.46	0.442	I	O	|	|	|	3.60
10.750	0.00	0.46	0.439	I	O	|	|	|	3.57
10.833	0.00	0.46	0.435	I	O	|	|	|	3.55
10.917	0.00	0.46	0.432	I	O	|	|	|	3.53
11.000	0.00	0.46	0.429	I	O	|	|	|	3.50
11.083	0.00	0.46	0.426	I	O	|	|	|	3.48
11.167	0.00	0.46	0.423	I	O	|	|	|	3.46
11.250	0.00	0.46	0.420	I	O	|	|	|	3.44
11.333	0.00	0.46	0.416	I	O	|	|	|	3.41
11.417	0.00	0.46	0.413	I	O	|	|	|	3.39
11.500	0.00	0.46	0.410	I	O	|	|	|	3.37
11.583	0.00	0.46	0.407	I	O	|	|	|	3.34
11.667	0.00	0.46	0.404	I	O	|	|	|	3.32
11.750	0.00	0.46	0.401	I	O	|	|	|	3.30
11.833	0.00	0.46	0.397	I	O	|	|	|	3.27
11.917	0.00	0.46	0.394	I	O	|	|	|	3.25
12.000	0.00	0.46	0.391	I	O	|	|	|	3.23
12.083	0.00	0.46	0.388	I	O	|	|	|	3.21
12.167	0.00	0.46	0.385	I	O	|	|	|	3.18
12.250	0.00	0.46	0.382	I	O	|	|	|	3.16
12.333	0.00	0.46	0.378	I	O	|	|	|	3.14
12.417	0.00	0.46	0.375	I	O	|	|	|	3.11
12.500	0.00	0.46	0.372	I	O	|	|	|	3.09
12.583	0.00	0.46	0.369	I	O	|	|	|	3.07
12.667	0.00	0.46	0.366	I	O	|	|	|	3.05
12.750	0.00	0.46	0.362	I	O	|	|	|	3.02
12.833	0.00	0.46	0.359	I	O	|	|	|	3.00
12.917	0.00	0.46	0.356	I	O	|	|	|	2.98
13.000	0.00	0.46	0.353	I	O	|	|	|	2.95
13.083	0.00	0.46	0.350	I	O	|	|	|	2.93
13.167	0.00	0.46	0.347	I	O	|	|	|	2.91
13.250	0.00	0.46	0.343	I	O	|	|	|	2.88
13.333	0.00	0.46	0.340	I	O	|	|	|	2.86
13.417	0.00	0.46	0.337	I	O	|	|	|	2.84
13.500	0.00	0.46	0.334	I	O	|	|	|	2.82
13.583	0.00	0.46	0.331	I	O	|	|	|	2.79
13.667	0.00	0.46	0.328	I	O	|	|	|	2.77
13.750	0.00	0.46	0.324	I	O	|	|	|	2.75

13.833	0.00	0.46	0.321	I	O	|	|	|	| 2.72
13.917	0.00	0.46	0.318	I	O	|	|	|	| 2.70
14.000	0.00	0.46	0.315	I	O	|	|	|	| 2.68
14.083	0.00	0.46	0.312	I	O	|	|	|	| 2.66
14.167	0.00	0.46	0.309	I	O	|	|	|	| 2.63
14.250	0.00	0.46	0.305	I	O	|	|	|	| 2.61
14.333	0.00	0.46	0.302	I	O	|	|	|	| 2.59
14.417	0.00	0.46	0.299	I	O	|	|	|	| 2.56
14.500	0.00	0.46	0.296	I	O	|	|	|	| 2.54
14.583	0.00	0.46	0.293	I	O	|	|	|	| 2.52
14.667	0.00	0.46	0.290	I	O	|	|	|	| 2.50
14.750	0.00	0.46	0.286	I	O	|	|	|	| 2.47
14.833	0.00	0.46	0.283	I	O	|	|	|	| 2.45
14.917	0.00	0.46	0.280	I	O	|	|	|	| 2.43
15.000	0.00	0.46	0.277	I	O	|	|	|	| 2.40
15.083	0.00	0.46	0.274	I	O	|	|	|	| 2.38
15.167	0.00	0.46	0.271	I	O	|	|	|	| 2.36
15.250	0.00	0.46	0.267	I	O	|	|	|	| 2.33
15.333	0.00	0.46	0.264	I	O	|	|	|	| 2.31
15.417	0.00	0.46	0.261	I	O	|	|	|	| 2.29
15.500	0.00	0.46	0.258	I	O	|	|	|	| 2.27
15.583	0.00	0.46	0.255	I	O	|	|	|	| 2.24
15.667	0.00	0.46	0.252	I	O	|	|	|	| 2.22
15.750	0.00	0.46	0.248	I	O	|	|	|	| 2.20
15.833	0.00	0.46	0.245	I	O	|	|	|	| 2.17
15.917	0.00	0.46	0.242	I	O	|	|	|	| 2.15
16.000	0.00	0.46	0.239	I	O	|	|	|	| 2.13
16.083	0.00	0.46	0.236	I	O	|	|	|	| 2.11
16.167	0.00	0.46	0.233	I	O	|	|	|	| 2.08
16.250	0.00	0.46	0.229	I	O	|	|	|	| 2.06
16.333	0.00	0.46	0.226	I	O	|	|	|	| 2.04
16.417	0.00	0.46	0.223	I	O	|	|	|	| 2.01
16.500	0.00	0.46	0.220	I	O	|	|	|	| 1.99
16.583	0.00	0.46	0.217	I	O	|	|	|	| 1.97
16.667	0.00	0.46	0.214	I	O	|	|	|	| 1.95
16.750	0.00	0.46	0.210	I	O	|	|	|	| 1.92
16.833	0.00	0.46	0.207	I	O	|	|	|	| 1.90
16.917	0.00	0.46	0.204	I	O	|	|	|	| 1.88
17.000	0.00	0.46	0.201	I	O	|	|	|	| 1.85
17.083	0.00	0.46	0.198	I	O	|	|	|	| 1.83
17.167	0.00	0.46	0.195	I	O	|	|	|	| 1.81
17.250	0.00	0.46	0.191	I	O	|	|	|	| 1.78
17.333	0.00	0.46	0.188	I	O	|	|	|	| 1.76
17.417	0.00	0.46	0.185	I	O	|	|	|	| 1.74
17.500	0.00	0.46	0.182	I	O	|	|	|	| 1.72
17.583	0.00	0.46	0.179	I	O	|	|	|	| 1.69
17.667	0.00	0.46	0.176	I	O	|	|	|	| 1.67
17.750	0.00	0.46	0.172	I	O	|	|	|	| 1.65
17.833	0.00	0.46	0.169	I	O	|	|	|	| 1.62
17.917	0.00	0.46	0.166	I	O	|	|	|	| 1.60
18.000	0.00	0.46	0.163	I	O	|	|	|	| 1.58
18.083	0.00	0.46	0.160	I	O	|	|	|	| 1.56
18.167	0.00	0.46	0.157	I	O	|	|	|	| 1.53
18.250	0.00	0.46	0.153	I	O	|	|	|	| 1.51
18.333	0.00	0.46	0.150	I	O	|	|	|	| 1.49
18.417	0.00	0.46	0.147	I	O	|	|	|	| 1.46
18.500	0.00	0.46	0.144	I	O	|	|	|	| 1.44
18.583	0.00	0.46	0.141	I	O	|	|	|	| 1.42
18.667	0.00	0.46	0.138	I	O	|	|	|	| 1.39
18.750	0.00	0.46	0.134	I	O	|	|	|	| 1.37

18.833	0.00	0.46	0.131	I O	|	|	|	1.35
18.917	0.00	0.46	0.128	I O	|	|	|	1.33
19.000	0.00	0.46	0.125	I O	|	|	|	1.30
19.083	0.00	0.46	0.122	I O	|	|	|	1.28
19.167	0.00	0.46	0.119	I O	|	|	|	1.26
19.250	0.00	0.46	0.115	I O	|	|	|	1.23
19.333	0.00	0.46	0.112	I O	|	|	|	1.21
19.417	0.00	0.46	0.109	I O	|	|	|	1.19
19.500	0.00	0.46	0.106	I O	|	|	|	1.17
19.583	0.00	0.46	0.103	I O	|	|	|	1.14
19.667	0.00	0.46	0.100	I O	|	|	|	1.12
19.750	0.00	0.46	0.096	I O	|	|	|	1.10
19.833	0.00	0.46	0.093	I O	|	|	|	1.07
19.917	0.00	0.46	0.090	I O	|	|	|	1.05
20.000	0.00	0.46	0.087	I O	|	|	|	1.03
20.083	0.00	0.46	0.084	I O	|	|	|	1.01
20.167	0.00	0.45	0.081	I O	|	|	|	0.97
20.250	0.00	0.43	0.078	I O	|	|	|	0.93
20.333	0.00	0.41	0.075	IO	|	|	|	0.90
20.417	0.00	0.40	0.072	IO	|	|	|	0.87
20.500	0.00	0.38	0.069	IO	|	|	|	0.83
20.583	0.00	0.37	0.067	IO	|	|	|	0.80
20.667	0.00	0.36	0.064	IO	|	|	|	0.77
20.750	0.00	0.34	0.062	IO	|	|	|	0.74
20.833	0.00	0.33	0.059	IO	|	|	|	0.72
20.917	0.00	0.32	0.057	IO	|	|	|	0.69
21.000	0.00	0.30	0.055	IO	|	|	|	0.66
21.083	0.00	0.29	0.053	IO	|	|	|	0.64
21.167	0.00	0.28	0.051	IO	|	|	|	0.61
21.250	0.00	0.27	0.049	IO	|	|	|	0.59
21.333	0.00	0.26	0.047	IO	|	|	|	0.57
21.417	0.00	0.25	0.045	IO	|	|	|	0.55
21.500	0.00	0.24	0.044	IO	|	|	|	0.53
21.583	0.00	0.23	0.042	IO	|	|	|	0.51
21.667	0.00	0.22	0.041	IO	|	|	|	0.49
21.750	0.00	0.22	0.039	IO	|	|	|	0.47
21.833	0.00	0.21	0.038	IO	|	|	|	0.45
21.917	0.00	0.20	0.036	O	|	|	|	0.44
22.000	0.00	0.19	0.035	O	|	|	|	0.42
22.083	0.00	0.19	0.033	O	|	|	|	0.40
22.167	0.00	0.18	0.032	O	|	|	|	0.39
22.250	0.00	0.17	0.031	O	|	|	|	0.37
22.333	0.00	0.17	0.030	O	|	|	|	0.36
22.417	0.00	0.16	0.029	O	|	|	|	0.35
22.500	0.00	0.15	0.028	O	|	|	|	0.33
22.583	0.00	0.15	0.027	O	|	|	|	0.32
22.667	0.00	0.14	0.026	O	|	|	|	0.31
22.750	0.00	0.14	0.025	O	|	|	|	0.30
22.833	0.00	0.13	0.024	O	|	|	|	0.29
22.917	0.00	0.13	0.023	O	|	|	|	0.28
23.000	0.00	0.12	0.022	O	|	|	|	0.27
23.083	0.00	0.12	0.021	O	|	|	|	0.26
23.167	0.00	0.11	0.020	O	|	|	|	0.25
23.250	0.00	0.11	0.020	O	|	|	|	0.24
23.333	0.00	0.10	0.019	O	|	|	|	0.23
23.417	0.00	0.10	0.018	O	|	|	|	0.22
23.500	0.00	0.10	0.018	O	|	|	|	0.21
23.583	0.00	0.09	0.017	O	|	|	|	0.20
23.667	0.00	0.09	0.016	O	|	|	|	0.20
23.750	0.00	0.09	0.016	O	|	|	|	0.19

23.833	0.00	0.08	0.015	O	|	|	|	0.18
23.917	0.00	0.08	0.014	O	|	|	|	0.17
24.000	0.00	0.08	0.014	O	|	|	|	0.17
24.083	0.00	0.07	0.013	O	|	|	|	0.16
24.167	0.00	0.07	0.013	O	|	|	|	0.16
24.250	0.00	0.07	0.012	O	|	|	|	0.15
24.333	0.00	0.07	0.012	O	|	|	|	0.14
24.417	0.00	0.06	0.012	O	|	|	|	0.14
24.500	0.00	0.06	0.011	O	|	|	|	0.13
24.583	0.00	0.06	0.011	O	|	|	|	0.13
24.667	0.00	0.06	0.010	O	|	|	|	0.12
24.750	0.00	0.05	0.010	O	|	|	|	0.12
24.833	0.00	0.05	0.010	O	|	|	|	0.11
24.917	0.00	0.05	0.009	O	|	|	|	0.11
25.000	0.00	0.05	0.009	O	|	|	|	0.11
25.083	0.00	0.05	0.008	O	|	|	|	0.10
25.167	0.00	0.05	0.008	O	|	|	|	0.10
25.250	0.00	0.04	0.008	O	|	|	|	0.09
25.333	0.00	0.04	0.008	O	|	|	|	0.09
25.417	0.00	0.04	0.007	O	|	|	|	0.09
25.500	0.00	0.04	0.007	O	|	|	|	0.08
25.583	0.00	0.04	0.007	O	|	|	|	0.08
25.667	0.00	0.04	0.006	O	|	|	|	0.08
25.750	0.00	0.03	0.006	O	|	|	|	0.08
25.833	0.00	0.03	0.006	O	|	|	|	0.07
25.917	0.00	0.03	0.006	O	|	|	|	0.07
26.000	0.00	0.03	0.006	O	|	|	|	0.07
26.083	0.00	0.03	0.005	O	|	|	|	0.06
26.167	0.00	0.03	0.005	O	|	|	|	0.06
26.250	0.00	0.03	0.005	O	|	|	|	0.06
26.333	0.00	0.03	0.005	O	|	|	|	0.06
26.417	0.00	0.03	0.005	O	|	|	|	0.06
26.500	0.00	0.02	0.004	O	|	|	|	0.05
26.583	0.00	0.02	0.004	O	|	|	|	0.05
26.667	0.00	0.02	0.004	O	|	|	|	0.05
26.750	0.00	0.02	0.004	O	|	|	|	0.05
26.833	0.00	0.02	0.004	O	|	|	|	0.05
26.917	0.00	0.02	0.004	O	|	|	|	0.04
27.000	0.00	0.02	0.004	O	|	|	|	0.04
27.083	0.00	0.02	0.003	O	|	|	|	0.04
27.167	0.00	0.02	0.003	O	|	|	|	0.04
27.250	0.00	0.02	0.003	O	|	|	|	0.04
27.333	0.00	0.02	0.003	O	|	|	|	0.04
27.417	0.00	0.02	0.003	O	|	|	|	0.04
27.500	0.00	0.02	0.003	O	|	|	|	0.03
27.583	0.00	0.01	0.003	O	|	|	|	0.03
27.667	0.00	0.01	0.003	O	|	|	|	0.03
27.750	0.00	0.01	0.002	O	|	|	|	0.03
27.833	0.00	0.01	0.002	O	|	|	|	0.03
27.917	0.00	0.01	0.002	O	|	|	|	0.03
28.000	0.00	0.01	0.002	O	|	|	|	0.03
28.083	0.00	0.01	0.002	O	|	|	|	0.03
28.167	0.00	0.01	0.002	O	|	|	|	0.02
28.250	0.00	0.01	0.002	O	|	|	|	0.02
28.333	0.00	0.01	0.002	O	|	|	|	0.02
28.417	0.00	0.01	0.002	O	|	|	|	0.02
28.500	0.00	0.01	0.002	O	|	|	|	0.02
28.583	0.00	0.01	0.002	O	|	|	|	0.02
28.667	0.00	0.01	0.002	O	|	|	|	0.02
28.750	0.00	0.01	0.002	O	|	|	|	0.02

28.833	0.00	0.01	0.002	O	|	|	|	|	0.02
28.917	0.00	0.01	0.001	O	|	|	|	|	0.02
29.000	0.00	0.01	0.001	O	|	|	|	|	0.02
29.083	0.00	0.01	0.001	O	|	|	|	|	0.02
29.167	0.00	0.01	0.001	O	|	|	|	|	0.02
29.250	0.00	0.01	0.001	O	|	|	|	|	0.02
29.333	0.00	0.01	0.001	O	|	|	|	|	0.01
29.417	0.00	0.01	0.001	O	|	|	|	|	0.01
29.500	0.00	0.01	0.001	O	|	|	|	|	0.01
29.583	0.00	0.01	0.001	O	|	|	|	|	0.01
29.667	0.00	0.01	0.001	O	|	|	|	|	0.01
29.750	0.00	0.01	0.001	O	|	|	|	|	0.01
29.833	0.00	0.01	0.001	O	|	|	|	|	0.01
29.917	0.00	0.01	0.001	O	|	|	|	|	0.01
30.000	0.00	0.00	0.001	O	|	|	|	|	0.01
30.083	0.00	0.00	0.001	O	|	|	|	|	0.01
30.167	0.00	0.00	0.001	O	|	|	|	|	0.01
30.250	0.00	0.00	0.001	O	|	|	|	|	0.01
30.333	0.00	0.00	0.001	O	|	|	|	|	0.01
30.417	0.00	0.00	0.001	O	|	|	|	|	0.01
30.500	0.00	0.00	0.001	O	|	|	|	|	0.01
30.583	0.00	0.00	0.001	O	|	|	|	|	0.01
30.667	0.00	0.00	0.001	O	|	|	|	|	0.01
30.750	0.00	0.00	0.001	O	|	|	|	|	0.01
30.833	0.00	0.00	0.001	O	|	|	|	|	0.01
30.917	0.00	0.00	0.001	O	|	|	|	|	0.01
31.000	0.00	0.00	0.001	O	|	|	|	|	0.01
31.083	0.00	0.00	0.001	O	|	|	|	|	0.01
31.167	0.00	0.00	0.001	O	|	|	|	|	0.01
31.250	0.00	0.00	0.001	O	|	|	|	|	0.01
31.333	0.00	0.00	0.000	O	|	|	|	|	0.01
31.417	0.00	0.00	0.000	O	|	|	|	|	0.01
31.500	0.00	0.00	0.000	O	|	|	|	|	0.01
31.583	0.00	0.00	0.000	O	|	|	|	|	0.01
31.667	0.00	0.00	0.000	O	|	|	|	|	0.01
31.750	0.00	0.00	0.000	O	|	|	|	|	0.00
31.833	0.00	0.00	0.000	O	|	|	|	|	0.00
31.917	0.00	0.00	0.000	O	|	|	|	|	0.00
32.000	0.00	0.00	0.000	O	|	|	|	|	0.00
32.083	0.00	0.00	0.000	O	|	|	|	|	0.00
32.167	0.00	0.00	0.000	O	|	|	|	|	0.00
32.250	0.00	0.00	0.000	O	|	|	|	|	0.00
32.333	0.00	0.00	0.000	O	|	|	|	|	0.00
32.417	0.00	0.00	0.000	O	|	|	|	|	0.00
32.500	0.00	0.00	0.000	O	|	|	|	|	0.00
32.583	0.00	0.00	0.000	O	|	|	|	|	0.00
32.667	0.00	0.00	0.000	O	|	|	|	|	0.00
32.750	0.00	0.00	0.000	O	|	|	|	|	0.00
32.833	0.00	0.00	0.000	O	|	|	|	|	0.00
32.917	0.00	0.00	0.000	O	|	|	|	|	0.00
33.000	0.00	0.00	0.000	O	|	|	|	|	0.00
33.083	0.00	0.00	0.000	O	|	|	|	|	0.00
33.167	0.00	0.00	0.000	O	|	|	|	|	0.00
33.250	0.00	0.00	0.000	O	|	|	|	|	0.00
33.333	0.00	0.00	0.000	O	|	|	|	|	0.00
33.417	0.00	0.00	0.000	O	|	|	|	|	0.00
33.500	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 402

```
            Time interval =    5.0 (Min.)
            Maximum/Peak flow rate =        0.460 (CFS)
            Total volume =       0.811 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
5-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.257 (CFS)
Total volume = 1.372 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.6	1.13	1.69	2.26	Depth (Ft.)
0.083	0.05	0.00	0.000	O	|	|	|	|	0.00
0.167	0.11	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.13	0.01	0.002	OI	|	|	|	|	0.02
0.333	0.16	0.01	0.002	O I	|	|	|	|	0.03
0.417	0.19	0.02	0.003	O I	|	|	|	|	0.04
0.500	0.20	0.03	0.005	O I	|	|	|	|	0.06
0.583	0.20	0.03	0.006	O I	|	|	|	|	0.07
0.667	0.20	0.04	0.007	O I	|	|	|	|	0.08
0.750	0.20	0.04	0.008	O I	|	|	|	|	0.10
0.833	0.23	0.05	0.009	O I	|	|	|	|	0.11
0.917	0.26	0.06	0.010	O I	|	|	|	|	0.13
1.000	0.26	0.07	0.012	O I	|	|	|	|	0.14
1.083	0.24	0.07	0.013	|O I	|	|	|	|	0.16
1.167	0.21	0.08	0.014	|OI	|	|	|	|	0.17
1.250	0.20	0.08	0.015	|OI	|	|	|	|	0.18
1.333	0.20	0.09	0.016	|OI	|	|	|	|	0.19
1.417	0.20	0.09	0.017	|OI	|	|	|	|	0.20
1.500	0.20	0.10	0.017	|OI	|	|	|	|	0.21
1.583	0.20	0.10	0.018	|OI	|	|	|	|	0.22
1.667	0.20	0.10	0.019	|OI	|	|	|	|	0.22
1.750	0.20	0.11	0.019	|OI	|	|	|	|	0.23
1.833	0.23	0.11	0.020	|O I	|	|	|	|	0.24
1.917	0.26	0.12	0.021	|O I	|	|	|	|	0.25
2.000	0.26	0.12	0.022	|O I	|	|	|	|	0.26
2.083	0.26	0.13	0.023	|O I	|	|	|	|	0.27
2.167	0.27	0.13	0.024	|O I	|	|	|	|	0.29
2.250	0.27	0.14	0.025	|O I	|	|	|	|	0.30
2.333	0.27	0.14	0.025	| OI	|	|	|	|	0.31
2.417	0.27	0.15	0.026	| OI	|	|	|	|	0.32
2.500	0.27	0.15	0.027	| OI	|	|	|	|	0.33
2.583	0.29	0.16	0.028	| O I	|	|	|	|	0.34
2.667	0.32	0.16	0.029	| O I	|	|	|	|	0.35
2.750	0.33	0.17	0.030	| O I	|	|	|	|	0.36
2.833	0.33	0.17	0.031	| O I	|	|	|	|	0.38
2.917	0.33	0.18	0.032	| O I	|	|	|	|	0.39
3.000	0.33	0.18	0.033	| O I	|	|	|	|	0.40
3.083	0.33	0.19	0.034	| O I	|	|	|	|	0.41
3.167	0.33	0.20	0.035	| O I	|	|	|	|	0.43
3.250	0.33	0.20	0.036	| O I	|	|	|	|	0.44
3.333	0.33	0.21	0.037	| O I	|	|	|	|	0.45
3.417	0.33	0.21	0.038	| O I	|	|	|	|	0.46
3.500	0.33	0.21	0.039	| OI	|	|	|	|	0.47
3.583	0.33	0.22	0.040	| OI	|	|	|	|	0.48
3.667	0.33	0.22	0.040	| OI	|	|	|	|	0.49
3.750	0.33	0.23	0.041	| OI	|	|	|	|	0.49

3.833	0.36	0.23	0.042	O I				0.50
3.917	0.39	0.24	0.043	O I				0.52
4.000	0.39	0.24	0.044	O I				0.53
4.083	0.40	0.25	0.045	O I				0.54
4.167	0.40	0.25	0.046	O I				0.55
4.250	0.40	0.26	0.047	O I				0.56
4.333	0.43	0.27	0.048	O I				0.58
4.417	0.45	0.27	0.049	O I				0.59
4.500	0.46	0.28	0.050	O I				0.61
4.583	0.46	0.29	0.052	O I				0.62
4.667	0.46	0.29	0.053	O I				0.64
4.750	0.46	0.30	0.054	O I				0.65
4.833	0.49	0.31	0.055	O I				0.66
4.917	0.52	0.31	0.057	O I				0.68
5.000	0.53	0.32	0.058	O I				0.70
5.083	0.48	0.33	0.059	O I				0.71
5.167	0.42	0.33	0.060	OI				0.72
5.250	0.41	0.34	0.061	OI				0.73
5.333	0.43	0.34	0.061	O I				0.74
5.417	0.45	0.34	0.062	O I				0.74
5.500	0.46	0.35	0.063	O I				0.75
5.583	0.49	0.35	0.063	O I				0.76
5.667	0.52	0.36	0.064	O I				0.78
5.750	0.53	0.36	0.066	O I				0.79
5.833	0.53	0.37	0.067	O I				0.80
5.917	0.53	0.38	0.068	O I				0.82
6.000	0.53	0.38	0.069	O I				0.83
6.083	0.56	0.39	0.070	O I				0.84
6.167	0.59	0.39	0.071	O I				0.86
6.250	0.59	0.40	0.073	O I				0.87
6.333	0.60	0.41	0.074	O I				0.89
6.417	0.60	0.42	0.075	O I				0.90
6.500	0.60	0.42	0.076	O I				0.92
6.583	0.62	0.43	0.078	O I				0.93
6.667	0.65	0.44	0.079	O	I			0.95
6.750	0.66	0.45	0.080	O	I			0.97
6.833	0.66	0.45	0.082	O	I			0.99
6.917	0.66	0.46	0.083	O	I			1.00
7.000	0.66	0.46	0.085	O	I			1.01
7.083	0.66	0.46	0.086	O	I			1.02
7.167	0.66	0.46	0.088	O	I			1.03
7.250	0.66	0.46	0.089	O	I			1.04
7.333	0.69	0.46	0.090	O	I			1.05
7.417	0.72	0.46	0.092	O	I			1.07
7.500	0.73	0.46	0.094	O	I			1.08
7.583	0.76	0.46	0.096	O	I			1.09
7.667	0.79	0.46	0.098	O	I			1.11
7.750	0.79	0.46	0.100	O	I			1.13
7.833	0.82	0.46	0.103	O	I			1.14
7.917	0.85	0.46	0.105	O	I			1.16
8.000	0.86	0.46	0.108	O	I			1.18
8.083	0.92	0.46	0.111	O	I			1.20
8.167	0.98	0.46	0.114	O	I			1.23
8.250	0.99	0.46	0.118	O	I			1.25
8.333	0.99	0.46	0.122	O	I			1.28
8.417	1.00	0.46	0.125	O	I			1.31
8.500	1.00	0.46	0.129	O	I			1.33
8.583	1.02	0.46	0.133	O	I			1.36
8.667	1.05	0.46	0.137	O	I			1.39
8.750	1.06	0.46	0.141	O	I			1.42

8.833	1.09	0.46	0.145	|	O	|	I|	|	1.45
8.917	1.12	0.46	0.149	|	O	|	I|	|	1.48
9.000	1.12	0.46	0.154	|	O	|	I|	|	1.51
9.083	1.18	0.46	0.159	|	O	|	I	|	1.55
9.167	1.24	0.46	0.164	|	O	|	|I	|	1.59
9.250	1.25	0.46	0.169	|	O	|	|I	|	1.63
9.333	1.29	0.46	0.175	|	O	|	| I	|	1.67
9.417	1.32	0.46	0.181	|	O	|	| I	|	1.71
9.500	1.32	0.46	0.187	|	O	|	| I	|	1.75
9.583	1.35	0.46	0.193	|	O	|	| I	|	1.79
9.667	1.38	0.46	0.199	|	O	|	| I	|	1.84
9.750	1.39	0.46	0.205	|	O	|	| I	|	1.89
9.833	1.42	0.46	0.212	|	O	|	| I	|	1.93
9.917	1.45	0.46	0.219	|	O	|	| I	|	1.98
10.000	1.46	0.46	0.225	|	O	|	| I	|	2.03
10.083	1.27	0.46	0.232	|	O	|	| I	|	2.08
10.167	1.07	0.46	0.237	|	O	|	I|	|	2.11
10.250	1.02	0.46	0.241	|	O	|	I |	|	2.14
10.333	1.00	0.46	0.244	|	O	|	I |	|	2.17
10.417	1.00	0.46	0.248	|	O	|	I |	|	2.19
10.500	1.00	0.46	0.252	|	O	|	I |	|	2.22
10.583	1.13	0.46	0.256	|	O	|	I	|	2.25
10.667	1.28	0.46	0.261	|	O	|	| I	|	2.29
10.750	1.31	0.46	0.267	|	O	|	| I	|	2.33
10.833	1.32	0.46	0.273	|	O	|	| I	|	2.37
10.917	1.33	0.46	0.279	|	O	|	| I	|	2.42
11.000	1.33	0.46	0.285	|	O	|	| I	|	2.46
11.083	1.30	0.46	0.291	|	O	|	| I	|	2.50
11.167	1.27	0.46	0.296	|	O	|	| I	|	2.54
11.250	1.26	0.46	0.302	|	O	|	|I	|	2.58
11.333	1.26	0.46	0.307	|	O	|	|I	|	2.62
11.417	1.26	0.46	0.313	|	O	|	|I	|	2.66
11.500	1.26	0.46	0.318	|	O	|	|I	|	2.70
11.583	1.21	0.46	0.324	|	O	|	|I	|	2.74
11.667	1.15	0.46	0.329	|	O	|	I	|	2.78
11.750	1.14	0.46	0.333	|	O	|	I	|	2.81
11.833	1.16	0.46	0.338	|	O	|	I	|	2.85
11.917	1.19	0.46	0.343	|	O	|	I	|	2.88
12.000	1.19	0.46	0.348	|	O	|	I	|	2.92
12.083	1.38	0.46	0.354	|	O	|	| I	|	2.96
12.167	1.59	0.46	0.361	|	O	|	| I	|	3.01
12.250	1.63	0.46	0.369	|	O	|	| I|	|	3.07
12.333	1.68	0.46	0.377	|	O	|	| I|	|	3.13
12.417	1.72	0.46	0.385	|	O	|	| I	|	3.19
12.500	1.72	0.46	0.394	|	O	|	| I	|	3.25
12.583	1.78	0.46	0.403	|	O	|	|I	|	3.32
12.667	1.84	0.46	0.412	|	O	|	| I	|	3.38
12.750	1.85	0.46	0.422	|	O	|	| I	|	3.45
12.833	1.88	0.46	0.432	|	O	|	| I	|	3.52
12.917	1.92	0.46	0.441	|	O	|	| I	|	3.59
13.000	1.92	0.46	0.452	|	O	|	| I	|	3.67
13.083	2.06	0.46	0.462	|	O	|	| I	|	3.74
13.167	2.21	0.46	0.474	|	O	|	| I|	|	3.83
13.250	2.24	0.46	0.486	|	O	|	| I|	|	3.91
13.333	2.25	0.46	0.498	|	O	|	| I|	|	4.00
13.417	2.26	0.46	0.510	|	O	|	| I	|	4.09
13.500	2.26	0.46	0.523	|	O	|	| I	|	4.18
13.583	1.96	0.46	0.534	|	O	|	| I	|	4.26
13.667	1.64	0.46	0.543	|	O	|	| I|	|	4.33
13.750	1.57	0.46	0.551	|	O	|	| I |	|	4.39

13.833	1.54	0.46	0.559	| O |	| I |	|	4.44
13.917	1.53	0.46	0.566	| O |	| I |	|	4.50
14.000	1.53	0.46	0.573	| O |	| I |	|	4.55
14.083	1.63	0.46	0.581	| O |	| I|	|	4.60
14.167	1.75	0.46	0.590	| O |	| I |	|	4.67
14.250	1.78	0.46	0.599	| O |	| |I |	|	4.73
14.333	1.76	0.46	0.608	| O |	| I |	|	4.80
14.417	1.74	0.46	0.617	| O |	| I |	|	4.86
14.500	1.73	0.46	0.625	| O |	| I |	|	4.92
14.583	1.73	0.46	0.634	| O |	| I |	|	4.99
14.667	1.73	0.46	0.643	| O |	| I |	|	5.05
14.750	1.73	0.46	0.651	| O |	| I |	|	5.11
14.833	1.70	0.46	0.660	| O |	| I |	|	5.18
14.917	1.67	0.46	0.669	| O |	| I|	|	5.24
15.000	1.66	0.46	0.677	| O |	| I|	|	5.30
15.083	1.63	0.46	0.685	| O |	| I|	|	5.36
15.167	1.60	0.46	0.693	| O |	| I |	|	5.41
15.250	1.60	0.46	0.701	| O |	| I |	|	5.47
15.333	1.57	0.46	0.709	| O |	| I |	|	5.53
15.417	1.54	0.46	0.716	| O |	| I |	|	5.58
15.500	1.53	0.46	0.724	| O |	| I |	|	5.63
15.583	1.42	0.46	0.731	| O |	| I |	|	5.69
15.667	1.30	0.46	0.737	| O |	| I |	|	5.73
15.750	1.28	0.46	0.742	| O |	| I |	|	5.77
15.833	1.27	0.46	0.748	| O |	|I |	|	5.81
15.917	1.26	0.46	0.754	| O |	|I |	|	5.85
16.000	1.26	0.46	0.759	| O |	|I |	|	5.89
16.083	0.86	0.46	0.763	| O | I |	|	|	5.92
16.167	0.41	0.46	0.764	| IO |	|	|	5.93
16.250	0.32	0.46	0.764	| I O |	|	|	5.93
16.333	0.28	0.46	0.763	| I O |	|	|	5.92
16.417	0.27	0.46	0.761	| I O |	|	|	5.91
16.500	0.27	0.46	0.760	| I O |	|	|	5.90
16.583	0.24	0.46	0.759	| I O |	|	|	5.89
16.667	0.21	0.46	0.757	| I O |	|	|	5.88
16.750	0.20	0.46	0.755	| I O |	|	|	5.86
16.833	0.20	0.46	0.753	| I O |	|	|	5.85
16.917	0.20	0.46	0.752	| I O |	|	|	5.84
17.000	0.20	0.46	0.750	| I O |	|	|	5.83
17.083	0.25	0.46	0.748	| I O |	|	|	5.81
17.167	0.31	0.46	0.747	| I O |	|	|	5.80
17.250	0.32	0.46	0.746	| I O |	|	|	5.80
17.333	0.33	0.46	0.745	| I O |	|	|	5.79
17.417	0.33	0.46	0.744	| I O |	|	|	5.78
17.500	0.33	0.46	0.743	| I O |	|	|	5.78
17.583	0.33	0.46	0.742	| I O |	|	|	5.77
17.667	0.33	0.46	0.742	| I O |	|	|	5.77
17.750	0.33	0.46	0.741	| I O |	|	|	5.76
17.833	0.30	0.46	0.740	| I O |	|	|	5.75
17.917	0.28	0.46	0.739	| I O |	|	|	5.74
18.000	0.27	0.46	0.737	| I O |	|	|	5.73
18.083	0.27	0.46	0.736	| I O |	|	|	5.72
18.167	0.27	0.46	0.735	| I O |	|	|	5.72
18.250	0.27	0.46	0.733	| I O |	|	|	5.71
18.333	0.27	0.46	0.732	| I O |	|	|	5.70
18.417	0.27	0.46	0.731	| I O |	|	|	5.69
18.500	0.27	0.46	0.729	| I O |	|	|	5.68
18.583	0.24	0.46	0.728	| I O |	|	|	5.67
18.667	0.21	0.46	0.726	| I O |	|	|	5.65
18.750	0.20	0.46	0.724	| I O |	|	|	5.64

18.833	0.17	0.46	0.723	| I O |	|	|	|	5.63
18.917	0.14	0.46	0.720	| I O |	|	|	|	5.61
19.000	0.14	0.46	0.718	|I O |	|	|	|	5.60
19.083	0.16	0.46	0.716	| I O |	|	|	|	5.58
19.167	0.19	0.46	0.714	| I O |	|	|	|	5.57
19.250	0.20	0.46	0.712	| I O |	|	|	|	5.55
19.333	0.23	0.46	0.711	| I O |	|	|	|	5.54
19.417	0.26	0.46	0.709	| I O |	|	|	|	5.53
19.500	0.26	0.46	0.708	| I O |	|	|	|	5.52
19.583	0.24	0.46	0.706	| I O |	|	|	|	5.51
19.667	0.21	0.46	0.705	| I O |	|	|	|	5.50
19.750	0.20	0.46	0.703	| I O |	|	|	|	5.49
19.833	0.17	0.46	0.701	| I O |	|	|	|	5.47
19.917	0.14	0.46	0.699	| I O |	|	|	|	5.46
20.000	0.14	0.46	0.697	|I O |	|	|	|	5.44
20.083	0.16	0.46	0.695	| I O |	|	|	|	5.43
20.167	0.19	0.46	0.693	| I O |	|	|	|	5.41
20.250	0.20	0.46	0.691	| I O |	|	|	|	5.40
20.333	0.20	0.46	0.689	| I O |	|	|	|	5.38
20.417	0.20	0.46	0.687	| I O |	|	|	|	5.37
20.500	0.20	0.46	0.685	| I O |	|	|	|	5.36
20.583	0.20	0.46	0.684	| I O |	|	|	|	5.35
20.667	0.20	0.46	0.682	| I O |	|	|	|	5.33
20.750	0.20	0.46	0.680	| I O |	|	|	|	5.32
20.833	0.17	0.46	0.678	| I O |	|	|	|	5.31
20.917	0.14	0.46	0.676	| I O |	|	|	|	5.29
21.000	0.14	0.46	0.674	|I O |	|	|	|	5.27
21.083	0.16	0.46	0.672	| I O |	|	|	|	5.26
21.167	0.19	0.46	0.670	| I O |	|	|	|	5.25
21.250	0.20	0.46	0.668	| I O |	|	|	|	5.23
21.333	0.17	0.46	0.666	| I O |	|	|	|	5.22
21.417	0.14	0.46	0.664	| I O |	|	|	|	5.20
21.500	0.14	0.46	0.662	|I O |	|	|	|	5.19
21.583	0.16	0.46	0.660	| I O |	|	|	|	5.17
21.667	0.19	0.46	0.658	| I O |	|	|	|	5.16
21.750	0.20	0.46	0.656	| I O |	|	|	|	5.14
21.833	0.17	0.46	0.654	| I O |	|	|	|	5.13
21.917	0.14	0.46	0.652	| I O |	|	|	|	5.12
22.000	0.14	0.46	0.650	|I O |	|	|	|	5.10
22.083	0.16	0.46	0.647	| I O |	|	|	|	5.08
22.167	0.19	0.46	0.645	| I O |	|	|	|	5.07
22.250	0.20	0.46	0.644	| I O |	|	|	|	5.06
22.333	0.17	0.46	0.642	| I O |	|	|	|	5.04
22.417	0.14	0.46	0.640	| I O |	|	|	|	5.03
22.500	0.14	0.46	0.637	|I O |	|	|	|	5.01
22.583	0.13	0.46	0.635	|I O |	|	|	|	5.00
22.667	0.13	0.46	0.633	|I O |	|	|	|	4.98
22.750	0.13	0.46	0.631	|I O |	|	|	|	4.96
22.833	0.13	0.46	0.628	|I O |	|	|	|	4.95
22.917	0.13	0.46	0.626	|I O |	|	|	|	4.93
23.000	0.13	0.46	0.624	|I O |	|	|	|	4.91
23.083	0.13	0.46	0.622	|I O |	|	|	|	4.90
23.167	0.13	0.46	0.619	|I O |	|	|	|	4.88
23.250	0.13	0.46	0.617	|I O |	|	|	|	4.86
23.333	0.13	0.46	0.615	|I O |	|	|	|	4.85
23.417	0.13	0.46	0.613	|I O |	|	|	|	4.83
23.500	0.13	0.46	0.610	|I O |	|	|	|	4.82
23.583	0.13	0.46	0.608	|I O |	|	|	|	4.80
23.667	0.13	0.46	0.606	|I O |	|	|	|	4.78
23.750	0.13	0.46	0.604	|I O |	|	|	|	4.77

23.833	0.13	0.46	0.601	|I	O |				4.75
23.917	0.13	0.46	0.599	|I	O |				4.73
24.000	0.13	0.46	0.597	|I	O |				4.72
24.083	0.08	0.46	0.594	|I	O |				4.70
24.167	0.02	0.46	0.592	I	O |				4.68
24.250	0.01	0.46	0.588	I	O |				4.66
24.333	0.00	0.46	0.585	I	O |				4.63
24.417	0.00	0.46	0.582	I	O |				4.61
24.500	0.00	0.46	0.579	I	O |				4.59
24.583	0.00	0.46	0.576	I	O |				4.57
24.667	0.00	0.46	0.573	I	O |				4.54
24.750	0.00	0.46	0.569	I	O |				4.52
24.833	0.00	0.46	0.566	I	O |				4.50
24.917	0.00	0.46	0.563	I	O |				4.47
25.000	0.00	0.46	0.560	I	O |				4.45
25.083	0.00	0.46	0.557	I	O |				4.43
25.167	0.00	0.46	0.554	I	O |				4.41
25.250	0.00	0.46	0.550	I	O |				4.38
25.333	0.00	0.46	0.547	I	O |				4.36
25.417	0.00	0.46	0.544	I	O |				4.34
25.500	0.00	0.46	0.541	I	O |				4.31
25.583	0.00	0.46	0.538	I	O |				4.29
25.667	0.00	0.46	0.535	I	O |				4.27
25.750	0.00	0.46	0.531	I	O |				4.25
25.833	0.00	0.46	0.528	I	O |				4.22
25.917	0.00	0.46	0.525	I	O |				4.20
26.000	0.00	0.46	0.522	I	O |				4.18
26.083	0.00	0.46	0.519	I	O |				4.15
26.167	0.00	0.46	0.516	I	O |				4.13
26.250	0.00	0.46	0.512	I	O |				4.11
26.333	0.00	0.46	0.509	I	O |				4.08
26.417	0.00	0.46	0.506	I	O |				4.06
26.500	0.00	0.46	0.503	I	O |				4.04
26.583	0.00	0.46	0.500	I	O |				4.02
26.667	0.00	0.46	0.497	I	O |				3.99
26.750	0.00	0.46	0.493	I	O |				3.97
26.833	0.00	0.46	0.490	I	O |				3.95
26.917	0.00	0.46	0.487	I	O |				3.92
27.000	0.00	0.46	0.484	I	O |				3.90
27.083	0.00	0.46	0.481	I	O |				3.88
27.167	0.00	0.46	0.478	I	O |				3.86
27.250	0.00	0.46	0.474	I	O |				3.83
27.333	0.00	0.46	0.471	I	O |				3.81
27.417	0.00	0.46	0.468	I	O |				3.79
27.500	0.00	0.46	0.465	I	O |				3.76
27.583	0.00	0.46	0.462	I	O |				3.74
27.667	0.00	0.46	0.459	I	O |				3.72
27.750	0.00	0.46	0.455	I	O |				3.69
27.833	0.00	0.46	0.452	I	O |				3.67
27.917	0.00	0.46	0.449	I	O |				3.65
28.000	0.00	0.46	0.446	I	O |				3.63
28.083	0.00	0.46	0.443	I	O |				3.60
28.167	0.00	0.46	0.440	I	O |				3.58
28.250	0.00	0.46	0.436	I	O |				3.56
28.333	0.00	0.46	0.433	I	O |				3.53
28.417	0.00	0.46	0.430	I	O |				3.51
28.500	0.00	0.46	0.427	I	O |				3.49
28.583	0.00	0.46	0.424	I	O |				3.47
28.667	0.00	0.46	0.421	I	O |				3.44
28.750	0.00	0.46	0.417	I	O |				3.42

28.833	0.00	0.46	0.414	I	O				3.40
28.917	0.00	0.46	0.411	I	O				3.37
29.000	0.00	0.46	0.408	I	O				3.35
29.083	0.00	0.46	0.405	I	O				3.33
29.167	0.00	0.46	0.402	I	O				3.31
29.250	0.00	0.46	0.398	I	O				3.28
29.333	0.00	0.46	0.395	I	O				3.26
29.417	0.00	0.46	0.392	I	O				3.24
29.500	0.00	0.46	0.389	I	O				3.21
29.583	0.00	0.46	0.386	I	O				3.19
29.667	0.00	0.46	0.383	I	O				3.17
29.750	0.00	0.46	0.379	I	O				3.14
29.833	0.00	0.46	0.376	I	O				3.12
29.917	0.00	0.46	0.373	I	O				3.10
30.000	0.00	0.46	0.370	I	O				3.08
30.083	0.00	0.46	0.367	I	O				3.05
30.167	0.00	0.46	0.364	I	O				3.03
30.250	0.00	0.46	0.360	I	O				3.01
30.333	0.00	0.46	0.357	I	O				2.98
30.417	0.00	0.46	0.354	I	O				2.96
30.500	0.00	0.46	0.351	I	O				2.94
30.583	0.00	0.46	0.348	I	O				2.92
30.667	0.00	0.46	0.345	I	O				2.89
30.750	0.00	0.46	0.341	I	O				2.87
30.833	0.00	0.46	0.338	I	O				2.85
30.917	0.00	0.46	0.335	I	O				2.82
31.000	0.00	0.46	0.332	I	O				2.80
31.083	0.00	0.46	0.329	I	O				2.78
31.167	0.00	0.46	0.326	I	O				2.76
31.250	0.00	0.46	0.322	I	O				2.73
31.333	0.00	0.46	0.319	I	O				2.71
31.417	0.00	0.46	0.316	I	O				2.69
31.500	0.00	0.46	0.313	I	O				2.66
31.583	0.00	0.46	0.310	I	O				2.64
31.667	0.00	0.46	0.307	I	O				2.62
31.750	0.00	0.46	0.303	I	O				2.59
31.833	0.00	0.46	0.300	I	O				2.57
31.917	0.00	0.46	0.297	I	O				2.55
32.000	0.00	0.46	0.294	I	O				2.53
32.083	0.00	0.46	0.291	I	O				2.50
32.167	0.00	0.46	0.288	I	O				2.48
32.250	0.00	0.46	0.284	I	O				2.46
32.333	0.00	0.46	0.281	I	O				2.43
32.417	0.00	0.46	0.278	I	O				2.41
32.500	0.00	0.46	0.275	I	O				2.39
32.583	0.00	0.46	0.272	I	O				2.37
32.667	0.00	0.46	0.269	I	O				2.34
32.750	0.00	0.46	0.265	I	O				2.32
32.833	0.00	0.46	0.262	I	O				2.30
32.917	0.00	0.46	0.259	I	O				2.27
33.000	0.00	0.46	0.256	I	O				2.25
33.083	0.00	0.46	0.253	I	O				2.23
33.167	0.00	0.46	0.250	I	O				2.20
33.250	0.00	0.46	0.246	I	O				2.18
33.333	0.00	0.46	0.243	I	O				2.16
33.417	0.00	0.46	0.240	I	O				2.14
33.500	0.00	0.46	0.237	I	O				2.11
33.583	0.00	0.46	0.234	I	O				2.09
33.667	0.00	0.46	0.231	I	O				2.07
33.750	0.00	0.46	0.227	I	O				2.04

33.833	0.00	0.46	0.224	I	O	|	|	|	2.02
33.917	0.00	0.46	0.221	I	O	|	|	|	2.00
34.000	0.00	0.46	0.218	I	O	|	|	|	1.98
34.083	0.00	0.46	0.215	I	O	|	|	|	1.95
34.167	0.00	0.46	0.212	I	O	|	|	|	1.93
34.250	0.00	0.46	0.208	I	O	|	|	|	1.91
34.333	0.00	0.46	0.205	I	O	|	|	|	1.88
34.417	0.00	0.46	0.202	I	O	|	|	|	1.86
34.500	0.00	0.46	0.199	I	O	|	|	|	1.84
34.583	0.00	0.46	0.196	I	O	|	|	|	1.82
34.667	0.00	0.46	0.192	I	O	|	|	|	1.79
34.750	0.00	0.46	0.189	I	O	|	|	|	1.77
34.833	0.00	0.46	0.186	I	O	|	|	|	1.75
34.917	0.00	0.46	0.183	I	O	|	|	|	1.72
35.000	0.00	0.46	0.180	I	O	|	|	|	1.70
35.083	0.00	0.46	0.177	I	O	|	|	|	1.68
35.167	0.00	0.46	0.173	I	O	|	|	|	1.65
35.250	0.00	0.46	0.170	I	O	|	|	|	1.63
35.333	0.00	0.46	0.167	I	O	|	|	|	1.61
35.417	0.00	0.46	0.164	I	O	|	|	|	1.59
35.500	0.00	0.46	0.161	I	O	|	|	|	1.56
35.583	0.00	0.46	0.158	I	O	|	|	|	1.54
35.667	0.00	0.46	0.154	I	O	|	|	|	1.52
35.750	0.00	0.46	0.151	I	O	|	|	|	1.49
35.833	0.00	0.46	0.148	I	O	|	|	|	1.47
35.917	0.00	0.46	0.145	I	O	|	|	|	1.45
36.000	0.00	0.46	0.142	I	O	|	|	|	1.43
36.083	0.00	0.46	0.139	I	O	|	|	|	1.40
36.167	0.00	0.46	0.135	I	O	|	|	|	1.38
36.250	0.00	0.46	0.132	I	O	|	|	|	1.36
36.333	0.00	0.46	0.129	I	O	|	|	|	1.33
36.417	0.00	0.46	0.126	I	O	|	|	|	1.31
36.500	0.00	0.46	0.123	I	O	|	|	|	1.29
36.583	0.00	0.46	0.120	I	O	|	|	|	1.27
36.667	0.00	0.46	0.116	I	O	|	|	|	1.24
36.750	0.00	0.46	0.113	I	O	|	|	|	1.22
36.833	0.00	0.46	0.110	I	O	|	|	|	1.20
36.917	0.00	0.46	0.107	I	O	|	|	|	1.17
37.000	0.00	0.46	0.104	I	O	|	|	|	1.15
37.083	0.00	0.46	0.101	I	O	|	|	|	1.13
37.167	0.00	0.46	0.097	I	O	|	|	|	1.10
37.250	0.00	0.46	0.094	I	O	|	|	|	1.08
37.333	0.00	0.46	0.091	I	O	|	|	|	1.06
37.417	0.00	0.46	0.088	I	O	|	|	|	1.04
37.500	0.00	0.46	0.085	I	O	|	|	|	1.01
37.583	0.00	0.45	0.082	I	O	|	|	|	0.98
37.667	0.00	0.44	0.079	I	O	|	|	|	0.95
37.750	0.00	0.42	0.076	I	O	|	|	|	0.91
37.833	0.00	0.40	0.073	I	O	|	|	|	0.88
37.917	0.00	0.39	0.070	I	O	|	|	|	0.84
38.000	0.00	0.37	0.067	I	O	|	|	|	0.81
38.083	0.00	0.36	0.065	I	O	|	|	|	0.78
38.167	0.00	0.35	0.062	I	O	|	|	|	0.75
38.250	0.00	0.33	0.060	I	O	|	|	|	0.72
38.333	0.00	0.32	0.058	I	O	|	|	|	0.70
38.417	0.00	0.31	0.056	I	O	|	|	|	0.67
38.500	0.00	0.30	0.054	I	O	|	|	|	0.65
38.583	0.00	0.29	0.052	I	O	|	|	|	0.62
38.667	0.00	0.28	0.050	I	O	|	|	|	0.60
38.750	0.00	0.27	0.048	I	O	|	|	|	0.58

38.833	0.00	0.26	0.046	I O	|	|	|	0.55
38.917	0.00	0.25	0.044	I O	|	|	|	0.53
39.000	0.00	0.24	0.043	I O	|	|	|	0.51
39.083	0.00	0.23	0.041	I O	|	|	|	0.49
39.167	0.00	0.22	0.040	I O	|	|	|	0.48
39.250	0.00	0.21	0.038	I O	|	|	|	0.46
39.333	0.00	0.20	0.037	I O	|	|	|	0.44
39.417	0.00	0.20	0.035	I O	|	|	|	0.42
39.500	0.00	0.19	0.034	I O	|	|	|	0.41
39.583	0.00	0.18	0.033	I O	|	|	|	0.39
39.667	0.00	0.17	0.031	I O	|	|	|	0.38
39.750	0.00	0.17	0.030	I O	|	|	|	0.36
39.833	0.00	0.16	0.029	I O	|	|	|	0.35
39.917	0.00	0.16	0.028	I O	|	|	|	0.34
40.000	0.00	0.15	0.027	I O	|	|	|	0.33
40.083	0.00	0.14	0.026	I O	|	|	|	0.31
40.167	0.00	0.14	0.025	IO	|	|	|	0.30
40.250	0.00	0.13	0.024	IO	|	|	|	0.29
40.333	0.00	0.13	0.023	IO	|	|	|	0.28
40.417	0.00	0.12	0.022	IO	|	|	|	0.27
40.500	0.00	0.12	0.021	IO	|	|	|	0.26
40.583	0.00	0.11	0.021	IO	|	|	|	0.25
40.667	0.00	0.11	0.020	IO	|	|	|	0.24
40.750	0.00	0.11	0.019	IO	|	|	|	0.23
40.833	0.00	0.10	0.018	IO	|	|	|	0.22
40.917	0.00	0.10	0.018	IO	|	|	|	0.21
41.000	0.00	0.09	0.017	IO	|	|	|	0.21
41.083	0.00	0.09	0.016	IO	|	|	|	0.20
41.167	0.00	0.09	0.016	IO	|	|	|	0.19
41.250	0.00	0.08	0.015	IO	|	|	|	0.18
41.333	0.00	0.08	0.015	IO	|	|	|	0.18
41.417	0.00	0.08	0.014	IO	|	|	|	0.17
41.500	0.00	0.08	0.014	IO	|	|	|	0.16
41.583	0.00	0.07	0.013	IO	|	|	|	0.16
41.667	0.00	0.07	0.013	O	|	|	|	0.15
41.750	0.00	0.07	0.012	O	|	|	|	0.15
41.833	0.00	0.06	0.012	O	|	|	|	0.14
41.917	0.00	0.06	0.011	O	|	|	|	0.14
42.000	0.00	0.06	0.011	O	|	|	|	0.13
42.083	0.00	0.06	0.010	O	|	|	|	0.13
42.167	0.00	0.06	0.010	O	|	|	|	0.12
42.250	0.00	0.05	0.010	O	|	|	|	0.12
42.333	0.00	0.05	0.009	O	|	|	|	0.11
42.417	0.00	0.05	0.009	O	|	|	|	0.11
42.500	0.00	0.05	0.009	O	|	|	|	0.10
42.583	0.00	0.05	0.008	O	|	|	|	0.10
42.667	0.00	0.04	0.008	O	|	|	|	0.10
42.750	0.00	0.04	0.008	O	|	|	|	0.09
42.833	0.00	0.04	0.007	O	|	|	|	0.09
42.917	0.00	0.04	0.007	O	|	|	|	0.09
43.000	0.00	0.04	0.007	O	|	|	|	0.08
43.083	0.00	0.04	0.007	O	|	|	|	0.08
43.167	0.00	0.04	0.006	O	|	|	|	0.08
43.250	0.00	0.03	0.006	O	|	|	|	0.07
43.333	0.00	0.03	0.006	O	|	|	|	0.07
43.417	0.00	0.03	0.006	O	|	|	|	0.07
43.500	0.00	0.03	0.005	O	|	|	|	0.07
43.583	0.00	0.03	0.005	O	|	|	|	0.06
43.667	0.00	0.03	0.005	O	|	|	|	0.06
43.750	0.00	0.03	0.005	O	|	|	|	0.06

43.833	0.00	0.03	0.005	O	|	|	|	0.06
43.917	0.00	0.02	0.004	O	|	|	|	0.05
44.000	0.00	0.02	0.004	O	|	|	|	0.05
44.083	0.00	0.02	0.004	O	|	|	|	0.05
44.167	0.00	0.02	0.004	O	|	|	|	0.05
44.250	0.00	0.02	0.004	O	|	|	|	0.05
44.333	0.00	0.02	0.004	O	|	|	|	0.04
44.417	0.00	0.02	0.004	O	|	|	|	0.04
44.500	0.00	0.02	0.003	O	|	|	|	0.04
44.583	0.00	0.02	0.003	O	|	|	|	0.04
44.667	0.00	0.02	0.003	O	|	|	|	0.04
44.750	0.00	0.02	0.003	O	|	|	|	0.04
44.833	0.00	0.02	0.003	O	|	|	|	0.04
44.917	0.00	0.02	0.003	O	|	|	|	0.03
45.000	0.00	0.02	0.003	O	|	|	|	0.03
45.083	0.00	0.01	0.003	O	|	|	|	0.03
45.167	0.00	0.01	0.003	O	|	|	|	0.03
45.250	0.00	0.01	0.002	O	|	|	|	0.03
45.333	0.00	0.01	0.002	O	|	|	|	0.03
45.417	0.00	0.01	0.002	O	|	|	|	0.03
45.500	0.00	0.01	0.002	O	|	|	|	0.03
45.583	0.00	0.01	0.002	O	|	|	|	0.03
45.667	0.00	0.01	0.002	O	|	|	|	0.02
45.750	0.00	0.01	0.002	O	|	|	|	0.02
45.833	0.00	0.01	0.002	O	|	|	|	0.02
45.917	0.00	0.01	0.002	O	|	|	|	0.02
46.000	0.00	0.01	0.002	O	|	|	|	0.02
46.083	0.00	0.01	0.002	O	|	|	|	0.02
46.167	0.00	0.01	0.002	O	|	|	|	0.02
46.250	0.00	0.01	0.002	O	|	|	|	0.02
46.333	0.00	0.01	0.001	O	|	|	|	0.02
46.417	0.00	0.01	0.001	O	|	|	|	0.02
46.500	0.00	0.01	0.001	O	|	|	|	0.02
46.583	0.00	0.01	0.001	O	|	|	|	0.02
46.667	0.00	0.01	0.001	O	|	|	|	0.02
46.750	0.00	0.01	0.001	O	|	|	|	0.01
46.833	0.00	0.01	0.001	O	|	|	|	0.01
46.917	0.00	0.01	0.001	O	|	|	|	0.01
47.000	0.00	0.01	0.001	O	|	|	|	0.01
47.083	0.00	0.01	0.001	O	|	|	|	0.01
47.167	0.00	0.01	0.001	O	|	|	|	0.01
47.250	0.00	0.01	0.001	O	|	|	|	0.01
47.333	0.00	0.01	0.001	O	|	|	|	0.01
47.417	0.00	0.01	0.001	O	|	|	|	0.01
47.500	0.00	0.00	0.001	O	|	|	|	0.01
47.583	0.00	0.00	0.001	O	|	|	|	0.01
47.667	0.00	0.00	0.001	O	|	|	|	0.01
47.750	0.00	0.00	0.001	O	|	|	|	0.01
47.833	0.00	0.00	0.001	O	|	|	|	0.01
47.917	0.00	0.00	0.001	O	|	|	|	0.01
48.000	0.00	0.00	0.001	O	|	|	|	0.01
48.083	0.00	0.00	0.001	O	|	|	|	0.01
48.167	0.00	0.00	0.001	O	|	|	|	0.01
48.250	0.00	0.00	0.001	O	|	|	|	0.01
48.333	0.00	0.00	0.001	O	|	|	|	0.01
48.417	0.00	0.00	0.001	O	|	|	|	0.01
48.500	0.00	0.00	0.001	O	|	|	|	0.01
48.583	0.00	0.00	0.001	O	|	|	|	0.01
48.667	0.00	0.00	0.001	O	|	|	|	0.01
48.750	0.00	0.00	0.000	O	|	|	|	0.01

48.833	0.00	0.00	0.000	O	|	|	|	|	0.01
48.917	0.00	0.00	0.000	O	|	|	|	|	0.01
49.000	0.00	0.00	0.000	O	|	|	|	|	0.01
49.083	0.00	0.00	0.000	O	|	|	|	|	0.01
49.167	0.00	0.00	0.000	O	|	|	|	|	0.00
49.250	0.00	0.00	0.000	O	|	|	|	|	0.00
49.333	0.00	0.00	0.000	O	|	|	|	|	0.00
49.417	0.00	0.00	0.000	O	|	|	|	|	0.00
49.500	0.00	0.00	0.000	O	|	|	|	|	0.00
49.583	0.00	0.00	0.000	O	|	|	|	|	0.00
49.667	0.00	0.00	0.000	O	|	|	|	|	0.00
49.750	0.00	0.00	0.000	O	|	|	|	|	0.00
49.833	0.00	0.00	0.000	O	|	|	|	|	0.00
49.917	0.00	0.00	0.000	O	|	|	|	|	0.00
50.000	0.00	0.00	0.000	O	|	|	|	|	0.00
50.083	0.00	0.00	0.000	O	|	|	|	|	0.00
50.167	0.00	0.00	0.000	O	|	|	|	|	0.00
50.250	0.00	0.00	0.000	O	|	|	|	|	0.00
50.333	0.00	0.00	0.000	O	|	|	|	|	0.00
50.417	0.00	0.00	0.000	O	|	|	|	|	0.00
50.500	0.00	0.00	0.000	O	|	|	|	|	0.00
50.583	0.00	0.00	0.000	O	|	|	|	|	0.00
50.667	0.00	0.00	0.000	O	|	|	|	|	0.00
50.750	0.00	0.00	0.000	O	|	|	|	|	0.00
50.833	0.00	0.00	0.000	O	|	|	|	|	0.00
50.917	0.00	0.00	0.000	O	|	|	|	|	0.00
51.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 612
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 1.371 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
5-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 16.098 (CFS)
Total volume = 0.498 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	4.0	8.05	12.07	16.10	Depth (Ft.)
0.083	1.44	0.02	0.005	O I	|	|	|	|	0.09
0.167	2.53	0.08	0.018	O I	|	|	|	|	0.33
0.250	3.06	0.16	0.037	O I	|	|	|	|	0.67
0.333	3.28	0.24	0.057	O I	|	|	|	|	1.04
0.417	3.42	0.33	0.078	O I	|	|	|	|	1.43
0.500	3.79	0.35	0.101	O I	|	|	|	|	1.73
0.583	4.77	0.35	0.128	O I	|	|	|	|	2.06
0.667	5.96	0.35	0.162	O I	|	|	|	|	2.49
0.750	8.33	0.35	0.209	O I	|	|	|	|	3.07
0.833	16.10	0.35	0.291	O I	|	|	|	|	4.07
0.917	12.28	0.35	0.386	O I	|	|	|	|	5.25
1.000	5.48	0.35	0.445	O I	|	|	|	|	5.97
1.083	1.61	0.35	0.467	O I	|	|	|	|	6.25
1.167	0.24	0.35	0.471	O	|	|	|	|	6.30
1.250	0.00	0.35	0.469	O	|	|	|	|	6.28
1.333	0.00	0.35	0.467	O	|	|	|	|	6.25
1.417	0.00	0.35	0.464	O	|	|	|	|	6.22
1.500	0.00	0.35	0.462	O	|	|	|	|	6.19
1.583	0.00	0.35	0.460	O	|	|	|	|	6.16
1.667	0.00	0.35	0.457	O	|	|	|	|	6.13
1.750	0.00	0.35	0.455	O	|	|	|	|	6.10
1.833	0.00	0.35	0.452	O	|	|	|	|	6.07
1.917	0.00	0.35	0.450	O	|	|	|	|	6.04
2.000	0.00	0.35	0.448	O	|	|	|	|	6.01
2.083	0.00	0.35	0.445	O	|	|	|	|	5.98
2.167	0.00	0.35	0.443	O	|	|	|	|	5.95
2.250	0.00	0.35	0.440	O	|	|	|	|	5.92
2.333	0.00	0.35	0.438	O	|	|	|	|	5.89
2.417	0.00	0.35	0.435	O	|	|	|	|	5.86
2.500	0.00	0.35	0.433	O	|	|	|	|	5.83
2.583	0.00	0.35	0.431	O	|	|	|	|	5.80
2.667	0.00	0.35	0.428	O	|	|	|	|	5.77
2.750	0.00	0.35	0.426	O	|	|	|	|	5.74
2.833	0.00	0.35	0.423	O	|	|	|	|	5.71
2.917	0.00	0.35	0.421	O	|	|	|	|	5.68
3.000	0.00	0.35	0.419	O	|	|	|	|	5.65
3.083	0.00	0.35	0.416	O	|	|	|	|	5.62
3.167	0.00	0.35	0.414	O	|	|	|	|	5.59
3.250	0.00	0.35	0.411	O	|	|	|	|	5.56
3.333	0.00	0.35	0.409	O	|	|	|	|	5.53
3.417	0.00	0.35	0.407	O	|	|	|	|	5.50
3.500	0.00	0.35	0.404	O	|	|	|	|	5.47
3.583	0.00	0.35	0.402	O	|	|	|	|	5.44
3.667	0.00	0.35	0.399	O	|	|	|	|	5.41
3.750	0.00	0.35	0.397	O	|	|	|	|	5.38
3.833	0.00	0.35	0.394	O	|	|	|	|	5.35

3.917	0.00	0.35	0.392	O				5.32
4.000	0.00	0.35	0.390	O				5.29
4.083	0.00	0.35	0.387	O				5.26
4.167	0.00	0.35	0.385	O				5.24
4.250	0.00	0.35	0.382	O				5.21
4.333	0.00	0.35	0.380	O				5.18
4.417	0.00	0.35	0.378	O				5.15
4.500	0.00	0.35	0.375	O				5.12
4.583	0.00	0.35	0.373	O				5.09
4.667	0.00	0.35	0.370	O				5.06
4.750	0.00	0.35	0.368	O				5.03
4.833	0.00	0.35	0.366	O				5.00
4.917	0.00	0.35	0.363	O				4.97
5.000	0.00	0.35	0.361	O				4.94
5.083	0.00	0.35	0.358	O				4.91
5.167	0.00	0.35	0.356	O				4.88
5.250	0.00	0.35	0.353	O				4.85
5.333	0.00	0.35	0.351	O				4.82
5.417	0.00	0.35	0.349	O				4.79
5.500	0.00	0.35	0.346	O				4.76
5.583	0.00	0.35	0.344	O				4.73
5.667	0.00	0.35	0.341	O				4.70
5.750	0.00	0.35	0.339	O				4.67
5.833	0.00	0.35	0.337	O				4.64
5.917	0.00	0.35	0.334	O				4.61
6.000	0.00	0.35	0.332	O				4.58
6.083	0.00	0.35	0.329	O				4.55
6.167	0.00	0.35	0.327	O				4.52
6.250	0.00	0.35	0.325	O				4.49
6.333	0.00	0.35	0.322	O				4.46
6.417	0.00	0.35	0.320	O				4.43
6.500	0.00	0.35	0.317	O				4.40
6.583	0.00	0.35	0.315	O				4.37
6.667	0.00	0.35	0.313	O				4.34
6.750	0.00	0.35	0.310	O				4.31
6.833	0.00	0.35	0.308	O				4.28
6.917	0.00	0.35	0.305	O				4.25
7.000	0.00	0.35	0.303	O				4.22
7.083	0.00	0.35	0.300	O				4.19
7.167	0.00	0.35	0.298	O				4.16
7.250	0.00	0.35	0.296	O				4.14
7.333	0.00	0.35	0.293	O				4.11
7.417	0.00	0.35	0.291	O				4.08
7.500	0.00	0.35	0.288	O				4.05
7.583	0.00	0.35	0.286	O				4.02
7.667	0.00	0.35	0.284	O				3.99
7.750	0.00	0.35	0.281	O				3.96
7.833	0.00	0.35	0.279	O				3.93
7.917	0.00	0.35	0.276	O				3.90
8.000	0.00	0.35	0.274	O				3.87
8.083	0.00	0.35	0.272	O				3.84
8.167	0.00	0.35	0.269	O				3.81
8.250	0.00	0.35	0.267	O				3.78
8.333	0.00	0.35	0.264	O				3.75
8.417	0.00	0.35	0.262	O				3.72
8.500	0.00	0.35	0.259	O				3.69
8.583	0.00	0.35	0.257	O				3.66
8.667	0.00	0.35	0.255	O				3.63
8.750	0.00	0.35	0.252	O				3.60
8.833	0.00	0.35	0.250	O				3.57

8.917	0.00	0.35	0.247	O					3.54
9.000	0.00	0.35	0.245	O					3.51
9.083	0.00	0.35	0.243	O					3.48
9.167	0.00	0.35	0.240	O					3.45
9.250	0.00	0.35	0.238	O					3.42
9.333	0.00	0.35	0.235	O					3.39
9.417	0.00	0.35	0.233	O					3.36
9.500	0.00	0.35	0.231	O					3.33
9.583	0.00	0.35	0.228	O					3.30
9.667	0.00	0.35	0.226	O					3.27
9.750	0.00	0.35	0.223	O					3.24
9.833	0.00	0.35	0.221	O					3.21
9.917	0.00	0.35	0.219	O					3.18
10.000	0.00	0.35	0.216	O					3.15
10.083	0.00	0.35	0.214	O					3.12
10.167	0.00	0.35	0.211	O					3.09
10.250	0.00	0.35	0.209	O					3.06
10.333	0.00	0.35	0.206	O					3.04
10.417	0.00	0.35	0.204	O					3.01
10.500	0.00	0.35	0.202	O					2.98
10.583	0.00	0.35	0.199	O					2.95
10.667	0.00	0.35	0.197	O					2.92
10.750	0.00	0.35	0.194	O					2.89
10.833	0.00	0.35	0.192	O					2.86
10.917	0.00	0.35	0.190	O					2.83
11.000	0.00	0.35	0.187	O					2.80
11.083	0.00	0.35	0.185	O					2.77
11.167	0.00	0.35	0.182	O					2.74
11.250	0.00	0.35	0.180	O					2.71
11.333	0.00	0.35	0.178	O					2.68
11.417	0.00	0.35	0.175	O					2.65
11.500	0.00	0.35	0.173	O					2.62
11.583	0.00	0.35	0.170	O					2.59
11.667	0.00	0.35	0.168	O					2.56
11.750	0.00	0.35	0.165	O					2.53
11.833	0.00	0.35	0.163	O					2.50
11.917	0.00	0.35	0.161	O					2.47
12.000	0.00	0.35	0.158	O					2.44
12.083	0.00	0.35	0.156	O					2.41
12.167	0.00	0.35	0.153	O					2.38
12.250	0.00	0.35	0.151	O					2.35
12.333	0.00	0.35	0.149	O					2.32
12.417	0.00	0.35	0.146	O					2.29
12.500	0.00	0.35	0.144	O					2.26
12.583	0.00	0.35	0.141	O					2.23
12.667	0.00	0.35	0.139	O					2.20
12.750	0.00	0.35	0.137	O					2.17
12.833	0.00	0.35	0.134	O					2.14
12.917	0.00	0.35	0.132	O					2.11
13.000	0.00	0.35	0.129	O					2.08
13.083	0.00	0.35	0.127	O					2.05
13.167	0.00	0.35	0.125	O					2.02
13.250	0.00	0.35	0.122	O					1.99
13.333	0.00	0.35	0.120	O					1.96
13.417	0.00	0.35	0.117	O					1.94
13.500	0.00	0.35	0.115	O					1.91
13.583	0.00	0.35	0.112	O					1.88
13.667	0.00	0.35	0.110	O					1.85
13.750	0.00	0.35	0.108	O					1.82
13.833	0.00	0.35	0.105	O					1.79

13.917	0.00	0.35	0.103	O					1.76
14.000	0.00	0.35	0.100	O					1.73
14.083	0.00	0.35	0.098	O					1.70
14.167	0.00	0.35	0.096	O					1.67
14.250	0.00	0.35	0.093	O					1.64
14.333	0.00	0.35	0.091	O					1.61
14.417	0.00	0.35	0.088	O					1.58
14.500	0.00	0.35	0.086	O					1.55
14.583	0.00	0.35	0.084	O					1.52
14.667	0.00	0.35	0.081	O					1.48
14.750	0.00	0.34	0.079	O					1.44
14.833	0.00	0.33	0.076	O					1.40
14.917	0.00	0.32	0.074	O					1.36
15.000	0.00	0.31	0.072	O					1.32
15.083	0.00	0.30	0.070	O					1.28
15.167	0.00	0.29	0.068	O					1.24
15.250	0.00	0.28	0.066	O					1.21
15.333	0.00	0.27	0.064	O					1.17
15.417	0.00	0.27	0.062	O					1.14
15.500	0.00	0.26	0.060	O					1.11
15.583	0.00	0.25	0.059	O					1.07
15.667	0.00	0.24	0.057	O					1.04
15.750	0.00	0.24	0.055	O					1.01
15.833	0.00	0.23	0.054	O					0.98
15.917	0.00	0.22	0.052	O					0.95
16.000	0.00	0.22	0.051	O					0.93
16.083	0.00	0.21	0.049	O					0.90
16.167	0.00	0.20	0.048	O					0.87
16.250	0.00	0.20	0.046	O					0.85
16.333	0.00	0.19	0.045	O					0.82
16.417	0.00	0.19	0.044	O					0.80
16.500	0.00	0.18	0.042	O					0.78
16.583	0.00	0.18	0.041	O					0.75
16.667	0.00	0.17	0.040	O					0.73
16.750	0.00	0.17	0.039	O					0.71
16.833	0.00	0.16	0.038	O					0.69
16.917	0.00	0.16	0.037	O					0.67
17.000	0.00	0.15	0.036	O					0.65
17.083	0.00	0.15	0.035	O					0.63
17.167	0.00	0.14	0.034	O					0.61
17.250	0.00	0.14	0.033	O					0.60
17.333	0.00	0.14	0.032	O					0.58
17.417	0.00	0.13	0.031	O					0.56
17.500	0.00	0.13	0.030	O					0.55
17.583	0.00	0.12	0.029	O					0.53
17.667	0.00	0.12	0.028	O					0.52
17.750	0.00	0.12	0.027	O					0.50
17.833	0.00	0.11	0.027	O					0.49
17.917	0.00	0.11	0.026	O					0.47
18.000	0.00	0.11	0.025	O					0.46
18.083	0.00	0.10	0.024	O					0.44
18.167	0.00	0.10	0.024	O					0.43
18.250	0.00	0.10	0.023	O					0.42
18.333	0.00	0.09	0.022	O					0.41
18.417	0.00	0.09	0.022	O					0.40
18.500	0.00	0.09	0.021	O					0.38
18.583	0.00	0.09	0.020	O					0.37
18.667	0.00	0.08	0.020	O					0.36
18.750	0.00	0.08	0.019	O					0.35
18.833	0.00	0.08	0.019	O					0.34

18.917	0.00	0.08	0.018	O	|	|	|	0.33
19.000	0.00	0.08	0.018	O	|	|	|	0.32
19.083	0.00	0.07	0.017	O	|	|	|	0.31
19.167	0.00	0.07	0.017	O	|	|	|	0.30
19.250	0.00	0.07	0.016	O	|	|	|	0.29
19.333	0.00	0.07	0.016	O	|	|	|	0.29
19.417	0.00	0.06	0.015	O	|	|	|	0.28
19.500	0.00	0.06	0.015	O	|	|	|	0.27
19.583	0.00	0.06	0.014	O	|	|	|	0.26
19.667	0.00	0.06	0.014	O	|	|	|	0.25
19.750	0.00	0.06	0.014	O	|	|	|	0.25
19.833	0.00	0.06	0.013	O	|	|	|	0.24
19.917	0.00	0.05	0.013	O	|	|	|	0.23
20.000	0.00	0.05	0.012	O	|	|	|	0.23
20.083	0.00	0.05	0.012	O	|	|	|	0.22
20.167	0.00	0.05	0.012	O	|	|	|	0.21
20.250	0.00	0.05	0.011	O	|	|	|	0.21
20.333	0.00	0.05	0.011	O	|	|	|	0.20
20.417	0.00	0.05	0.011	O	|	|	|	0.20
20.500	0.00	0.04	0.010	O	|	|	|	0.19
20.583	0.00	0.04	0.010	O	|	|	|	0.18
20.667	0.00	0.04	0.010	O	|	|	|	0.18
20.750	0.00	0.04	0.009	O	|	|	|	0.17
20.833	0.00	0.04	0.009	O	|	|	|	0.17
20.917	0.00	0.04	0.009	O	|	|	|	0.16
21.000	0.00	0.04	0.009	O	|	|	|	0.16
21.083	0.00	0.04	0.008	O	|	|	|	0.15
21.167	0.00	0.03	0.008	O	|	|	|	0.15
21.250	0.00	0.03	0.008	O	|	|	|	0.15
21.333	0.00	0.03	0.008	O	|	|	|	0.14
21.417	0.00	0.03	0.007	O	|	|	|	0.14
21.500	0.00	0.03	0.007	O	|	|	|	0.13
21.583	0.00	0.03	0.007	O	|	|	|	0.13
21.667	0.00	0.03	0.007	O	|	|	|	0.13
21.750	0.00	0.03	0.007	O	|	|	|	0.12
21.833	0.00	0.03	0.006	O	|	|	|	0.12
21.917	0.00	0.03	0.006	O	|	|	|	0.11
22.000	0.00	0.03	0.006	O	|	|	|	0.11
22.083	0.00	0.03	0.006	O	|	|	|	0.11
22.167	0.00	0.02	0.006	O	|	|	|	0.11
22.250	0.00	0.02	0.006	O	|	|	|	0.10
22.333	0.00	0.02	0.005	O	|	|	|	0.10
22.417	0.00	0.02	0.005	O	|	|	|	0.10
22.500	0.00	0.02	0.005	O	|	|	|	0.09
22.583	0.00	0.02	0.005	O	|	|	|	0.09
22.667	0.00	0.02	0.005	O	|	|	|	0.09
22.750	0.00	0.02	0.005	O	|	|	|	0.09
22.833	0.00	0.02	0.005	O	|	|	|	0.08
22.917	0.00	0.02	0.004	O	|	|	|	0.08
23.000	0.00	0.02	0.004	O	|	|	|	0.08
23.083	0.00	0.02	0.004	O	|	|	|	0.08
23.167	0.00	0.02	0.004	O	|	|	|	0.07
23.250	0.00	0.02	0.004	O	|	|	|	0.07
23.333	0.00	0.02	0.004	O	|	|	|	0.07
23.417	0.00	0.02	0.004	O	|	|	|	0.07
23.500	0.00	0.02	0.004	O	|	|	|	0.07
23.583	0.00	0.01	0.003	O	|	|	|	0.06
23.667	0.00	0.01	0.003	O	|	|	|	0.06
23.750	0.00	0.01	0.003	O	|	|	|	0.06
23.833	0.00	0.01	0.003	O	|	|	|	0.06

23.917	0.00	0.01	0.003	O	|	|	|	0.06
24.000	0.00	0.01	0.003	O	|	|	|	0.06
24.083	0.00	0.01	0.003	O	|	|	|	0.05
24.167	0.00	0.01	0.003	O	|	|	|	0.05
24.250	0.00	0.01	0.003	O	|	|	|	0.05
24.333	0.00	0.01	0.003	O	|	|	|	0.05
24.417	0.00	0.01	0.003	O	|	|	|	0.05
24.500	0.00	0.01	0.003	O	|	|	|	0.05
24.583	0.00	0.01	0.002	O	|	|	|	0.04
24.667	0.00	0.01	0.002	O	|	|	|	0.04
24.750	0.00	0.01	0.002	O	|	|	|	0.04
24.833	0.00	0.01	0.002	O	|	|	|	0.04
24.917	0.00	0.01	0.002	O	|	|	|	0.04
25.000	0.00	0.01	0.002	O	|	|	|	0.04
25.083	0.00	0.01	0.002	O	|	|	|	0.04
25.167	0.00	0.01	0.002	O	|	|	|	0.04
25.250	0.00	0.01	0.002	O	|	|	|	0.04
25.333	0.00	0.01	0.002	O	|	|	|	0.03
25.417	0.00	0.01	0.002	O	|	|	|	0.03
25.500	0.00	0.01	0.002	O	|	|	|	0.03
25.583	0.00	0.01	0.002	O	|	|	|	0.03
25.667	0.00	0.01	0.002	O	|	|	|	0.03
25.750	0.00	0.01	0.002	O	|	|	|	0.03
25.833	0.00	0.01	0.002	O	|	|	|	0.03
25.917	0.00	0.01	0.002	O	|	|	|	0.03
26.000	0.00	0.01	0.001	O	|	|	|	0.03
26.083	0.00	0.01	0.001	O	|	|	|	0.03
26.167	0.00	0.01	0.001	O	|	|	|	0.03
26.250	0.00	0.01	0.001	O	|	|	|	0.02
26.333	0.00	0.01	0.001	O	|	|	|	0.02
26.417	0.00	0.01	0.001	O	|	|	|	0.02
26.500	0.00	0.01	0.001	O	|	|	|	0.02
26.583	0.00	0.01	0.001	O	|	|	|	0.02
26.667	0.00	0.01	0.001	O	|	|	|	0.02
26.750	0.00	0.00	0.001	O	|	|	|	0.02
26.833	0.00	0.00	0.001	O	|	|	|	0.02
26.917	0.00	0.00	0.001	O	|	|	|	0.02
27.000	0.00	0.00	0.001	O	|	|	|	0.02
27.083	0.00	0.00	0.001	O	|	|	|	0.02
27.167	0.00	0.00	0.001	O	|	|	|	0.02
27.250	0.00	0.00	0.001	O	|	|	|	0.02
27.333	0.00	0.00	0.001	O	|	|	|	0.02
27.417	0.00	0.00	0.001	O	|	|	|	0.02
27.500	0.00	0.00	0.001	O	|	|	|	0.02
27.583	0.00	0.00	0.001	O	|	|	|	0.02
27.667	0.00	0.00	0.001	O	|	|	|	0.02
27.750	0.00	0.00	0.001	O	|	|	|	0.01
27.833	0.00	0.00	0.001	O	|	|	|	0.01
27.917	0.00	0.00	0.001	O	|	|	|	0.01
28.000	0.00	0.00	0.001	O	|	|	|	0.01
28.083	0.00	0.00	0.001	O	|	|	|	0.01
28.167	0.00	0.00	0.001	O	|	|	|	0.01
28.250	0.00	0.00	0.001	O	|	|	|	0.01
28.333	0.00	0.00	0.001	O	|	|	|	0.01
28.417	0.00	0.00	0.001	O	|	|	|	0.01
28.500	0.00	0.00	0.001	O	|	|	|	0.01
28.583	0.00	0.00	0.001	O	|	|	|	0.01
28.667	0.00	0.00	0.001	O	|	|	|	0.01
28.750	0.00	0.00	0.001	O	|	|	|	0.01
28.833	0.00	0.00	0.001	O	|	|	|	0.01

28.917	0.00	0.00	0.001	O	|	|	|	|	0.01
29.000	0.00	0.00	0.001	O	|	|	|	|	0.01
29.083	0.00	0.00	0.001	O	|	|	|	|	0.01
29.167	0.00	0.00	0.000	O	|	|	|	|	0.01
29.250	0.00	0.00	0.000	O	|	|	|	|	0.01
29.333	0.00	0.00	0.000	O	|	|	|	|	0.01
29.417	0.00	0.00	0.000	O	|	|	|	|	0.01
29.500	0.00	0.00	0.000	O	|	|	|	|	0.01
29.583	0.00	0.00	0.000	O	|	|	|	|	0.01
29.667	0.00	0.00	0.000	O	|	|	|	|	0.01
29.750	0.00	0.00	0.000	O	|	|	|	|	0.01
29.833	0.00	0.00	0.000	O	|	|	|	|	0.01
29.917	0.00	0.00	0.000	O	|	|	|	|	0.01
30.000	0.00	0.00	0.000	O	|	|	|	|	0.01
30.083	0.00	0.00	0.000	O	|	|	|	|	0.01
30.167	0.00	0.00	0.000	O	|	|	|	|	0.01
30.250	0.00	0.00	0.000	O	|	|	|	|	0.01
30.333	0.00	0.00	0.000	O	|	|	|	|	0.01
30.417	0.00	0.00	0.000	O	|	|	|	|	0.01
30.500	0.00	0.00	0.000	O	|	|	|	|	0.01
30.583	0.00	0.00	0.000	O	|	|	|	|	0.01
30.667	0.00	0.00	0.000	O	|	|	|	|	0.01
30.750	0.00	0.00	0.000	O	|	|	|	|	0.01
30.833	0.00	0.00	0.000	O	|	|	|	|	0.00
30.917	0.00	0.00	0.000	O	|	|	|	|	0.00
31.000	0.00	0.00	0.000	O	|	|	|	|	0.00
31.083	0.00	0.00	0.000	O	|	|	|	|	0.00
31.167	0.00	0.00	0.000	O	|	|	|	|	0.00
31.250	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 375
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.350 (CFS)
Total volume = 0.498 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
5-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.670 (CFS)
Total volume = 0.802 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.7 5.34 8.00 10.67	Depth (Ft.)
0.083	0.74	0.01	0.003	O I | | | |	0.05
0.167	1.28	0.04	0.009	O I | | | |	0.17
0.250	1.28	0.08	0.018	O I | | | |	0.32
0.333	1.42	0.11	0.026	O I | | | |	0.48
0.417	1.57	0.15	0.036	O I | | | |	0.65
0.500	1.78	0.20	0.046	O I | | | |	0.84
0.583	1.73	0.24	0.057	O I | | | |	1.04
0.667	1.80	0.29	0.067	O I | | | |	1.23
0.750	1.90	0.33	0.078	O I | | | |	1.42
0.833	1.76	0.35	0.088	|O I | | |	1.57
0.917	1.69	0.35	0.097	|O I | | |	1.69
1.000	1.82	0.35	0.107	|O I | | |	1.81
1.083	2.14	0.35	0.118	|O I | | |	1.95
1.167	2.32	0.35	0.131	|O I | | |	2.11
1.250	2.36	0.35	0.145	|O I| | |	2.28
1.333	2.24	0.35	0.158	|O I | | |	2.44
1.417	2.50	0.35	0.172	|O I| | |	2.61
1.500	2.79	0.35	0.188	|O I | | |	2.81
1.583	2.71	0.35	0.205	|O I | | |	3.01
1.667	2.77	0.35	0.221	|O I | | |	3.22
1.750	3.21	0.35	0.239	|O |I | | |	3.44
1.833	3.37	0.35	0.260	|O | I | | |	3.69
1.917	3.23	0.35	0.280	|O |I | | |	3.94
2.000	3.18	0.35	0.300	|O |I | | |	4.18
2.083	3.26	0.35	0.319	|O |I | | |	4.43
2.167	4.16	0.35	0.342	|O | I | | |	4.71
2.250	5.49	0.35	0.373	|O | I | | |	5.09
2.333	4.83	0.35	0.406	|O | I | | |	5.50
2.417	6.83	0.35	0.444	|O | | I | |	5.97
2.500	9.15	0.35	0.497	|O | | | I |	6.62
2.583	10.67	0.35	0.563	|O | | | | I	7.43
2.667	9.32	0.40	0.629	|O | | | I |	8.38
2.750	5.04	0.65	0.675	|O | | I| |	9.20
2.833	2.47	0.91	0.695	| O I| | | |	9.49
2.917	1.95	1.01	0.704	| O I | | | |	9.61
3.000	1.25	1.06	0.708	| O | | | |	9.67
3.083	0.40	1.04	0.706	|I O | | | |	9.65
3.167	0.05	0.97	0.701	I O | | | |	9.57
3.250	0.00	0.90	0.695	I O | | | |	9.48
3.333	0.00	0.82	0.689	I O | | | |	9.39
3.417	0.00	0.76	0.683	I O | | | |	9.32
3.500	0.00	0.69	0.678	I O | | | |	9.25
3.583	0.00	0.64	0.674	IO | | | |	9.18
3.667	0.00	0.58	0.669	IO | | | |	9.12
3.750	0.00	0.54	0.666	IO | | | |	9.06
3.833	0.00	0.49	0.662	IO | | | |	9.01

3.917	0.00	0.47	0.659	IO				8.96
4.000	0.00	0.47	0.655	IO				8.89
4.083	0.00	0.46	0.652	IO				8.83
4.167	0.00	0.45	0.649	IO				8.77
4.250	0.00	0.44	0.646	IO				8.71
4.333	0.00	0.44	0.643	IO				8.65
4.417	0.00	0.43	0.640	IO				8.60
4.500	0.00	0.42	0.637	IO				8.54
4.583	0.00	0.41	0.634	IO				8.49
4.667	0.00	0.41	0.631	IO				8.43
4.750	0.00	0.40	0.629	IO				8.38
4.833	0.00	0.39	0.626	IO				8.33
4.917	0.00	0.39	0.623	IO				8.27
5.000	0.00	0.38	0.621	IO				8.22
5.083	0.00	0.37	0.618	IO				8.17
5.167	0.00	0.37	0.615	IO				8.12
5.250	0.00	0.36	0.613	IO				8.08
5.333	0.00	0.35	0.611	IO				8.03
5.417	0.00	0.35	0.608	IO				7.99
5.500	0.00	0.35	0.606	IO				7.96
5.583	0.00	0.35	0.603	IO				7.93
5.667	0.00	0.35	0.601	IO				7.90
5.750	0.00	0.35	0.598	IO				7.87
5.833	0.00	0.35	0.596	IO				7.84
5.917	0.00	0.35	0.594	IO				7.81
6.000	0.00	0.35	0.591	IO				7.78
6.083	0.00	0.35	0.589	IO				7.75
6.167	0.00	0.35	0.586	IO				7.72
6.250	0.00	0.35	0.584	IO				7.69
6.333	0.00	0.35	0.582	IO				7.66
6.417	0.00	0.35	0.579	IO				7.63
6.500	0.00	0.35	0.577	IO				7.60
6.583	0.00	0.35	0.574	IO				7.57
6.667	0.00	0.35	0.572	IO				7.54
6.750	0.00	0.35	0.570	IO				7.51
6.833	0.00	0.35	0.567	IO				7.48
6.917	0.00	0.35	0.565	IO				7.45
7.000	0.00	0.35	0.562	IO				7.42
7.083	0.00	0.35	0.560	IO				7.39
7.167	0.00	0.35	0.557	IO				7.36
7.250	0.00	0.35	0.555	IO				7.33
7.333	0.00	0.35	0.553	IO				7.31
7.417	0.00	0.35	0.550	IO				7.28
7.500	0.00	0.35	0.548	IO				7.25
7.583	0.00	0.35	0.545	IO				7.22
7.667	0.00	0.35	0.543	IO				7.19
7.750	0.00	0.35	0.541	IO				7.16
7.833	0.00	0.35	0.538	IO				7.13
7.917	0.00	0.35	0.536	IO				7.10
8.000	0.00	0.35	0.533	IO				7.07
8.083	0.00	0.35	0.531	IO				7.04
8.167	0.00	0.35	0.529	IO				7.01
8.250	0.00	0.35	0.526	IO				6.98
8.333	0.00	0.35	0.524	IO				6.95
8.417	0.00	0.35	0.521	IO				6.92
8.500	0.00	0.35	0.519	IO				6.89
8.583	0.00	0.35	0.517	IO				6.86
8.667	0.00	0.35	0.514	IO				6.83
8.750	0.00	0.35	0.512	IO				6.80
8.833	0.00	0.35	0.509	IO				6.77

8.917	0.00	0.35	0.507	IO				6.74
9.000	0.00	0.35	0.504	IO				6.71
9.083	0.00	0.35	0.502	IO				6.68
9.167	0.00	0.35	0.500	IO				6.65
9.250	0.00	0.35	0.497	IO				6.62
9.333	0.00	0.35	0.495	IO				6.59
9.417	0.00	0.35	0.492	IO				6.56
9.500	0.00	0.35	0.490	IO				6.53
9.583	0.00	0.35	0.488	IO				6.50
9.667	0.00	0.35	0.485	IO				6.47
9.750	0.00	0.35	0.483	IO				6.44
9.833	0.00	0.35	0.480	IO				6.41
9.917	0.00	0.35	0.478	IO				6.38
10.000	0.00	0.35	0.476	IO				6.35
10.083	0.00	0.35	0.473	IO				6.32
10.167	0.00	0.35	0.471	IO				6.29
10.250	0.00	0.35	0.468	IO				6.26
10.333	0.00	0.35	0.466	IO				6.23
10.417	0.00	0.35	0.463	IO				6.21
10.500	0.00	0.35	0.461	IO				6.18
10.583	0.00	0.35	0.459	IO				6.15
10.667	0.00	0.35	0.456	IO				6.12
10.750	0.00	0.35	0.454	IO				6.09
10.833	0.00	0.35	0.451	IO				6.06
10.917	0.00	0.35	0.449	IO				6.03
11.000	0.00	0.35	0.447	IO				6.00
11.083	0.00	0.35	0.444	IO				5.97
11.167	0.00	0.35	0.442	IO				5.94
11.250	0.00	0.35	0.439	IO				5.91
11.333	0.00	0.35	0.437	IO				5.88
11.417	0.00	0.35	0.435	IO				5.85
11.500	0.00	0.35	0.432	IO				5.82
11.583	0.00	0.35	0.430	IO				5.79
11.667	0.00	0.35	0.427	IO				5.76
11.750	0.00	0.35	0.425	IO				5.73
11.833	0.00	0.35	0.423	IO				5.70
11.917	0.00	0.35	0.420	IO				5.67
12.000	0.00	0.35	0.418	IO				5.64
12.083	0.00	0.35	0.415	IO				5.61
12.167	0.00	0.35	0.413	IO				5.58
12.250	0.00	0.35	0.410	IO				5.55
12.333	0.00	0.35	0.408	IO				5.52
12.417	0.00	0.35	0.406	IO				5.49
12.500	0.00	0.35	0.403	IO				5.46
12.583	0.00	0.35	0.401	IO				5.43
12.667	0.00	0.35	0.398	IO				5.40
12.750	0.00	0.35	0.396	IO				5.37
12.833	0.00	0.35	0.394	IO				5.34
12.917	0.00	0.35	0.391	IO				5.31
13.000	0.00	0.35	0.389	IO				5.28
13.083	0.00	0.35	0.386	IO				5.25
13.167	0.00	0.35	0.384	IO				5.22
13.250	0.00	0.35	0.382	IO				5.19
13.333	0.00	0.35	0.379	IO				5.16
13.417	0.00	0.35	0.377	IO				5.13
13.500	0.00	0.35	0.374	IO				5.11
13.583	0.00	0.35	0.372	IO				5.08
13.667	0.00	0.35	0.369	IO				5.05
13.750	0.00	0.35	0.367	IO				5.02
13.833	0.00	0.35	0.365	IO				4.99

13.917	0.00	0.35	0.362	IO				4.96
14.000	0.00	0.35	0.360	IO				4.93
14.083	0.00	0.35	0.357	IO				4.90
14.167	0.00	0.35	0.355	IO				4.87
14.250	0.00	0.35	0.353	IO				4.84
14.333	0.00	0.35	0.350	IO				4.81
14.417	0.00	0.35	0.348	IO				4.78
14.500	0.00	0.35	0.345	IO				4.75
14.583	0.00	0.35	0.343	IO				4.72
14.667	0.00	0.35	0.341	IO				4.69
14.750	0.00	0.35	0.338	IO				4.66
14.833	0.00	0.35	0.336	IO				4.63
14.917	0.00	0.35	0.333	IO				4.60
15.000	0.00	0.35	0.331	IO				4.57
15.083	0.00	0.35	0.328	IO				4.54
15.167	0.00	0.35	0.326	IO				4.51
15.250	0.00	0.35	0.324	IO				4.48
15.333	0.00	0.35	0.321	IO				4.45
15.417	0.00	0.35	0.319	IO				4.42
15.500	0.00	0.35	0.316	IO				4.39
15.583	0.00	0.35	0.314	IO				4.36
15.667	0.00	0.35	0.312	IO				4.33
15.750	0.00	0.35	0.309	IO				4.30
15.833	0.00	0.35	0.307	IO				4.27
15.917	0.00	0.35	0.304	IO				4.24
16.000	0.00	0.35	0.302	IO				4.21
16.083	0.00	0.35	0.300	IO				4.18
16.167	0.00	0.35	0.297	IO				4.15
16.250	0.00	0.35	0.295	IO				4.12
16.333	0.00	0.35	0.292	IO				4.09
16.417	0.00	0.35	0.290	IO				4.06
16.500	0.00	0.35	0.288	IO				4.03
16.583	0.00	0.35	0.285	IO				4.01
16.667	0.00	0.35	0.283	IO				3.98
16.750	0.00	0.35	0.280	IO				3.95
16.833	0.00	0.35	0.278	IO				3.92
16.917	0.00	0.35	0.275	IO				3.89
17.000	0.00	0.35	0.273	IO				3.86
17.083	0.00	0.35	0.271	IO				3.83
17.167	0.00	0.35	0.268	IO				3.80
17.250	0.00	0.35	0.266	IO				3.77
17.333	0.00	0.35	0.263	IO				3.74
17.417	0.00	0.35	0.261	IO				3.71
17.500	0.00	0.35	0.259	IO				3.68
17.583	0.00	0.35	0.256	IO				3.65
17.667	0.00	0.35	0.254	IO				3.62
17.750	0.00	0.35	0.251	IO				3.59
17.833	0.00	0.35	0.249	IO				3.56
17.917	0.00	0.35	0.247	IO				3.53
18.000	0.00	0.35	0.244	IO				3.50
18.083	0.00	0.35	0.242	IO				3.47
18.167	0.00	0.35	0.239	IO				3.44
18.250	0.00	0.35	0.237	IO				3.41
18.333	0.00	0.35	0.234	IO				3.38
18.417	0.00	0.35	0.232	IO				3.35
18.500	0.00	0.35	0.230	IO				3.32
18.583	0.00	0.35	0.227	IO				3.29
18.667	0.00	0.35	0.225	IO				3.26
18.750	0.00	0.35	0.222	IO				3.23
18.833	0.00	0.35	0.220	IO				3.20

18.917	0.00	0.35	0.218	IO				3.17
19.000	0.00	0.35	0.215	IO				3.14
19.083	0.00	0.35	0.213	IO				3.11
19.167	0.00	0.35	0.210	IO				3.08
19.250	0.00	0.35	0.208	IO				3.05
19.333	0.00	0.35	0.206	IO				3.02
19.417	0.00	0.35	0.203	IO				2.99
19.500	0.00	0.35	0.201	IO				2.96
19.583	0.00	0.35	0.198	IO				2.93
19.667	0.00	0.35	0.196	IO				2.91
19.750	0.00	0.35	0.194	IO				2.88
19.833	0.00	0.35	0.191	IO				2.85
19.917	0.00	0.35	0.189	IO				2.82
20.000	0.00	0.35	0.186	IO				2.79
20.083	0.00	0.35	0.184	IO				2.76
20.167	0.00	0.35	0.181	IO				2.73
20.250	0.00	0.35	0.179	IO				2.70
20.333	0.00	0.35	0.177	IO				2.67
20.417	0.00	0.35	0.174	IO				2.64
20.500	0.00	0.35	0.172	IO				2.61
20.583	0.00	0.35	0.169	IO				2.58
20.667	0.00	0.35	0.167	IO				2.55
20.750	0.00	0.35	0.165	IO				2.52
20.833	0.00	0.35	0.162	IO				2.49
20.917	0.00	0.35	0.160	IO				2.46
21.000	0.00	0.35	0.157	IO				2.43
21.083	0.00	0.35	0.155	IO				2.40
21.167	0.00	0.35	0.153	IO				2.37
21.250	0.00	0.35	0.150	IO				2.34
21.333	0.00	0.35	0.148	IO				2.31
21.417	0.00	0.35	0.145	IO				2.28
21.500	0.00	0.35	0.143	IO				2.25
21.583	0.00	0.35	0.140	IO				2.22
21.667	0.00	0.35	0.138	IO				2.19
21.750	0.00	0.35	0.136	IO				2.16
21.833	0.00	0.35	0.133	IO				2.13
21.917	0.00	0.35	0.131	IO				2.10
22.000	0.00	0.35	0.128	IO				2.07
22.083	0.00	0.35	0.126	IO				2.04
22.167	0.00	0.35	0.124	IO				2.01
22.250	0.00	0.35	0.121	IO				1.98
22.333	0.00	0.35	0.119	IO				1.95
22.417	0.00	0.35	0.116	IO				1.92
22.500	0.00	0.35	0.114	IO				1.89
22.583	0.00	0.35	0.112	IO				1.86
22.667	0.00	0.35	0.109	IO				1.83
22.750	0.00	0.35	0.107	IO				1.81
22.833	0.00	0.35	0.104	IO				1.78
22.917	0.00	0.35	0.102	IO				1.75
23.000	0.00	0.35	0.100	IO				1.72
23.083	0.00	0.35	0.097	IO				1.69
23.167	0.00	0.35	0.095	IO				1.66
23.250	0.00	0.35	0.092	IO				1.63
23.333	0.00	0.35	0.090	IO				1.60
23.417	0.00	0.35	0.087	IO				1.57
23.500	0.00	0.35	0.085	IO				1.54
23.583	0.00	0.35	0.083	IO				1.51
23.667	0.00	0.34	0.080	IO				1.47
23.750	0.00	0.33	0.078	O				1.43
23.833	0.00	0.32	0.076	O				1.38

23.917	0.00	0.31	0.073	O	|	|	|	1.34
24.000	0.00	0.30	0.071	O	|	|	|	1.31
24.083	0.00	0.30	0.069	O	|	|	|	1.27
24.167	0.00	0.29	0.067	O	|	|	|	1.23
24.250	0.00	0.28	0.065	O	|	|	|	1.19
24.333	0.00	0.27	0.063	O	|	|	|	1.16
24.417	0.00	0.26	0.062	O	|	|	|	1.13
24.500	0.00	0.26	0.060	O	|	|	|	1.09
24.583	0.00	0.25	0.058	O	|	|	|	1.06
24.667	0.00	0.24	0.056	O	|	|	|	1.03
24.750	0.00	0.23	0.055	O	|	|	|	1.00
24.833	0.00	0.23	0.053	O	|	|	|	0.97
24.917	0.00	0.22	0.052	O	|	|	|	0.94
25.000	0.00	0.21	0.050	O	|	|	|	0.92
25.083	0.00	0.21	0.049	O	|	|	|	0.89
25.167	0.00	0.20	0.047	O	|	|	|	0.86
25.250	0.00	0.20	0.046	O	|	|	|	0.84
25.333	0.00	0.19	0.045	O	|	|	|	0.82
25.417	0.00	0.18	0.043	O	|	|	|	0.79
25.500	0.00	0.18	0.042	O	|	|	|	0.77
25.583	0.00	0.17	0.041	O	|	|	|	0.75
25.667	0.00	0.17	0.040	O	|	|	|	0.72
25.750	0.00	0.16	0.038	O	|	|	|	0.70
25.833	0.00	0.16	0.037	O	|	|	|	0.68
25.917	0.00	0.15	0.036	O	|	|	|	0.66
26.000	0.00	0.15	0.035	O	|	|	|	0.64
26.083	0.00	0.15	0.034	O	|	|	|	0.63
26.167	0.00	0.14	0.033	O	|	|	|	0.61
26.250	0.00	0.14	0.032	O	|	|	|	0.59
26.333	0.00	0.13	0.031	O	|	|	|	0.57
26.417	0.00	0.13	0.030	O	|	|	|	0.56
26.500	0.00	0.13	0.030	O	|	|	|	0.54
26.583	0.00	0.12	0.029	O	|	|	|	0.52
26.667	0.00	0.12	0.028	O	|	|	|	0.51
26.750	0.00	0.12	0.027	O	|	|	|	0.49
26.833	0.00	0.11	0.026	O	|	|	|	0.48
26.917	0.00	0.11	0.025	O	|	|	|	0.47
27.000	0.00	0.11	0.025	O	|	|	|	0.45
27.083	0.00	0.10	0.024	O	|	|	|	0.44
27.167	0.00	0.10	0.023	O	|	|	|	0.43
27.250	0.00	0.10	0.023	O	|	|	|	0.41
27.333	0.00	0.09	0.022	O	|	|	|	0.40
27.417	0.00	0.09	0.021	O	|	|	|	0.39
27.500	0.00	0.09	0.021	O	|	|	|	0.38
27.583	0.00	0.09	0.020	O	|	|	|	0.37
27.667	0.00	0.08	0.020	O	|	|	|	0.36
27.750	0.00	0.08	0.019	O	|	|	|	0.35
27.833	0.00	0.08	0.018	O	|	|	|	0.34
27.917	0.00	0.08	0.018	O	|	|	|	0.33
28.000	0.00	0.07	0.017	O	|	|	|	0.32
28.083	0.00	0.07	0.017	O	|	|	|	0.31
28.167	0.00	0.07	0.016	O	|	|	|	0.30
28.250	0.00	0.07	0.016	O	|	|	|	0.29
28.333	0.00	0.07	0.015	O	|	|	|	0.28
28.417	0.00	0.06	0.015	O	|	|	|	0.27
28.500	0.00	0.06	0.015	O	|	|	|	0.27
28.583	0.00	0.06	0.014	O	|	|	|	0.26
28.667	0.00	0.06	0.014	O	|	|	|	0.25
28.750	0.00	0.06	0.013	O	|	|	|	0.24
28.833	0.00	0.06	0.013	O	|	|	|	0.24

28.917	0.00	0.05	0.013	O					0.23
29.000	0.00	0.05	0.012	O					0.22
29.083	0.00	0.05	0.012	O					0.22
29.167	0.00	0.05	0.012	O					0.21
29.250	0.00	0.05	0.011	O					0.20
29.333	0.00	0.05	0.011	O					0.20
29.417	0.00	0.05	0.011	O					0.19
29.500	0.00	0.04	0.010	O					0.19
29.583	0.00	0.04	0.010	O					0.18
29.667	0.00	0.04	0.010	O					0.18
29.750	0.00	0.04	0.009	O					0.17
29.833	0.00	0.04	0.009	O					0.17
29.917	0.00	0.04	0.009	O					0.16
30.000	0.00	0.04	0.009	O					0.16
30.083	0.00	0.04	0.008	O					0.15
30.167	0.00	0.03	0.008	O					0.15
30.250	0.00	0.03	0.008	O					0.14
30.333	0.00	0.03	0.008	O					0.14
30.417	0.00	0.03	0.007	O					0.14
30.500	0.00	0.03	0.007	O					0.13
30.583	0.00	0.03	0.007	O					0.13
30.667	0.00	0.03	0.007	O					0.12
30.750	0.00	0.03	0.007	O					0.12
30.833	0.00	0.03	0.006	O					0.12
30.917	0.00	0.03	0.006	O					0.11
31.000	0.00	0.03	0.006	O					0.11
31.083	0.00	0.03	0.006	O					0.11
31.167	0.00	0.02	0.006	O					0.10
31.250	0.00	0.02	0.006	O					0.10
31.333	0.00	0.02	0.005	O					0.10
31.417	0.00	0.02	0.005	O					0.10
31.500	0.00	0.02	0.005	O					0.09
31.583	0.00	0.02	0.005	O					0.09
31.667	0.00	0.02	0.005	O					0.09
31.750	0.00	0.02	0.005	O					0.08
31.833	0.00	0.02	0.005	O					0.08
31.917	0.00	0.02	0.004	O					0.08
32.000	0.00	0.02	0.004	O					0.08
32.083	0.00	0.02	0.004	O					0.08
32.167	0.00	0.02	0.004	O					0.07
32.250	0.00	0.02	0.004	O					0.07
32.333	0.00	0.02	0.004	O					0.07
32.417	0.00	0.02	0.004	O					0.07
32.500	0.00	0.02	0.004	O					0.07
32.583	0.00	0.01	0.003	O					0.06
32.667	0.00	0.01	0.003	O					0.06
32.750	0.00	0.01	0.003	O					0.06
32.833	0.00	0.01	0.003	O					0.06
32.917	0.00	0.01	0.003	O					0.06
33.000	0.00	0.01	0.003	O					0.05
33.083	0.00	0.01	0.003	O					0.05
33.167	0.00	0.01	0.003	O					0.05
33.250	0.00	0.01	0.003	O					0.05
33.333	0.00	0.01	0.003	O					0.05
33.417	0.00	0.01	0.003	O					0.05
33.500	0.00	0.01	0.002	O					0.05
33.583	0.00	0.01	0.002	O					0.04
33.667	0.00	0.01	0.002	O					0.04
33.750	0.00	0.01	0.002	O					0.04
33.833	0.00	0.01	0.002	O					0.04

33.917	0.00	0.01	0.002	O				0.04
34.000	0.00	0.01	0.002	O				0.04
34.083	0.00	0.01	0.002	O				0.04
34.167	0.00	0.01	0.002	O				0.04
34.250	0.00	0.01	0.002	O				0.04
34.333	0.00	0.01	0.002	O				0.03
34.417	0.00	0.01	0.002	O				0.03
34.500	0.00	0.01	0.002	O				0.03
34.583	0.00	0.01	0.002	O				0.03
34.667	0.00	0.01	0.002	O				0.03
34.750	0.00	0.01	0.002	O				0.03
34.833	0.00	0.01	0.002	O				0.03
34.917	0.00	0.01	0.002	O				0.03
35.000	0.00	0.01	0.001	O				0.03
35.083	0.00	0.01	0.001	O				0.03
35.167	0.00	0.01	0.001	O				0.03
35.250	0.00	0.01	0.001	O				0.02
35.333	0.00	0.01	0.001	O				0.02
35.417	0.00	0.01	0.001	O				0.02
35.500	0.00	0.01	0.001	O				0.02
35.583	0.00	0.01	0.001	O				0.02
35.667	0.00	0.00	0.001	O				0.02
35.750	0.00	0.00	0.001	O				0.02
35.833	0.00	0.00	0.001	O				0.02
35.917	0.00	0.00	0.001	O				0.02
36.000	0.00	0.00	0.001	O				0.02
36.083	0.00	0.00	0.001	O				0.02
36.167	0.00	0.00	0.001	O				0.02
36.250	0.00	0.00	0.001	O				0.02
36.333	0.00	0.00	0.001	O				0.02
36.417	0.00	0.00	0.001	O				0.02
36.500	0.00	0.00	0.001	O				0.02
36.583	0.00	0.00	0.001	O				0.02
36.667	0.00	0.00	0.001	O				0.01
36.750	0.00	0.00	0.001	O				0.01
36.833	0.00	0.00	0.001	O				0.01
36.917	0.00	0.00	0.001	O				0.01
37.000	0.00	0.00	0.001	O				0.01
37.083	0.00	0.00	0.001	O				0.01
37.167	0.00	0.00	0.001	O				0.01
37.250	0.00	0.00	0.001	O				0.01
37.333	0.00	0.00	0.001	O				0.01
37.417	0.00	0.00	0.001	O				0.01
37.500	0.00	0.00	0.001	O				0.01
37.583	0.00	0.00	0.001	O				0.01
37.667	0.00	0.00	0.001	O				0.01
37.750	0.00	0.00	0.001	O				0.01
37.833	0.00	0.00	0.001	O				0.01
37.917	0.00	0.00	0.001	O				0.01
38.000	0.00	0.00	0.001	O				0.01
38.083	0.00	0.00	0.000	O				0.01
38.167	0.00	0.00	0.000	O				0.01
38.250	0.00	0.00	0.000	O				0.01
38.333	0.00	0.00	0.000	O				0.01
38.417	0.00	0.00	0.000	O				0.01
38.500	0.00	0.00	0.000	O				0.01
38.583	0.00	0.00	0.000	O				0.01
38.667	0.00	0.00	0.000	O				0.01
38.750	0.00	0.00	0.000	O				0.01
38.833	0.00	0.00	0.000	O				0.01

38.917	0.00	0.00	0.000	O	|	|	|	0.01
39.000	0.00	0.00	0.000	O	|	|	|	0.01
39.083	0.00	0.00	0.000	O	|	|	|	0.01
39.167	0.00	0.00	0.000	O	|	|	|	0.01
39.250	0.00	0.00	0.000	O	|	|	|	0.01
39.333	0.00	0.00	0.000	O	|	|	|	0.01
39.417	0.00	0.00	0.000	O	|	|	|	0.01
39.500	0.00	0.00	0.000	O	|	|	|	0.01
39.583	0.00	0.00	0.000	O	|	|	|	0.01
39.667	0.00	0.00	0.000	O	|	|	|	0.01
39.750	0.00	0.00	0.000	O	|	|	|	0.01
39.833	0.00	0.00	0.000	O	|	|	|	0.00
39.917	0.00	0.00	0.000	O	|	|	|	0.00
40.000	0.00	0.00	0.000	O	|	|	|	0.00
40.083	0.00	0.00	0.000	O	|	|	|	0.00
40.167	0.00	0.00	0.000	O	|	|	|	0.00
40.250	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 483
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.061 (CFS)
Total volume = 0.802 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
5-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 9.786 (CFS)
Total volume = 1.090 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.4 4.89 7.34 9.79	Depth (Ft.)
0.083	0.40	0.01	0.001	OI | | | |	0.02
0.167	0.77	0.02	0.005	O I | | | |	0.10
0.250	0.89	0.05	0.011	O I | | | |	0.20
0.333	0.90	0.07	0.017	O I | | | |	0.30
0.417	0.90	0.09	0.022	O I | | | |	0.40
0.500	0.98	0.12	0.028	O I | | | |	0.51
0.583	1.04	0.14	0.034	O I | | | |	0.62
0.667	1.05	0.17	0.040	O I | | | |	0.73
0.750	1.05	0.20	0.046	O I | | | |	0.84
0.833	1.05	0.22	0.052	O I | | | |	0.95
0.917	1.05	0.25	0.057	O I | | | |	1.05
1.000	1.13	0.27	0.063	O I | | | |	1.16
1.083	1.19	0.30	0.069	O I | | | |	1.27
1.167	1.20	0.32	0.075	|O I | | | |	1.38
1.250	1.20	0.35	0.081	|O I | | | |	1.49
1.333	1.20	0.35	0.087	|O I | | | |	1.56
1.417	1.20	0.35	0.093	|O I | | | |	1.64
1.500	1.20	0.35	0.099	|O I | | | |	1.71
1.583	1.20	0.35	0.105	|O I | | | |	1.78
1.667	1.20	0.35	0.111	|O I | | | |	1.85
1.750	1.20	0.35	0.116	|O I | | | |	1.92
1.833	1.20	0.35	0.122	|O I | | | |	2.00
1.917	1.20	0.35	0.128	|O I | | | |	2.07
2.000	1.28	0.35	0.134	|O I | | | |	2.14
2.083	1.26	0.35	0.141	|O I | | | |	2.22
2.167	1.29	0.35	0.147	|O I | | | |	2.30
2.250	1.34	0.35	0.154	|O I | | | |	2.38
2.333	1.35	0.35	0.160	|O I | | | |	2.47
2.417	1.35	0.35	0.167	|O I | | | |	2.55
2.500	1.35	0.35	0.174	|O I | | | |	2.64
2.583	1.35	0.35	0.181	|O I | | | |	2.72
2.667	1.35	0.35	0.188	|O I | | | |	2.81
2.750	1.43	0.35	0.195	|O I | | | |	2.90
2.833	1.49	0.35	0.203	|O I | | | |	2.99
2.917	1.50	0.35	0.211	|O I | | | |	3.09
3.000	1.50	0.35	0.219	|O I | | | |	3.18
3.083	1.50	0.35	0.227	|O I | | | |	3.28
3.167	1.58	0.35	0.235	|O I | | | |	3.38
3.250	1.64	0.35	0.243	|O I | | | |	3.49
3.333	1.65	0.35	0.252	|O I | | | |	3.60
3.417	1.73	0.35	0.262	|O I | | | |	3.71
3.500	1.87	0.35	0.271	|O I | | | |	3.84
3.583	2.02	0.35	0.282	|O I | | | |	3.97
3.667	2.09	0.35	0.294	|O I | | | |	4.12
3.750	2.18	0.35	0.306	|O I| | | |	4.27
3.833	2.24	0.35	0.319	|O I| | | |	4.43

3.917	2.33	0.35	0.333	O I				4.59
4.000	2.39	0.35	0.346	O I				4.76
4.083	2.48	0.35	0.361	O I				4.94
4.167	2.62	0.35	0.376	O I				5.13
4.250	2.77	0.35	0.392	O I				5.32
4.333	2.92	0.35	0.409	O I				5.54
4.417	3.07	0.35	0.427	O I				5.76
4.500	3.14	0.35	0.446	O I				5.99
4.583	3.23	0.35	0.466	O I				6.24
4.667	3.37	0.35	0.486	O I				6.49
4.750	3.52	0.35	0.508	O I				6.75
4.833	3.59	0.35	0.530	O I				7.02
4.917	3.70	0.35	0.552	O I				7.30
5.000	3.90	0.35	0.576	O I				7.59
5.083	4.60	0.35	0.603	O I				7.92
5.167	5.67	0.42	0.636	O I				8.51
5.250	6.56	0.64	0.674	O I				9.19
5.333	7.28	1.16	0.716	O I				9.78
5.417	8.20	2.40	0.757	O I				10.28
5.500	9.79	4.04	0.796	O I				10.72
5.583	6.44	5.05	0.821	O I				10.99
5.667	2.69	4.93	0.818	I O				10.96
5.750	1.23	4.19	0.800	I O				10.76
5.833	0.86	3.41	0.781	I O				10.55
5.917	0.60	2.74	0.765	I O				10.37
6.000	0.39	2.19	0.751	I O				10.22
6.083	0.15	1.71	0.740	I O				10.10
6.167	0.02	1.34	0.730	I O				9.98
6.250	0.00	1.23	0.721	I O				9.86
6.333	0.00	1.13	0.713	I O				9.74
6.417	0.00	1.03	0.706	I O				9.64
6.500	0.00	0.95	0.699	I O				9.54
6.583	0.00	0.87	0.692	I O				9.45
6.667	0.00	0.80	0.687	I O				9.37
6.750	0.00	0.73	0.681	I O				9.29
6.833	0.00	0.67	0.677	I O				9.22
6.917	0.00	0.62	0.672	I O				9.16
7.000	0.00	0.57	0.668	IO				9.10
7.083	0.00	0.52	0.664	IO				9.05
7.167	0.00	0.48	0.661	IO				9.00
7.250	0.00	0.47	0.658	IO				8.93
7.333	0.00	0.46	0.654	IO				8.87
7.417	0.00	0.46	0.651	IO				8.81
7.500	0.00	0.45	0.648	IO				8.75
7.583	0.00	0.44	0.645	IO				8.69
7.667	0.00	0.43	0.642	IO				8.64
7.750	0.00	0.43	0.639	IO				8.58
7.833	0.00	0.42	0.636	IO				8.52
7.917	0.00	0.41	0.633	IO				8.47
8.000	0.00	0.40	0.631	IO				8.41
8.083	0.00	0.40	0.628	IO				8.36
8.167	0.00	0.39	0.625	IO				8.31
8.250	0.00	0.38	0.622	IO				8.26
8.333	0.00	0.38	0.620	IO				8.21
8.417	0.00	0.37	0.617	IO				8.16
8.500	0.00	0.36	0.615	IO				8.11
8.583	0.00	0.36	0.612	IO				8.06
8.667	0.00	0.35	0.610	IO				8.01
8.750	0.00	0.35	0.607	IO				7.98
8.833	0.00	0.35	0.605	IO				7.95

8.917	0.00	0.35	0.602	IO				7.92
9.000	0.00	0.35	0.600	IO				7.89
9.083	0.00	0.35	0.598	IO				7.86
9.167	0.00	0.35	0.595	IO				7.83
9.250	0.00	0.35	0.593	IO				7.80
9.333	0.00	0.35	0.590	IO				7.77
9.417	0.00	0.35	0.588	IO				7.74
9.500	0.00	0.35	0.586	IO				7.71
9.583	0.00	0.35	0.583	IO				7.68
9.667	0.00	0.35	0.581	IO				7.65
9.750	0.00	0.35	0.578	IO				7.62
9.833	0.00	0.35	0.576	IO				7.59
9.917	0.00	0.35	0.574	IO				7.56
10.000	0.00	0.35	0.571	IO				7.53
10.083	0.00	0.35	0.569	IO				7.50
10.167	0.00	0.35	0.566	IO				7.47
10.250	0.00	0.35	0.564	IO				7.44
10.333	0.00	0.35	0.562	IO				7.41
10.417	0.00	0.35	0.559	IO				7.38
10.500	0.00	0.35	0.557	IO				7.35
10.583	0.00	0.35	0.554	IO				7.33
10.667	0.00	0.35	0.552	IO				7.30
10.750	0.00	0.35	0.549	IO				7.27
10.833	0.00	0.35	0.547	IO				7.24
10.917	0.00	0.35	0.545	IO				7.21
11.000	0.00	0.35	0.542	IO				7.18
11.083	0.00	0.35	0.540	IO				7.15
11.167	0.00	0.35	0.537	IO				7.12
11.250	0.00	0.35	0.535	IO				7.09
11.333	0.00	0.35	0.533	IO				7.06
11.417	0.00	0.35	0.530	IO				7.03
11.500	0.00	0.35	0.528	IO				7.00
11.583	0.00	0.35	0.525	IO				6.97
11.667	0.00	0.35	0.523	IO				6.94
11.750	0.00	0.35	0.521	IO				6.91
11.833	0.00	0.35	0.518	IO				6.88
11.917	0.00	0.35	0.516	IO				6.85
12.000	0.00	0.35	0.513	IO				6.82
12.083	0.00	0.35	0.511	IO				6.79
12.167	0.00	0.35	0.508	IO				6.76
12.250	0.00	0.35	0.506	IO				6.73
12.333	0.00	0.35	0.504	IO				6.70
12.417	0.00	0.35	0.501	IO				6.67
12.500	0.00	0.35	0.499	IO				6.64
12.583	0.00	0.35	0.496	IO				6.61
12.667	0.00	0.35	0.494	IO				6.58
12.750	0.00	0.35	0.492	IO				6.55
12.833	0.00	0.35	0.489	IO				6.52
12.917	0.00	0.35	0.487	IO				6.49
13.000	0.00	0.35	0.484	IO				6.46
13.083	0.00	0.35	0.482	IO				6.43
13.167	0.00	0.35	0.480	IO				6.40
13.250	0.00	0.35	0.477	IO				6.37
13.333	0.00	0.35	0.475	IO				6.34
13.417	0.00	0.35	0.472	IO				6.31
13.500	0.00	0.35	0.470	IO				6.28
13.583	0.00	0.35	0.468	IO				6.25
13.667	0.00	0.35	0.465	IO				6.23
13.750	0.00	0.35	0.463	IO				6.20
13.833	0.00	0.35	0.460	IO				6.17

13.917	0.00	0.35	0.458	IO				6.14
14.000	0.00	0.35	0.455	IO				6.11
14.083	0.00	0.35	0.453	IO				6.08
14.167	0.00	0.35	0.451	IO				6.05
14.250	0.00	0.35	0.448	IO				6.02
14.333	0.00	0.35	0.446	IO				5.99
14.417	0.00	0.35	0.443	IO				5.96
14.500	0.00	0.35	0.441	IO				5.93
14.583	0.00	0.35	0.439	IO				5.90
14.667	0.00	0.35	0.436	IO				5.87
14.750	0.00	0.35	0.434	IO				5.84
14.833	0.00	0.35	0.431	IO				5.81
14.917	0.00	0.35	0.429	IO				5.78
15.000	0.00	0.35	0.427	IO				5.75
15.083	0.00	0.35	0.424	IO				5.72
15.167	0.00	0.35	0.422	IO				5.69
15.250	0.00	0.35	0.419	IO				5.66
15.333	0.00	0.35	0.417	IO				5.63
15.417	0.00	0.35	0.414	IO				5.60
15.500	0.00	0.35	0.412	IO				5.57
15.583	0.00	0.35	0.410	IO				5.54
15.667	0.00	0.35	0.407	IO				5.51
15.750	0.00	0.35	0.405	IO				5.48
15.833	0.00	0.35	0.402	IO				5.45
15.917	0.00	0.35	0.400	IO				5.42
16.000	0.00	0.35	0.398	IO				5.39
16.083	0.00	0.35	0.395	IO				5.36
16.167	0.00	0.35	0.393	IO				5.33
16.250	0.00	0.35	0.390	IO				5.30
16.333	0.00	0.35	0.388	IO				5.27
16.417	0.00	0.35	0.386	IO				5.24
16.500	0.00	0.35	0.383	IO				5.21
16.583	0.00	0.35	0.381	IO				5.18
16.667	0.00	0.35	0.378	IO				5.15
16.750	0.00	0.35	0.376	IO				5.13
16.833	0.00	0.35	0.374	IO				5.10
16.917	0.00	0.35	0.371	IO				5.07
17.000	0.00	0.35	0.369	IO				5.04
17.083	0.00	0.35	0.366	IO				5.01
17.167	0.00	0.35	0.364	IO				4.98
17.250	0.00	0.35	0.361	IO				4.95
17.333	0.00	0.35	0.359	IO				4.92
17.417	0.00	0.35	0.357	IO				4.89
17.500	0.00	0.35	0.354	IO				4.86
17.583	0.00	0.35	0.352	IO				4.83
17.667	0.00	0.35	0.349	IO				4.80
17.750	0.00	0.35	0.347	IO				4.77
17.833	0.00	0.35	0.345	IO				4.74
17.917	0.00	0.35	0.342	IO				4.71
18.000	0.00	0.35	0.340	IO				4.68
18.083	0.00	0.35	0.337	IO				4.65
18.167	0.00	0.35	0.335	IO				4.62
18.250	0.00	0.35	0.333	IO				4.59
18.333	0.00	0.35	0.330	IO				4.56
18.417	0.00	0.35	0.328	IO				4.53
18.500	0.00	0.35	0.325	IO				4.50
18.583	0.00	0.35	0.323	IO				4.47
18.667	0.00	0.35	0.320	IO				4.44
18.750	0.00	0.35	0.318	IO				4.41
18.833	0.00	0.35	0.316	IO				4.38

18.917	0.00	0.35	0.313	IO				4.35
19.000	0.00	0.35	0.311	IO				4.32
19.083	0.00	0.35	0.308	IO				4.29
19.167	0.00	0.35	0.306	IO				4.26
19.250	0.00	0.35	0.304	IO				4.23
19.333	0.00	0.35	0.301	IO				4.20
19.417	0.00	0.35	0.299	IO				4.17
19.500	0.00	0.35	0.296	IO				4.14
19.583	0.00	0.35	0.294	IO				4.11
19.667	0.00	0.35	0.292	IO				4.08
19.750	0.00	0.35	0.289	IO				4.05
19.833	0.00	0.35	0.287	IO				4.03
19.917	0.00	0.35	0.284	IO				4.00
20.000	0.00	0.35	0.282	IO				3.97
20.083	0.00	0.35	0.279	IO				3.94
20.167	0.00	0.35	0.277	IO				3.91
20.250	0.00	0.35	0.275	IO				3.88
20.333	0.00	0.35	0.272	IO				3.85
20.417	0.00	0.35	0.270	IO				3.82
20.500	0.00	0.35	0.267	IO				3.79
20.583	0.00	0.35	0.265	IO				3.76
20.667	0.00	0.35	0.263	IO				3.73
20.750	0.00	0.35	0.260	IO				3.70
20.833	0.00	0.35	0.258	IO				3.67
20.917	0.00	0.35	0.255	IO				3.64
21.000	0.00	0.35	0.253	IO				3.61
21.083	0.00	0.35	0.251	IO				3.58
21.167	0.00	0.35	0.248	IO				3.55
21.250	0.00	0.35	0.246	IO				3.52
21.333	0.00	0.35	0.243	IO				3.49
21.417	0.00	0.35	0.241	IO				3.46
21.500	0.00	0.35	0.239	IO				3.43
21.583	0.00	0.35	0.236	IO				3.40
21.667	0.00	0.35	0.234	IO				3.37
21.750	0.00	0.35	0.231	IO				3.34
21.833	0.00	0.35	0.229	IO				3.31
21.917	0.00	0.35	0.226	IO				3.28
22.000	0.00	0.35	0.224	IO				3.25
22.083	0.00	0.35	0.222	IO				3.22
22.167	0.00	0.35	0.219	IO				3.19
22.250	0.00	0.35	0.217	IO				3.16
22.333	0.00	0.35	0.214	IO				3.13
22.417	0.00	0.35	0.212	IO				3.10
22.500	0.00	0.35	0.210	IO				3.07
22.583	0.00	0.35	0.207	IO				3.04
22.667	0.00	0.35	0.205	IO				3.01
22.750	0.00	0.35	0.202	IO				2.98
22.833	0.00	0.35	0.200	IO				2.95
22.917	0.00	0.35	0.198	IO				2.93
23.000	0.00	0.35	0.195	IO				2.90
23.083	0.00	0.35	0.193	IO				2.87
23.167	0.00	0.35	0.190	IO				2.84
23.250	0.00	0.35	0.188	IO				2.81
23.333	0.00	0.35	0.185	IO				2.78
23.417	0.00	0.35	0.183	IO				2.75
23.500	0.00	0.35	0.181	IO				2.72
23.583	0.00	0.35	0.178	IO				2.69
23.667	0.00	0.35	0.176	IO				2.66
23.750	0.00	0.35	0.173	IO				2.63
23.833	0.00	0.35	0.171	IO				2.60

23.917	0.00	0.35	0.169	IO				2.57
24.000	0.00	0.35	0.166	IO				2.54
24.083	0.00	0.35	0.164	IO				2.51
24.167	0.00	0.35	0.161	IO				2.48
24.250	0.00	0.35	0.159	IO				2.45
24.333	0.00	0.35	0.157	IO				2.42
24.417	0.00	0.35	0.154	IO				2.39
24.500	0.00	0.35	0.152	IO				2.36
24.583	0.00	0.35	0.149	IO				2.33
24.667	0.00	0.35	0.147	IO				2.30
24.750	0.00	0.35	0.145	IO				2.27
24.833	0.00	0.35	0.142	IO				2.24
24.917	0.00	0.35	0.140	IO				2.21
25.000	0.00	0.35	0.137	IO				2.18
25.083	0.00	0.35	0.135	IO				2.15
25.167	0.00	0.35	0.132	IO				2.12
25.250	0.00	0.35	0.130	IO				2.09
25.333	0.00	0.35	0.128	IO				2.06
25.417	0.00	0.35	0.125	IO				2.03
25.500	0.00	0.35	0.123	IO				2.00
25.583	0.00	0.35	0.120	IO				1.97
25.667	0.00	0.35	0.118	IO				1.94
25.750	0.00	0.35	0.116	IO				1.91
25.833	0.00	0.35	0.113	IO				1.88
25.917	0.00	0.35	0.111	IO				1.85
26.000	0.00	0.35	0.108	IO				1.83
26.083	0.00	0.35	0.106	IO				1.80
26.167	0.00	0.35	0.104	IO				1.77
26.250	0.00	0.35	0.101	IO				1.74
26.333	0.00	0.35	0.099	IO				1.71
26.417	0.00	0.35	0.096	IO				1.68
26.500	0.00	0.35	0.094	IO				1.65
26.583	0.00	0.35	0.091	IO				1.62
26.667	0.00	0.35	0.089	IO				1.59
26.750	0.00	0.35	0.087	IO				1.56
26.833	0.00	0.35	0.084	IO				1.53
26.917	0.00	0.35	0.082	IO				1.50
27.000	0.00	0.34	0.079	IO				1.45
27.083	0.00	0.33	0.077	IO				1.41
27.167	0.00	0.32	0.075	IO				1.37
27.250	0.00	0.31	0.073	IO				1.33
27.333	0.00	0.30	0.071	O				1.29
27.417	0.00	0.29	0.069	O				1.25
27.500	0.00	0.28	0.067	O				1.22
27.583	0.00	0.28	0.065	O				1.18
27.667	0.00	0.27	0.063	O				1.15
27.750	0.00	0.26	0.061	O				1.12
27.833	0.00	0.25	0.059	O				1.08
27.917	0.00	0.25	0.058	O				1.05
28.000	0.00	0.24	0.056	O				1.02
28.083	0.00	0.23	0.054	O				0.99
28.167	0.00	0.22	0.053	O				0.96
28.250	0.00	0.22	0.051	O				0.94
28.333	0.00	0.21	0.050	O				0.91
28.417	0.00	0.21	0.048	O				0.88
28.500	0.00	0.20	0.047	O				0.86
28.583	0.00	0.19	0.045	O				0.83
28.667	0.00	0.19	0.044	O				0.81
28.750	0.00	0.18	0.043	O				0.78
28.833	0.00	0.18	0.042	O				0.76

28.917	0.00	0.17	0.040	O					0.74
29.000	0.00	0.17	0.039	O					0.72
29.083	0.00	0.16	0.038	O					0.70
29.167	0.00	0.16	0.037	O					0.68
29.250	0.00	0.15	0.036	O					0.66
29.333	0.00	0.15	0.035	O					0.64
29.417	0.00	0.14	0.034	O					0.62
29.500	0.00	0.14	0.033	O					0.60
29.583	0.00	0.14	0.032	O					0.58
29.667	0.00	0.13	0.031	O					0.57
29.750	0.00	0.13	0.030	O					0.55
29.833	0.00	0.12	0.029	O					0.54
29.917	0.00	0.12	0.028	O					0.52
30.000	0.00	0.12	0.028	O					0.50
30.083	0.00	0.11	0.027	O					0.49
30.167	0.00	0.11	0.026	O					0.48
30.250	0.00	0.11	0.025	O					0.46
30.333	0.00	0.10	0.025	O					0.45
30.417	0.00	0.10	0.024	O					0.44
30.500	0.00	0.10	0.023	O					0.42
30.583	0.00	0.10	0.022	O					0.41
30.667	0.00	0.09	0.022	O					0.40
30.750	0.00	0.09	0.021	O					0.39
30.833	0.00	0.09	0.021	O					0.38
30.917	0.00	0.09	0.020	O					0.37
31.000	0.00	0.08	0.019	O					0.35
31.083	0.00	0.08	0.019	O					0.34
31.167	0.00	0.08	0.018	O					0.33
31.250	0.00	0.08	0.018	O					0.32
31.333	0.00	0.07	0.017	O					0.32
31.417	0.00	0.07	0.017	O					0.31
31.500	0.00	0.07	0.016	O					0.30
31.583	0.00	0.07	0.016	O					0.29
31.667	0.00	0.07	0.015	O					0.28
31.750	0.00	0.06	0.015	O					0.27
31.833	0.00	0.06	0.014	O					0.26
31.917	0.00	0.06	0.014	O					0.26
32.000	0.00	0.06	0.014	O					0.25
32.083	0.00	0.06	0.013	O					0.24
32.167	0.00	0.05	0.013	O					0.23
32.250	0.00	0.05	0.012	O					0.23
32.333	0.00	0.05	0.012	O					0.22
32.417	0.00	0.05	0.012	O					0.22
32.500	0.00	0.05	0.011	O					0.21
32.583	0.00	0.05	0.011	O					0.20
32.667	0.00	0.05	0.011	O					0.20
32.750	0.00	0.04	0.010	O					0.19
32.833	0.00	0.04	0.010	O					0.19
32.917	0.00	0.04	0.010	O					0.18
33.000	0.00	0.04	0.010	O					0.18
33.083	0.00	0.04	0.009	O					0.17
33.167	0.00	0.04	0.009	O					0.17
33.250	0.00	0.04	0.009	O					0.16
33.333	0.00	0.04	0.009	O					0.16
33.417	0.00	0.04	0.008	O					0.15
33.500	0.00	0.03	0.008	O					0.15
33.583	0.00	0.03	0.008	O					0.14
33.667	0.00	0.03	0.008	O					0.14
33.750	0.00	0.03	0.007	O					0.13
33.833	0.00	0.03	0.007	O					0.13

33.917	0.00	0.03	0.007	O				0.13
34.000	0.00	0.03	0.007	O				0.12
34.083	0.00	0.03	0.007	O				0.12
34.167	0.00	0.03	0.006	O				0.12
34.250	0.00	0.03	0.006	O				0.11
34.333	0.00	0.03	0.006	O				0.11
34.417	0.00	0.02	0.006	O				0.11
34.500	0.00	0.02	0.006	O				0.10
34.583	0.00	0.02	0.005	O				0.10
34.667	0.00	0.02	0.005	O				0.10
34.750	0.00	0.02	0.005	O				0.09
34.833	0.00	0.02	0.005	O				0.09
34.917	0.00	0.02	0.005	O				0.09
35.000	0.00	0.02	0.005	O				0.09
35.083	0.00	0.02	0.005	O				0.08
35.167	0.00	0.02	0.004	O				0.08
35.250	0.00	0.02	0.004	O				0.08
35.333	0.00	0.02	0.004	O				0.08
35.417	0.00	0.02	0.004	O				0.07
35.500	0.00	0.02	0.004	O				0.07
35.583	0.00	0.02	0.004	O				0.07
35.667	0.00	0.02	0.004	O				0.07
35.750	0.00	0.02	0.004	O				0.07
35.833	0.00	0.02	0.004	O				0.06
35.917	0.00	0.01	0.003	O				0.06
36.000	0.00	0.01	0.003	O				0.06
36.083	0.00	0.01	0.003	O				0.06
36.167	0.00	0.01	0.003	O				0.06
36.250	0.00	0.01	0.003	O				0.06
36.333	0.00	0.01	0.003	O				0.05
36.417	0.00	0.01	0.003	O				0.05
36.500	0.00	0.01	0.003	O				0.05
36.583	0.00	0.01	0.003	O				0.05
36.667	0.00	0.01	0.003	O				0.05
36.750	0.00	0.01	0.003	O				0.05
36.833	0.00	0.01	0.002	O				0.05
36.917	0.00	0.01	0.002	O				0.04
37.000	0.00	0.01	0.002	O				0.04
37.083	0.00	0.01	0.002	O				0.04
37.167	0.00	0.01	0.002	O				0.04
37.250	0.00	0.01	0.002	O				0.04
37.333	0.00	0.01	0.002	O				0.04
37.417	0.00	0.01	0.002	O				0.04
37.500	0.00	0.01	0.002	O				0.04
37.583	0.00	0.01	0.002	O				0.03
37.667	0.00	0.01	0.002	O				0.03
37.750	0.00	0.01	0.002	O				0.03
37.833	0.00	0.01	0.002	O				0.03
37.917	0.00	0.01	0.002	O				0.03
38.000	0.00	0.01	0.002	O				0.03
38.083	0.00	0.01	0.002	O				0.03
38.167	0.00	0.01	0.002	O				0.03
38.250	0.00	0.01	0.002	O				0.03
38.333	0.00	0.01	0.001	O				0.03
38.417	0.00	0.01	0.001	O				0.03
38.500	0.00	0.01	0.001	O				0.03
38.583	0.00	0.01	0.001	O				0.02
38.667	0.00	0.01	0.001	O				0.02
38.750	0.00	0.01	0.001	O				0.02
38.833	0.00	0.01	0.001	O				0.02

38.917	0.00	0.01	0.001	O	|	|	|	|	0.02
39.000	0.00	0.00	0.001	O	|	|	|	|	0.02
39.083	0.00	0.00	0.001	O	|	|	|	|	0.02
39.167	0.00	0.00	0.001	O	|	|	|	|	0.02
39.250	0.00	0.00	0.001	O	|	|	|	|	0.02
39.333	0.00	0.00	0.001	O	|	|	|	|	0.02
39.417	0.00	0.00	0.001	O	|	|	|	|	0.02
39.500	0.00	0.00	0.001	O	|	|	|	|	0.02
39.583	0.00	0.00	0.001	O	|	|	|	|	0.02
39.667	0.00	0.00	0.001	O	|	|	|	|	0.02
39.750	0.00	0.00	0.001	O	|	|	|	|	0.02
39.833	0.00	0.00	0.001	O	|	|	|	|	0.02
39.917	0.00	0.00	0.001	O	|	|	|	|	0.02
40.000	0.00	0.00	0.001	O	|	|	|	|	0.01
40.083	0.00	0.00	0.001	O	|	|	|	|	0.01
40.167	0.00	0.00	0.001	O	|	|	|	|	0.01
40.250	0.00	0.00	0.001	O	|	|	|	|	0.01
40.333	0.00	0.00	0.001	O	|	|	|	|	0.01
40.417	0.00	0.00	0.001	O	|	|	|	|	0.01
40.500	0.00	0.00	0.001	O	|	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	|	0.01
40.667	0.00	0.00	0.001	O	|	|	|	|	0.01
40.750	0.00	0.00	0.001	O	|	|	|	|	0.01
40.833	0.00	0.00	0.001	O	|	|	|	|	0.01
40.917	0.00	0.00	0.001	O	|	|	|	|	0.01
41.000	0.00	0.00	0.001	O	|	|	|	|	0.01
41.083	0.00	0.00	0.001	O	|	|	|	|	0.01
41.167	0.00	0.00	0.001	O	|	|	|	|	0.01
41.250	0.00	0.00	0.001	O	|	|	|	|	0.01
41.333	0.00	0.00	0.001	O	|	|	|	|	0.01
41.417	0.00	0.00	0.000	O	|	|	|	|	0.01
41.500	0.00	0.00	0.000	O	|	|	|	|	0.01
41.583	0.00	0.00	0.000	O	|	|	|	|	0.01
41.667	0.00	0.00	0.000	O	|	|	|	|	0.01
41.750	0.00	0.00	0.000	O	|	|	|	|	0.01
41.833	0.00	0.00	0.000	O	|	|	|	|	0.01
41.917	0.00	0.00	0.000	O	|	|	|	|	0.01
42.000	0.00	0.00	0.000	O	|	|	|	|	0.01
42.083	0.00	0.00	0.000	O	|	|	|	|	0.01
42.167	0.00	0.00	0.000	O	|	|	|	|	0.01
42.250	0.00	0.00	0.000	O	|	|	|	|	0.01
42.333	0.00	0.00	0.000	O	|	|	|	|	0.01
42.417	0.00	0.00	0.000	O	|	|	|	|	0.01
42.500	0.00	0.00	0.000	O	|	|	|	|	0.01
42.583	0.00	0.00	0.000	O	|	|	|	|	0.01
42.667	0.00	0.00	0.000	O	|	|	|	|	0.01
42.750	0.00	0.00	0.000	O	|	|	|	|	0.01
42.833	0.00	0.00	0.000	O	|	|	|	|	0.01
42.917	0.00	0.00	0.000	O	|	|	|	|	0.01
43.000	0.00	0.00	0.000	O	|	|	|	|	0.01
43.083	0.00	0.00	0.000	O	|	|	|	|	0.00
43.167	0.00	0.00	0.000	O	|	|	|	|	0.00
43.250	0.00	0.00	0.000	O	|	|	|	|	0.00
43.333	0.00	0.00	0.000	O	|	|	|	|	0.00
43.417	0.00	0.00	0.000	O	|	|	|	|	0.00
43.500	0.00	0.00	0.000	O	|	|	|	|	0.00
43.583	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 523

```
            Time interval =    5.0 (Min.)
            Maximum/Peak flow rate =        5.054 (CFS)
            Total volume =       1.089 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
5-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.984 (CFS)
Total volume = 1.813 (Ac.Ft)

Status of hydrographs being held in storage

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

****

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Process from Point/Station 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

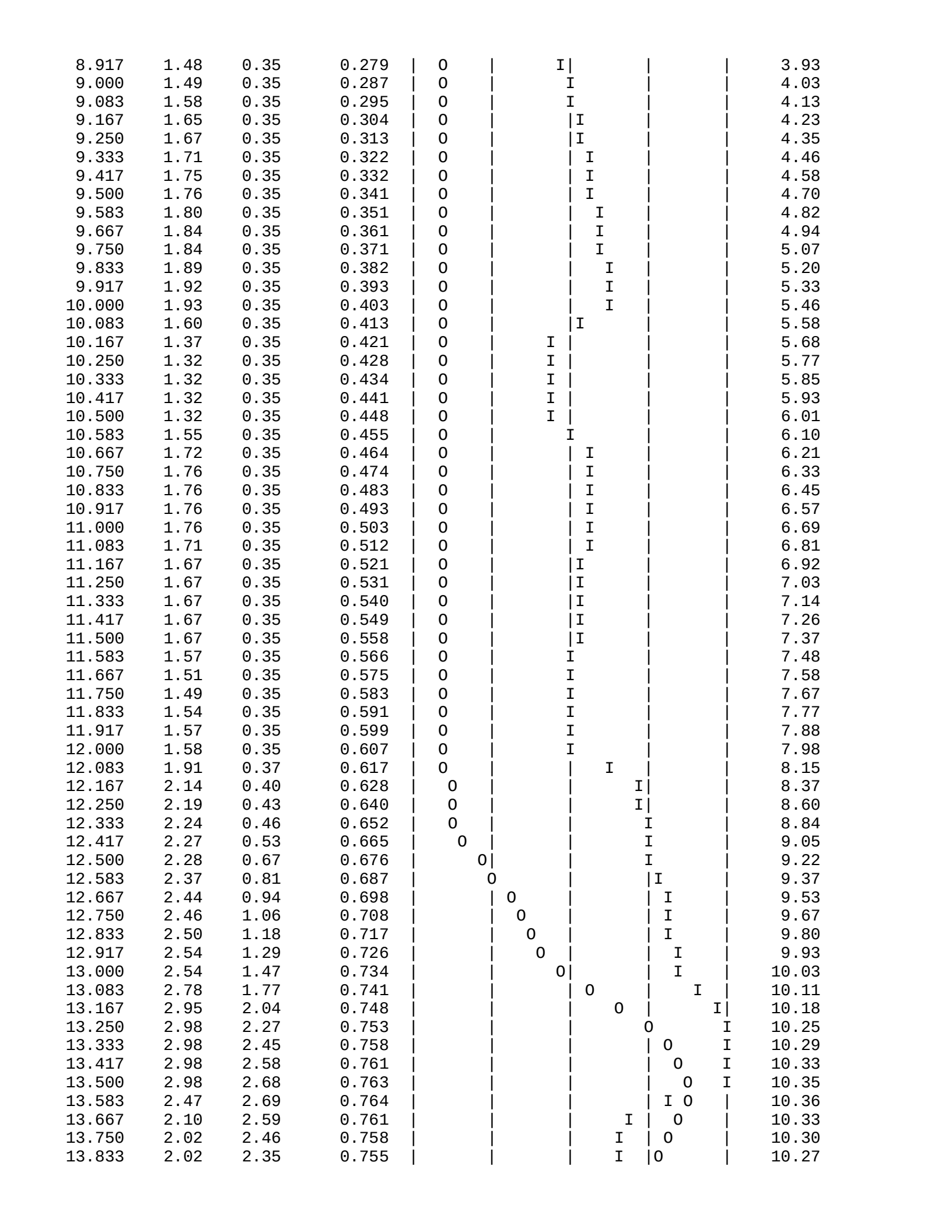
10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.7	1.49	2.24	2.98	Depth (Ft.)
0.083	0.09	0.00	0.000	O	|	|	|	|	0.01
0.167	0.16	0.00	0.001	OI	|	|	|	|	0.02
0.250	0.18	0.01	0.002	OI	|	|	|	|	0.04
0.333	0.22	0.02	0.004	O I	|	|	|	|	0.07
0.417	0.26	0.02	0.005	O I	|	|	|	|	0.09
0.500	0.26	0.03	0.007	O I	|	|	|	|	0.12
0.583	0.26	0.04	0.008	O I	|	|	|	|	0.15
0.667	0.26	0.04	0.010	O I	|	|	|	|	0.18
0.750	0.26	0.05	0.011	O I	|	|	|	|	0.21
0.833	0.31	0.06	0.013	O I	|	|	|	|	0.24
0.917	0.34	0.06	0.015	O I	|	|	|	|	0.27
1.000	0.35	0.07	0.017	O I	|	|	|	|	0.31
1.083	0.30	0.08	0.018	O I	|	|	|	|	0.34
1.167	0.27	0.08	0.020	O I	|	|	|	|	0.36
1.250	0.26	0.09	0.021	O I	|	|	|	|	0.39
1.333	0.26	0.10	0.022	|OI	|	|	|	|	0.41
1.417	0.26	0.10	0.023	|OI	|	|	|	|	0.43
1.500	0.26	0.10	0.025	|OI	|	|	|	|	0.45
1.583	0.26	0.11	0.026	|OI	|	|	|	|	0.47
1.667	0.26	0.11	0.027	|OI	|	|	|	|	0.49
1.750	0.26	0.12	0.028	|OI	|	|	|	|	0.51
1.833	0.31	0.12	0.029	|O I	|	|	|	|	0.53
1.917	0.34	0.13	0.030	|O I	|	|	|	|	0.55
2.000	0.35	0.14	0.032	|O I	|	|	|	|	0.58
2.083	0.35	0.14	0.033	|O I	|	|	|	|	0.61
2.167	0.35	0.15	0.035	|O I	|	|	|	|	0.63
2.250	0.35	0.15	0.036	|O I	|	|	|	|	0.66
2.333	0.35	0.16	0.037	|O I	|	|	|	|	0.68
2.417	0.35	0.16	0.039	|O I	|	|	|	|	0.71
2.500	0.35	0.17	0.040	|O I	|	|	|	|	0.73
2.583	0.40	0.18	0.041	|O I	|	|	|	|	0.75
2.667	0.43	0.18	0.043	|O I	|	|	|	|	0.78
2.750	0.44	0.19	0.045	| O I	|	|	|	|	0.82
2.833	0.44	0.20	0.046	| O I	|	|	|	|	0.85
2.917	0.44	0.20	0.048	| O I	|	|	|	|	0.88
3.000	0.44	0.21	0.049	| O I	|	|	|	|	0.91
3.083	0.44	0.22	0.051	| O I	|	|	|	|	0.93
3.167	0.44	0.22	0.053	| O I	|	|	|	|	0.96
3.250	0.44	0.23	0.054	| O I	|	|	|	|	0.99
3.333	0.44	0.24	0.055	| O I	|	|	|	|	1.01
3.417	0.44	0.24	0.057	| O I	|	|	|	|	1.04
3.500	0.44	0.25	0.058	| O I	|	|	|	|	1.06
3.583	0.44	0.25	0.059	| O I	|	|	|	|	1.09
3.667	0.44	0.26	0.061	| O I	|	|	|	|	1.11
3.750	0.44	0.26	0.062	| O I	|	|	|	|	1.13
3.833	0.49	0.27	0.063	| O I	|	|	|	|	1.16

3.917	0.52	0.28	0.065	O I				1.19
4.000	0.53	0.28	0.066	O I				1.22
4.083	0.53	0.29	0.068	O I				1.25
4.167	0.53	0.30	0.070	O I				1.28
4.250	0.53	0.30	0.071	O I				1.30
4.333	0.57	0.31	0.073	O I				1.33
4.417	0.61	0.32	0.075	O I				1.37
4.500	0.61	0.33	0.077	O I				1.41
4.583	0.61	0.34	0.079	O I				1.44
4.667	0.61	0.34	0.081	O I				1.48
4.750	0.61	0.35	0.082	O I				1.51
4.833	0.66	0.35	0.084	O I				1.53
4.917	0.70	0.35	0.087	O I				1.56
5.000	0.70	0.35	0.089	O I				1.59
5.083	0.61	0.35	0.091	O I				1.61
5.167	0.54	0.35	0.093	O I				1.63
5.250	0.53	0.35	0.094	O I				1.65
5.333	0.57	0.35	0.095	O I				1.67
5.417	0.61	0.35	0.097	O I				1.69
5.500	0.61	0.35	0.099	O I				1.71
5.583	0.66	0.35	0.101	O I				1.73
5.667	0.70	0.35	0.103	O I				1.76
5.750	0.70	0.35	0.106	O I				1.79
5.833	0.70	0.35	0.108	O I				1.82
5.917	0.70	0.35	0.110	O I				1.85
6.000	0.70	0.35	0.113	O I				1.88
6.083	0.75	0.35	0.115	O I				1.91
6.167	0.78	0.35	0.118	O I				1.95
6.250	0.79	0.35	0.121	O I				1.98
6.333	0.79	0.35	0.124	O I				2.02
6.417	0.79	0.35	0.127	O I				2.06
6.500	0.79	0.35	0.130	O I				2.10
6.583	0.84	0.35	0.134	O I				2.14
6.667	0.87	0.35	0.137	O I				2.18
6.750	0.88	0.35	0.141	O I				2.22
6.833	0.88	0.35	0.144	O I				2.27
6.917	0.88	0.35	0.148	O I				2.31
7.000	0.88	0.35	0.151	O I				2.36
7.083	0.88	0.35	0.155	O I				2.40
7.167	0.88	0.35	0.159	O I				2.45
7.250	0.88	0.35	0.162	O I				2.49
7.333	0.92	0.35	0.166	O I				2.54
7.417	0.96	0.35	0.170	O I				2.59
7.500	0.97	0.35	0.174	O I				2.64
7.583	1.01	0.35	0.179	O I				2.69
7.667	1.05	0.35	0.184	O I				2.75
7.750	1.05	0.35	0.188	O I				2.81
7.833	1.10	0.35	0.193	O I				2.87
7.917	1.13	0.35	0.199	O I				2.94
8.000	1.14	0.35	0.204	O I				3.01
8.083	1.23	0.35	0.210	O I				3.08
8.167	1.30	0.35	0.216	O I				3.15
8.250	1.32	0.35	0.223	O I				3.24
8.333	1.32	0.35	0.229	O I				3.32
8.417	1.32	0.35	0.236	O I				3.40
8.500	1.32	0.35	0.243	O I				3.48
8.583	1.36	0.35	0.250	O I				3.57
8.667	1.40	0.35	0.257	O I				3.65
8.750	1.40	0.35	0.264	O I				3.74
8.833	1.45	0.35	0.271	O I				3.83



13.917	2.02	2.27	0.753	|	|	| I O |	10.24
14.000	2.02	2.20	0.752	|	|	| I O|	|	10.23
14.083	2.20	2.18	0.751	|	|	| O|	|	10.22
14.167	2.34	2.20	0.752	|	|	| O|I	|	10.23
14.250	2.37	2.24	0.753	|	|	| OI	|	10.24
14.333	2.32	2.27	0.753	|	|	| O	|	10.24
14.417	2.29	2.28	0.753	|	|	| O	|	10.25
14.500	2.28	2.28	0.754	|	|	| O	|	10.25
14.583	2.28	2.28	0.754	|	|	| O	|	10.25
14.667	2.28	2.28	0.754	|	|	| O	|	10.25
14.750	2.28	2.28	0.754	|	|	| O	|	10.25
14.833	2.24	2.28	0.753	|	|	| IO	|	10.25
14.917	2.20	2.26	0.753	|	|	| IO	|	10.24
15.000	2.19	2.25	0.753	|	|	| IO	|	10.24
15.083	2.15	2.23	0.752	|	|	| O|	|	10.23
15.167	2.11	2.20	0.752	|	|	| IO|	|	10.23
15.250	2.11	2.18	0.751	|	|	| IO|	|	10.22
15.333	2.06	2.16	0.751	|	|	| IO|	|	10.21
15.417	2.03	2.13	0.750	|	|	| IO |	|	10.21
15.500	2.02	2.10	0.749	|	|	| IO |	|	10.20
15.583	1.83	2.06	0.748	|	|	| I O |	|	10.19
15.667	1.70	1.98	0.746	|	|	| I O |	|	10.17
15.750	1.67	1.91	0.745	|	|	|I O |	|	10.15
15.833	1.67	1.85	0.743	|	|	|I O |	|	10.13
15.917	1.67	1.80	0.742	|	|	|I O |	|	10.12
16.000	1.67	1.77	0.741	|	|	|IO |	|	10.11
16.083	0.97	1.66	0.738	|	| I |	|O |	|	10.08
16.167	0.46	1.42	0.733	| I |	| O|	|	|	10.02
16.250	0.35	1.29	0.726	| I |	| O |	|	|	9.93
16.333	0.35	1.21	0.720	| I |	| O |	|	|	9.84
16.417	0.35	1.14	0.714	| I |	| O |	|	|	9.76
16.500	0.35	1.08	0.709	| I |	| O |	|	|	9.69
16.583	0.30	1.02	0.704	| I |	| O |	|	|	9.62
16.667	0.27	0.96	0.699	| I |	| O |	|	|	9.55
16.750	0.26	0.90	0.695	| I |	|O |	|	|	9.48
16.833	0.26	0.85	0.691	| I |	|O |	|	|	9.42
16.917	0.26	0.80	0.687	| I | O |	|	|	9.37
17.000	0.26	0.76	0.683	| I | O |	|	|	9.32
17.083	0.36	0.72	0.680	| I O|	|	|	|	9.27
17.167	0.42	0.69	0.678	| I O|	|	|	|	9.24
17.250	0.44	0.67	0.676	| I O|	|	|	|	9.22
17.333	0.44	0.65	0.675	| I O |	|	|	|	9.20
17.417	0.44	0.63	0.673	| I O |	|	|	|	9.18
17.500	0.44	0.62	0.672	| I O |	|	|	|	9.16
17.583	0.44	0.60	0.671	| I O |	|	|	|	9.14
17.667	0.44	0.59	0.670	| I O |	|	|	|	9.13
17.750	0.44	0.58	0.669	| I O |	|	|	|	9.11
17.833	0.39	0.56	0.668	| I O |	|	|	|	9.10
17.917	0.36	0.55	0.667	| I O |	|	|	|	9.08
18.000	0.35	0.53	0.665	| I O |	|	|	|	9.06
18.083	0.35	0.52	0.664	| I O |	|	|	|	9.04
18.167	0.35	0.50	0.663	| I O |	|	|	|	9.03
18.250	0.35	0.49	0.662	| I O |	|	|	|	9.01
18.333	0.35	0.48	0.661	| I O |	|	|	|	9.00
18.417	0.35	0.48	0.660	| I O |	|	|	|	8.98
18.500	0.35	0.48	0.659	| I O |	|	|	|	8.97
18.583	0.30	0.47	0.658	| I O |	|	|	|	8.95
18.667	0.27	0.47	0.657	| I O |	|	|	|	8.92
18.750	0.26	0.47	0.656	| I O |	|	|	|	8.90
18.833	0.22	0.46	0.654	| I O |	|	|	|	8.87

18.917	0.18	0.46	0.652	I O				8.83
19.000	0.18	0.45	0.650	I O				8.79
19.083	0.22	0.45	0.649	I O				8.76
19.167	0.26	0.45	0.647	I O				8.73
19.250	0.26	0.44	0.646	I O				8.71
19.333	0.31	0.44	0.645	IO				8.69
19.417	0.34	0.44	0.644	IO				8.67
19.500	0.35	0.44	0.643	IO				8.66
19.583	0.30	0.43	0.643	IO				8.65
19.667	0.27	0.43	0.642	I O				8.63
19.750	0.26	0.43	0.641	I O				8.61
19.833	0.22	0.43	0.639	I O				8.58
19.917	0.18	0.42	0.638	I O				8.55
20.000	0.18	0.42	0.636	I O				8.52
20.083	0.22	0.41	0.635	I O				8.49
20.167	0.26	0.41	0.633	I O				8.47
20.250	0.26	0.41	0.632	I O				8.45
20.333	0.26	0.41	0.631	I O				8.43
20.417	0.26	0.40	0.630	I O				8.41
20.500	0.26	0.40	0.629	I O				8.39
20.583	0.26	0.40	0.629	I O				8.38
20.667	0.26	0.40	0.628	I O				8.36
20.750	0.26	0.39	0.627	I O				8.34
20.833	0.22	0.39	0.626	I O				8.32
20.917	0.18	0.39	0.624	I O				8.29
21.000	0.18	0.38	0.623	I O				8.27
21.083	0.22	0.38	0.622	I O				8.24
21.167	0.26	0.38	0.621	I O				8.22
21.250	0.26	0.38	0.620	I O				8.21
21.333	0.22	0.37	0.619	I O				8.19
21.417	0.18	0.37	0.618	I O				8.17
21.500	0.18	0.37	0.616	I O				8.14
21.583	0.22	0.37	0.615	IO				8.12
21.667	0.26	0.36	0.614	IO				8.10
21.750	0.26	0.36	0.614	IO				8.09
21.833	0.22	0.36	0.613	IO				8.07
21.917	0.18	0.36	0.612	I O				8.05
22.000	0.18	0.35	0.611	I O				8.03
22.083	0.22	0.35	0.609	IO				8.01
22.167	0.26	0.35	0.609	IO				8.00
22.250	0.26	0.35	0.608	IO				7.99
22.333	0.22	0.35	0.607	IO				7.98
22.417	0.18	0.35	0.606	I O				7.97
22.500	0.18	0.35	0.605	I O				7.95
22.583	0.18	0.35	0.604	I O				7.94
22.667	0.18	0.35	0.603	I O				7.92
22.750	0.18	0.35	0.601	I O				7.91
22.833	0.18	0.35	0.600	I O				7.89
22.917	0.18	0.35	0.599	I O				7.88
23.000	0.18	0.35	0.598	I O				7.86
23.083	0.18	0.35	0.597	I O				7.85
23.167	0.18	0.35	0.595	I O				7.83
23.250	0.18	0.35	0.594	I O				7.82
23.333	0.18	0.35	0.593	I O				7.80
23.417	0.18	0.35	0.592	I O				7.79
23.500	0.18	0.35	0.591	I O				7.77
23.583	0.18	0.35	0.589	I O				7.76
23.667	0.18	0.35	0.588	I O				7.74
23.750	0.18	0.35	0.587	I O				7.73
23.833	0.18	0.35	0.586	I O				7.71

23.917	0.18	0.35	0.585	|I O	|	|	|	7.70
24.000	0.18	0.35	0.583	|I O	|	|	|	7.68
24.083	0.08	0.35	0.582	I O	|	|	|	7.67
24.167	0.01	0.35	0.580	I O	|	|	|	7.64
24.250	0.00	0.35	0.577	I O	|	|	|	7.61
24.333	0.00	0.35	0.575	I O	|	|	|	7.58
24.417	0.00	0.35	0.573	I O	|	|	|	7.55
24.500	0.00	0.35	0.570	I O	|	|	|	7.52
24.583	0.00	0.35	0.568	I O	|	|	|	7.49
24.667	0.00	0.35	0.565	I O	|	|	|	7.46
24.750	0.00	0.35	0.563	I O	|	|	|	7.43
24.833	0.00	0.35	0.561	I O	|	|	|	7.40
24.917	0.00	0.35	0.558	I O	|	|	|	7.37
25.000	0.00	0.35	0.556	I O	|	|	|	7.34
25.083	0.00	0.35	0.553	I O	|	|	|	7.31
25.167	0.00	0.35	0.551	I O	|	|	|	7.28
25.250	0.00	0.35	0.549	I O	|	|	|	7.25
25.333	0.00	0.35	0.546	I O	|	|	|	7.22
25.417	0.00	0.35	0.544	I O	|	|	|	7.20
25.500	0.00	0.35	0.541	I O	|	|	|	7.17
25.583	0.00	0.35	0.539	I O	|	|	|	7.14
25.667	0.00	0.35	0.537	I O	|	|	|	7.11
25.750	0.00	0.35	0.534	I O	|	|	|	7.08
25.833	0.00	0.35	0.532	I O	|	|	|	7.05
25.917	0.00	0.35	0.529	I O	|	|	|	7.02
26.000	0.00	0.35	0.527	I O	|	|	|	6.99
26.083	0.00	0.35	0.524	I O	|	|	|	6.96
26.167	0.00	0.35	0.522	I O	|	|	|	6.93
26.250	0.00	0.35	0.520	I O	|	|	|	6.90
26.333	0.00	0.35	0.517	I O	|	|	|	6.87
26.417	0.00	0.35	0.515	I O	|	|	|	6.84
26.500	0.00	0.35	0.512	I O	|	|	|	6.81
26.583	0.00	0.35	0.510	I O	|	|	|	6.78
26.667	0.00	0.35	0.508	I O	|	|	|	6.75
26.750	0.00	0.35	0.505	I O	|	|	|	6.72
26.833	0.00	0.35	0.503	I O	|	|	|	6.69
26.917	0.00	0.35	0.500	I O	|	|	|	6.66
27.000	0.00	0.35	0.498	I O	|	|	|	6.63
27.083	0.00	0.35	0.496	I O	|	|	|	6.60
27.167	0.00	0.35	0.493	I O	|	|	|	6.57
27.250	0.00	0.35	0.491	I O	|	|	|	6.54
27.333	0.00	0.35	0.488	I O	|	|	|	6.51
27.417	0.00	0.35	0.486	I O	|	|	|	6.48
27.500	0.00	0.35	0.483	I O	|	|	|	6.45
27.583	0.00	0.35	0.481	I O	|	|	|	6.42
27.667	0.00	0.35	0.479	I O	|	|	|	6.39
27.750	0.00	0.35	0.476	I O	|	|	|	6.36
27.833	0.00	0.35	0.474	I O	|	|	|	6.33
27.917	0.00	0.35	0.471	I O	|	|	|	6.30
28.000	0.00	0.35	0.469	I O	|	|	|	6.27
28.083	0.00	0.35	0.467	I O	|	|	|	6.24
28.167	0.00	0.35	0.464	I O	|	|	|	6.21
28.250	0.00	0.35	0.462	I O	|	|	|	6.18
28.333	0.00	0.35	0.459	I O	|	|	|	6.15
28.417	0.00	0.35	0.457	I O	|	|	|	6.12
28.500	0.00	0.35	0.455	I O	|	|	|	6.10
28.583	0.00	0.35	0.452	I O	|	|	|	6.07
28.667	0.00	0.35	0.450	I O	|	|	|	6.04
28.750	0.00	0.35	0.447	I O	|	|	|	6.01
28.833	0.00	0.35	0.445	I O	|	|	|	5.98

28.917	0.00	0.35	0.443	I	O	|	|	|	|	5.95
29.000	0.00	0.35	0.440	I	O	|	|	|	|	5.92
29.083	0.00	0.35	0.438	I	O	|	|	|	|	5.89
29.167	0.00	0.35	0.435	I	O	|	|	|	|	5.86
29.250	0.00	0.35	0.433	I	O	|	|	|	|	5.83
29.333	0.00	0.35	0.430	I	O	|	|	|	|	5.80
29.417	0.00	0.35	0.428	I	O	|	|	|	|	5.77
29.500	0.00	0.35	0.426	I	O	|	|	|	|	5.74
29.583	0.00	0.35	0.423	I	O	|	|	|	|	5.71
29.667	0.00	0.35	0.421	I	O	|	|	|	|	5.68
29.750	0.00	0.35	0.418	I	O	|	|	|	|	5.65
29.833	0.00	0.35	0.416	I	O	|	|	|	|	5.62
29.917	0.00	0.35	0.414	I	O	|	|	|	|	5.59
30.000	0.00	0.35	0.411	I	O	|	|	|	|	5.56
30.083	0.00	0.35	0.409	I	O	|	|	|	|	5.53
30.167	0.00	0.35	0.406	I	O	|	|	|	|	5.50
30.250	0.00	0.35	0.404	I	O	|	|	|	|	5.47
30.333	0.00	0.35	0.402	I	O	|	|	|	|	5.44
30.417	0.00	0.35	0.399	I	O	|	|	|	|	5.41
30.500	0.00	0.35	0.397	I	O	|	|	|	|	5.38
30.583	0.00	0.35	0.394	I	O	|	|	|	|	5.35
30.667	0.00	0.35	0.392	I	O	|	|	|	|	5.32
30.750	0.00	0.35	0.389	I	O	|	|	|	|	5.29
30.833	0.00	0.35	0.387	I	O	|	|	|	|	5.26
30.917	0.00	0.35	0.385	I	O	|	|	|	|	5.23
31.000	0.00	0.35	0.382	I	O	|	|	|	|	5.20
31.083	0.00	0.35	0.380	I	O	|	|	|	|	5.17
31.167	0.00	0.35	0.377	I	O	|	|	|	|	5.14
31.250	0.00	0.35	0.375	I	O	|	|	|	|	5.11
31.333	0.00	0.35	0.373	I	O	|	|	|	|	5.08
31.417	0.00	0.35	0.370	I	O	|	|	|	|	5.05
31.500	0.00	0.35	0.368	I	O	|	|	|	|	5.02
31.583	0.00	0.35	0.365	I	O	|	|	|	|	5.00
31.667	0.00	0.35	0.363	I	O	|	|	|	|	4.97
31.750	0.00	0.35	0.361	I	O	|	|	|	|	4.94
31.833	0.00	0.35	0.358	I	O	|	|	|	|	4.91
31.917	0.00	0.35	0.356	I	O	|	|	|	|	4.88
32.000	0.00	0.35	0.353	I	O	|	|	|	|	4.85
32.083	0.00	0.35	0.351	I	O	|	|	|	|	4.82
32.167	0.00	0.35	0.348	I	O	|	|	|	|	4.79
32.250	0.00	0.35	0.346	I	O	|	|	|	|	4.76
32.333	0.00	0.35	0.344	I	O	|	|	|	|	4.73
32.417	0.00	0.35	0.341	I	O	|	|	|	|	4.70
32.500	0.00	0.35	0.339	I	O	|	|	|	|	4.67
32.583	0.00	0.35	0.336	I	O	|	|	|	|	4.64
32.667	0.00	0.35	0.334	I	O	|	|	|	|	4.61
32.750	0.00	0.35	0.332	I	O	|	|	|	|	4.58
32.833	0.00	0.35	0.329	I	O	|	|	|	|	4.55
32.917	0.00	0.35	0.327	I	O	|	|	|	|	4.52
33.000	0.00	0.35	0.324	I	O	|	|	|	|	4.49
33.083	0.00	0.35	0.322	I	O	|	|	|	|	4.46
33.167	0.00	0.35	0.320	I	O	|	|	|	|	4.43
33.250	0.00	0.35	0.317	I	O	|	|	|	|	4.40
33.333	0.00	0.35	0.315	I	O	|	|	|	|	4.37
33.417	0.00	0.35	0.312	I	O	|	|	|	|	4.34
33.500	0.00	0.35	0.310	I	O	|	|	|	|	4.31
33.583	0.00	0.35	0.308	I	O	|	|	|	|	4.28
33.667	0.00	0.35	0.305	I	O	|	|	|	|	4.25
33.750	0.00	0.35	0.303	I	O	|	|	|	|	4.22
33.833	0.00	0.35	0.300	I	O	|	|	|	|	4.19

33.917	0.00	0.35	0.298	I	O	|	|	|	|	4.16
34.000	0.00	0.35	0.295	I	O	|	|	|	|	4.13
34.083	0.00	0.35	0.293	I	O	|	|	|	|	4.10
34.167	0.00	0.35	0.291	I	O	|	|	|	|	4.07
34.250	0.00	0.35	0.288	I	O	|	|	|	|	4.04
34.333	0.00	0.35	0.286	I	O	|	|	|	|	4.01
34.417	0.00	0.35	0.283	I	O	|	|	|	|	3.98
34.500	0.00	0.35	0.281	I	O	|	|	|	|	3.95
34.583	0.00	0.35	0.279	I	O	|	|	|	|	3.92
34.667	0.00	0.35	0.276	I	O	|	|	|	|	3.90
34.750	0.00	0.35	0.274	I	O	|	|	|	|	3.87
34.833	0.00	0.35	0.271	I	O	|	|	|	|	3.84
34.917	0.00	0.35	0.269	I	O	|	|	|	|	3.81
35.000	0.00	0.35	0.267	I	O	|	|	|	|	3.78
35.083	0.00	0.35	0.264	I	O	|	|	|	|	3.75
35.167	0.00	0.35	0.262	I	O	|	|	|	|	3.72
35.250	0.00	0.35	0.259	I	O	|	|	|	|	3.69
35.333	0.00	0.35	0.257	I	O	|	|	|	|	3.66
35.417	0.00	0.35	0.254	I	O	|	|	|	|	3.63
35.500	0.00	0.35	0.252	I	O	|	|	|	|	3.60
35.583	0.00	0.35	0.250	I	O	|	|	|	|	3.57
35.667	0.00	0.35	0.247	I	O	|	|	|	|	3.54
35.750	0.00	0.35	0.245	I	O	|	|	|	|	3.51
35.833	0.00	0.35	0.242	I	O	|	|	|	|	3.48
35.917	0.00	0.35	0.240	I	O	|	|	|	|	3.45
36.000	0.00	0.35	0.238	I	O	|	|	|	|	3.42
36.083	0.00	0.35	0.235	I	O	|	|	|	|	3.39
36.167	0.00	0.35	0.233	I	O	|	|	|	|	3.36
36.250	0.00	0.35	0.230	I	O	|	|	|	|	3.33
36.333	0.00	0.35	0.228	I	O	|	|	|	|	3.30
36.417	0.00	0.35	0.226	I	O	|	|	|	|	3.27
36.500	0.00	0.35	0.223	I	O	|	|	|	|	3.24
36.583	0.00	0.35	0.221	I	O	|	|	|	|	3.21
36.667	0.00	0.35	0.218	I	O	|	|	|	|	3.18
36.750	0.00	0.35	0.216	I	O	|	|	|	|	3.15
36.833	0.00	0.35	0.214	I	O	|	|	|	|	3.12
36.917	0.00	0.35	0.211	I	O	|	|	|	|	3.09
37.000	0.00	0.35	0.209	I	O	|	|	|	|	3.06
37.083	0.00	0.35	0.206	I	O	|	|	|	|	3.03
37.167	0.00	0.35	0.204	I	O	|	|	|	|	3.00
37.250	0.00	0.35	0.201	I	O	|	|	|	|	2.97
37.333	0.00	0.35	0.199	I	O	|	|	|	|	2.94
37.417	0.00	0.35	0.197	I	O	|	|	|	|	2.91
37.500	0.00	0.35	0.194	I	O	|	|	|	|	2.88
37.583	0.00	0.35	0.192	I	O	|	|	|	|	2.85
37.667	0.00	0.35	0.189	I	O	|	|	|	|	2.82
37.750	0.00	0.35	0.187	I	O	|	|	|	|	2.80
37.833	0.00	0.35	0.185	I	O	|	|	|	|	2.77
37.917	0.00	0.35	0.182	I	O	|	|	|	|	2.74
38.000	0.00	0.35	0.180	I	O	|	|	|	|	2.71
38.083	0.00	0.35	0.177	I	O	|	|	|	|	2.68
38.167	0.00	0.35	0.175	I	O	|	|	|	|	2.65
38.250	0.00	0.35	0.173	I	O	|	|	|	|	2.62
38.333	0.00	0.35	0.170	I	O	|	|	|	|	2.59
38.417	0.00	0.35	0.168	I	O	|	|	|	|	2.56
38.500	0.00	0.35	0.165	I	O	|	|	|	|	2.53
38.583	0.00	0.35	0.163	I	O	|	|	|	|	2.50
38.667	0.00	0.35	0.160	I	O	|	|	|	|	2.47
38.750	0.00	0.35	0.158	I	O	|	|	|	|	2.44
38.833	0.00	0.35	0.156	I	O	|	|	|	|	2.41

38.917	0.00	0.35	0.153	I	O	|	|	|	2.38
39.000	0.00	0.35	0.151	I	O	|	|	|	2.35
39.083	0.00	0.35	0.148	I	O	|	|	|	2.32
39.167	0.00	0.35	0.146	I	O	|	|	|	2.29
39.250	0.00	0.35	0.144	I	O	|	|	|	2.26
39.333	0.00	0.35	0.141	I	O	|	|	|	2.23
39.417	0.00	0.35	0.139	I	O	|	|	|	2.20
39.500	0.00	0.35	0.136	I	O	|	|	|	2.17
39.583	0.00	0.35	0.134	I	O	|	|	|	2.14
39.667	0.00	0.35	0.132	I	O	|	|	|	2.11
39.750	0.00	0.35	0.129	I	O	|	|	|	2.08
39.833	0.00	0.35	0.127	I	O	|	|	|	2.05
39.917	0.00	0.35	0.124	I	O	|	|	|	2.02
40.000	0.00	0.35	0.122	I	O	|	|	|	1.99
40.083	0.00	0.35	0.120	I	O	|	|	|	1.96
40.167	0.00	0.35	0.117	I	O	|	|	|	1.93
40.250	0.00	0.35	0.115	I	O	|	|	|	1.90
40.333	0.00	0.35	0.112	I	O	|	|	|	1.87
40.417	0.00	0.35	0.110	I	O	|	|	|	1.84
40.500	0.00	0.35	0.107	I	O	|	|	|	1.81
40.583	0.00	0.35	0.105	I	O	|	|	|	1.78
40.667	0.00	0.35	0.103	I	O	|	|	|	1.75
40.750	0.00	0.35	0.100	I	O	|	|	|	1.72
40.833	0.00	0.35	0.098	I	O	|	|	|	1.69
40.917	0.00	0.35	0.095	I	O	|	|	|	1.67
41.000	0.00	0.35	0.093	I	O	|	|	|	1.64
41.083	0.00	0.35	0.091	I	O	|	|	|	1.61
41.167	0.00	0.35	0.088	I	O	|	|	|	1.58
41.250	0.00	0.35	0.086	I	O	|	|	|	1.55
41.333	0.00	0.35	0.083	I	O	|	|	|	1.52
41.417	0.00	0.35	0.081	I	O	|	|	|	1.48
41.500	0.00	0.34	0.079	I	O	|	|	|	1.44
41.583	0.00	0.33	0.076	I	O	|	|	|	1.40
41.667	0.00	0.32	0.074	I	O	|	|	|	1.36
41.750	0.00	0.31	0.072	I	O	|	|	|	1.32
41.833	0.00	0.30	0.070	I	O	|	|	|	1.28
41.917	0.00	0.29	0.068	I	O	|	|	|	1.24
42.000	0.00	0.28	0.066	I	O	|	|	|	1.21
42.083	0.00	0.27	0.064	I	O	|	|	|	1.17
42.167	0.00	0.27	0.062	I	O	|	|	|	1.14
42.250	0.00	0.26	0.060	I	O	|	|	|	1.10
42.333	0.00	0.25	0.059	I	O	|	|	|	1.07
42.417	0.00	0.24	0.057	I	O	|	|	|	1.04
42.500	0.00	0.24	0.055	I	O	|	|	|	1.01
42.583	0.00	0.23	0.054	I	O	|	|	|	0.98
42.667	0.00	0.22	0.052	I	O	|	|	|	0.95
42.750	0.00	0.22	0.051	I	O	|	|	|	0.93
42.833	0.00	0.21	0.049	I	O	|	|	|	0.90
42.917	0.00	0.20	0.048	I	O	|	|	|	0.87
43.000	0.00	0.20	0.046	I	O	|	|	|	0.85
43.083	0.00	0.19	0.045	I	O	|	|	|	0.82
43.167	0.00	0.19	0.044	I	O	|	|	|	0.80
43.250	0.00	0.18	0.042	I	O	|	|	|	0.78
43.333	0.00	0.18	0.041	I	O	|	|	|	0.75
43.417	0.00	0.17	0.040	I	O	|	|	|	0.73
43.500	0.00	0.17	0.039	I	O	|	|	|	0.71
43.583	0.00	0.16	0.038	I	O	|	|	|	0.69
43.667	0.00	0.16	0.037	I	O	|	|	|	0.67
43.750	0.00	0.15	0.036	I	O	|	|	|	0.65
43.833	0.00	0.15	0.035	I	O	|	|	|	0.63

43.917	0.00	0.14	0.034	IO				0.61
44.000	0.00	0.14	0.033	IO				0.60
44.083	0.00	0.13	0.032	IO				0.58
44.167	0.00	0.13	0.031	IO				0.56
44.250	0.00	0.13	0.030	IO				0.55
44.333	0.00	0.12	0.029	IO				0.53
44.417	0.00	0.12	0.028	IO				0.51
44.500	0.00	0.12	0.027	IO				0.50
44.583	0.00	0.11	0.026	IO				0.48
44.667	0.00	0.11	0.026	IO				0.47
44.750	0.00	0.11	0.025	IO				0.46
44.833	0.00	0.10	0.024	IO				0.44
44.917	0.00	0.10	0.024	IO				0.43
45.000	0.00	0.10	0.023	IO				0.42
45.083	0.00	0.09	0.022	IO				0.41
45.167	0.00	0.09	0.022	O				0.39
45.250	0.00	0.09	0.021	O				0.38
45.333	0.00	0.09	0.020	O				0.37
45.417	0.00	0.08	0.020	O				0.36
45.500	0.00	0.08	0.019	O				0.35
45.583	0.00	0.08	0.019	O				0.34
45.667	0.00	0.08	0.018	O				0.33
45.750	0.00	0.07	0.018	O				0.32
45.833	0.00	0.07	0.017	O				0.31
45.917	0.00	0.07	0.017	O				0.30
46.000	0.00	0.07	0.016	O				0.29
46.083	0.00	0.07	0.016	O				0.29
46.167	0.00	0.06	0.015	O				0.28
46.250	0.00	0.06	0.015	O				0.27
46.333	0.00	0.06	0.014	O				0.26
46.417	0.00	0.06	0.014	O				0.25
46.500	0.00	0.06	0.013	O				0.25
46.583	0.00	0.06	0.013	O				0.24
46.667	0.00	0.05	0.013	O				0.23
46.750	0.00	0.05	0.012	O				0.23
46.833	0.00	0.05	0.012	O				0.22
46.917	0.00	0.05	0.012	O				0.21
47.000	0.00	0.05	0.011	O				0.21
47.083	0.00	0.05	0.011	O				0.20
47.167	0.00	0.05	0.011	O				0.19
47.250	0.00	0.04	0.010	O				0.19
47.333	0.00	0.04	0.010	O				0.18
47.417	0.00	0.04	0.010	O				0.18
47.500	0.00	0.04	0.009	O				0.17
47.583	0.00	0.04	0.009	O				0.17
47.667	0.00	0.04	0.009	O				0.16
47.750	0.00	0.04	0.009	O				0.16
47.833	0.00	0.04	0.008	O				0.15
47.917	0.00	0.03	0.008	O				0.15
48.000	0.00	0.03	0.008	O				0.15
48.083	0.00	0.03	0.008	O				0.14
48.167	0.00	0.03	0.007	O				0.14
48.250	0.00	0.03	0.007	O				0.13
48.333	0.00	0.03	0.007	O				0.13
48.417	0.00	0.03	0.007	O				0.13
48.500	0.00	0.03	0.007	O				0.12
48.583	0.00	0.03	0.006	O				0.12
48.667	0.00	0.03	0.006	O				0.11
48.750	0.00	0.03	0.006	O				0.11
48.833	0.00	0.03	0.006	O				0.11

48.917	0.00	0.02	0.006	O				0.11
49.000	0.00	0.02	0.006	O				0.10
49.083	0.00	0.02	0.005	O				0.10
49.167	0.00	0.02	0.005	O				0.10
49.250	0.00	0.02	0.005	O				0.09
49.333	0.00	0.02	0.005	O				0.09
49.417	0.00	0.02	0.005	O				0.09
49.500	0.00	0.02	0.005	O				0.09
49.583	0.00	0.02	0.005	O				0.08
49.667	0.00	0.02	0.004	O				0.08
49.750	0.00	0.02	0.004	O				0.08
49.833	0.00	0.02	0.004	O				0.08
49.917	0.00	0.02	0.004	O				0.07
50.000	0.00	0.02	0.004	O				0.07
50.083	0.00	0.02	0.004	O				0.07
50.167	0.00	0.02	0.004	O				0.07
50.250	0.00	0.02	0.004	O				0.07
50.333	0.00	0.01	0.003	O				0.06
50.417	0.00	0.01	0.003	O				0.06
50.500	0.00	0.01	0.003	O				0.06
50.583	0.00	0.01	0.003	O				0.06
50.667	0.00	0.01	0.003	O				0.06
50.750	0.00	0.01	0.003	O				0.06
50.833	0.00	0.01	0.003	O				0.05
50.917	0.00	0.01	0.003	O				0.05
51.000	0.00	0.01	0.003	O				0.05
51.083	0.00	0.01	0.003	O				0.05
51.167	0.00	0.01	0.003	O				0.05
51.250	0.00	0.01	0.003	O				0.05
51.333	0.00	0.01	0.002	O				0.04
51.417	0.00	0.01	0.002	O				0.04
51.500	0.00	0.01	0.002	O				0.04
51.583	0.00	0.01	0.002	O				0.04
51.667	0.00	0.01	0.002	O				0.04
51.750	0.00	0.01	0.002	O				0.04
51.833	0.00	0.01	0.002	O				0.04
51.917	0.00	0.01	0.002	O				0.04
52.000	0.00	0.01	0.002	O				0.04
52.083	0.00	0.01	0.002	O				0.03
52.167	0.00	0.01	0.002	O				0.03
52.250	0.00	0.01	0.002	O				0.03
52.333	0.00	0.01	0.002	O				0.03
52.417	0.00	0.01	0.002	O				0.03
52.500	0.00	0.01	0.002	O				0.03
52.583	0.00	0.01	0.002	O				0.03
52.667	0.00	0.01	0.002	O				0.03
52.750	0.00	0.01	0.001	O				0.03
52.833	0.00	0.01	0.001	O				0.03
52.917	0.00	0.01	0.001	O				0.03
53.000	0.00	0.01	0.001	O				0.02
53.083	0.00	0.01	0.001	O				0.02
53.167	0.00	0.01	0.001	O				0.02
53.250	0.00	0.01	0.001	O				0.02
53.333	0.00	0.01	0.001	O				0.02
53.417	0.00	0.01	0.001	O				0.02
53.500	0.00	0.00	0.001	O				0.02
53.583	0.00	0.00	0.001	O				0.02
53.667	0.00	0.00	0.001	O				0.02
53.750	0.00	0.00	0.001	O				0.02
53.833	0.00	0.00	0.001	O				0.02

53.917	0.00	0.00	0.001	O	|	|	|	|	0.02
54.000	0.00	0.00	0.001	O	|	|	|	|	0.02
54.083	0.00	0.00	0.001	O	|	|	|	|	0.02
54.167	0.00	0.00	0.001	O	|	|	|	|	0.02
54.250	0.00	0.00	0.001	O	|	|	|	|	0.02
54.333	0.00	0.00	0.001	O	|	|	|	|	0.02
54.417	0.00	0.00	0.001	O	|	|	|	|	0.02
54.500	0.00	0.00	0.001	O	|	|	|	|	0.01
54.583	0.00	0.00	0.001	O	|	|	|	|	0.01
54.667	0.00	0.00	0.001	O	|	|	|	|	0.01
54.750	0.00	0.00	0.001	O	|	|	|	|	0.01
54.833	0.00	0.00	0.001	O	|	|	|	|	0.01
54.917	0.00	0.00	0.001	O	|	|	|	|	0.01
55.000	0.00	0.00	0.001	O	|	|	|	|	0.01
55.083	0.00	0.00	0.001	O	|	|	|	|	0.01
55.167	0.00	0.00	0.001	O	|	|	|	|	0.01
55.250	0.00	0.00	0.001	O	|	|	|	|	0.01
55.333	0.00	0.00	0.001	O	|	|	|	|	0.01
55.417	0.00	0.00	0.001	O	|	|	|	|	0.01
55.500	0.00	0.00	0.001	O	|	|	|	|	0.01
55.583	0.00	0.00	0.001	O	|	|	|	|	0.01
55.667	0.00	0.00	0.001	O	|	|	|	|	0.01
55.750	0.00	0.00	0.001	O	|	|	|	|	0.01
55.833	0.00	0.00	0.001	O	|	|	|	|	0.01
55.917	0.00	0.00	0.000	O	|	|	|	|	0.01
56.000	0.00	0.00	0.000	O	|	|	|	|	0.01
56.083	0.00	0.00	0.000	O	|	|	|	|	0.01
56.167	0.00	0.00	0.000	O	|	|	|	|	0.01
56.250	0.00	0.00	0.000	O	|	|	|	|	0.01
56.333	0.00	0.00	0.000	O	|	|	|	|	0.01
56.417	0.00	0.00	0.000	O	|	|	|	|	0.01
56.500	0.00	0.00	0.000	O	|	|	|	|	0.01
56.583	0.00	0.00	0.000	O	|	|	|	|	0.01
56.667	0.00	0.00	0.000	O	|	|	|	|	0.01
56.750	0.00	0.00	0.000	O	|	|	|	|	0.01
56.833	0.00	0.00	0.000	O	|	|	|	|	0.01
56.917	0.00	0.00	0.000	O	|	|	|	|	0.01
57.000	0.00	0.00	0.000	O	|	|	|	|	0.01
57.083	0.00	0.00	0.000	O	|	|	|	|	0.01
57.167	0.00	0.00	0.000	O	|	|	|	|	0.01
57.250	0.00	0.00	0.000	O	|	|	|	|	0.01
57.333	0.00	0.00	0.000	O	|	|	|	|	0.01
57.417	0.00	0.00	0.000	O	|	|	|	|	0.01
57.500	0.00	0.00	0.000	O	|	|	|	|	0.01
57.583	0.00	0.00	0.000	O	|	|	|	|	0.00
57.667	0.00	0.00	0.000	O	|	|	|	|	0.00
57.750	0.00	0.00	0.000	O	|	|	|	|	0.00
57.833	0.00	0.00	0.000	O	|	|	|	|	0.00
57.917	0.00	0.00	0.000	O	|	|	|	|	0.00
58.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 696
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.693 (CFS)
Total volume = 1.813 (Ac.Ft)

Status of hydrographs being held in storage

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

****

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 10/25/24

DEXTER VILLAGE
AREA C
5-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.270 (CFS)
Total volume = 0.357 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.1 6.13 9.20 12.27	Depth (Ft.)
0.083	1.11	0.02	0.004	O I | | | |	0.06
0.167	1.81	0.08	0.013	O I | | | |	0.20
0.250	2.16	0.16	0.026	O I | | | |	0.39
0.333	2.30	0.25	0.040	O I | | | |	0.59
0.417	2.39	0.34	0.054	O I | | | |	0.80
0.500	2.71	0.43	0.069	|O I| | | |	1.02
0.583	3.49	0.55	0.087	|O |I | | |	1.28
0.667	4.36	0.64	0.110	|O | I | | |	1.59
0.750	6.19	0.64	0.142	|O | | I | |	1.92
0.833	12.27	0.64	0.201	|O | | | | I	2.54
0.917	8.44	0.64	0.268	|O | | | I |	3.24
1.000	3.48	0.64	0.305	|O |I | | |	3.62
1.083	0.96	0.64	0.316	|OI | | | |	3.74
1.167	0.11	0.64	0.315	IO | | | |	3.73
1.250	0.00	0.64	0.311	IO | | | |	3.69
1.333	0.00	0.64	0.307	IO | | | |	3.64
1.417	0.00	0.64	0.302	IO | | | |	3.59
1.500	0.00	0.64	0.298	IO | | | |	3.55
1.583	0.00	0.64	0.293	IO | | | |	3.50
1.667	0.00	0.64	0.289	IO | | | |	3.46
1.750	0.00	0.64	0.285	IO | | | |	3.41
1.833	0.00	0.64	0.280	IO | | | |	3.36
1.917	0.00	0.64	0.276	IO | | | |	3.32
2.000	0.00	0.64	0.271	IO | | | |	3.27
2.083	0.00	0.64	0.267	IO | | | |	3.22
2.167	0.00	0.64	0.262	IO | | | |	3.18
2.250	0.00	0.64	0.258	IO | | | |	3.13
2.333	0.00	0.64	0.254	IO | | | |	3.09
2.417	0.00	0.64	0.249	IO | | | |	3.04
2.500	0.00	0.64	0.245	IO | | | |	2.99
2.583	0.00	0.64	0.240	IO | | | |	2.95
2.667	0.00	0.64	0.236	IO | | | |	2.90
2.750	0.00	0.64	0.232	IO | | | |	2.86
2.833	0.00	0.64	0.227	IO | | | |	2.81
2.917	0.00	0.64	0.223	IO | | | |	2.76
3.000	0.00	0.64	0.218	IO | | | |	2.72
3.083	0.00	0.64	0.214	IO | | | |	2.67
3.167	0.00	0.64	0.210	IO | | | |	2.63
3.250	0.00	0.64	0.205	IO | | | |	2.58
3.333	0.00	0.64	0.201	IO | | | |	2.53
3.417	0.00	0.64	0.196	IO | | | |	2.49
3.500	0.00	0.64	0.192	IO | | | |	2.44
3.583	0.00	0.64	0.188	IO | | | |	2.39
3.667	0.00	0.64	0.183	IO | | | |	2.35
3.750	0.00	0.64	0.179	IO | | | |	2.30
3.833	0.00	0.64	0.174	IO | | | |	2.26

3.917	0.00	0.64	0.170	IO				2.21
4.000	0.00	0.64	0.166	IO				2.16
4.083	0.00	0.64	0.161	IO				2.12
4.167	0.00	0.64	0.157	IO				2.07
4.250	0.00	0.64	0.152	IO				2.03
4.333	0.00	0.64	0.148	IO				1.98
4.417	0.00	0.64	0.143	IO				1.93
4.500	0.00	0.64	0.139	IO				1.89
4.583	0.00	0.64	0.135	IO				1.84
4.667	0.00	0.64	0.130	IO				1.80
4.750	0.00	0.64	0.126	IO				1.75
4.833	0.00	0.64	0.121	IO				1.70
4.917	0.00	0.64	0.117	IO				1.66
5.000	0.00	0.64	0.113	IO				1.61
5.083	0.00	0.64	0.108	IO				1.56
5.167	0.00	0.64	0.104	IO				1.52
5.250	0.00	0.62	0.099	IO				1.46
5.333	0.00	0.60	0.095	IO				1.40
5.417	0.00	0.57	0.091	IO				1.34
5.500	0.00	0.55	0.087	IO				1.28
5.583	0.00	0.52	0.084	IO				1.23
5.667	0.00	0.50	0.080	IO				1.18
5.750	0.00	0.48	0.077	IO				1.13
5.833	0.00	0.46	0.073	IO				1.08
5.917	0.00	0.44	0.070	IO				1.03
6.000	0.00	0.42	0.067	IO				0.99
6.083	0.00	0.41	0.065	IO				0.95
6.167	0.00	0.39	0.062	IO				0.91
6.250	0.00	0.37	0.059	O				0.87
6.333	0.00	0.36	0.057	O				0.83
6.417	0.00	0.34	0.054	O				0.80
6.500	0.00	0.33	0.052	O				0.76
6.583	0.00	0.31	0.050	O				0.73
6.667	0.00	0.30	0.048	O				0.70
6.750	0.00	0.29	0.046	O				0.67
6.833	0.00	0.27	0.044	O				0.64
6.917	0.00	0.26	0.042	O				0.62
7.000	0.00	0.25	0.040	O				0.59
7.083	0.00	0.24	0.038	O				0.57
7.167	0.00	0.23	0.037	O				0.54
7.250	0.00	0.22	0.035	O				0.52
7.333	0.00	0.21	0.034	O				0.50
7.417	0.00	0.20	0.032	O				0.48
7.500	0.00	0.19	0.031	O				0.46
7.583	0.00	0.19	0.030	O				0.44
7.667	0.00	0.18	0.028	O				0.42
7.750	0.00	0.17	0.027	O				0.40
7.833	0.00	0.16	0.026	O				0.38
7.917	0.00	0.16	0.025	O				0.37
8.000	0.00	0.15	0.024	O				0.35
8.083	0.00	0.14	0.023	O				0.34
8.167	0.00	0.14	0.022	O				0.32
8.250	0.00	0.13	0.021	O				0.31
8.333	0.00	0.13	0.020	O				0.30
8.417	0.00	0.12	0.019	O				0.28
8.500	0.00	0.12	0.018	O				0.27
8.583	0.00	0.11	0.018	O				0.26
8.667	0.00	0.11	0.017	O				0.25
8.750	0.00	0.10	0.016	O				0.24
8.833	0.00	0.10	0.016	O				0.23

8.917	0.00	0.09	0.015	O					0.22
9.000	0.00	0.09	0.014	O					0.21
9.083	0.00	0.09	0.014	O					0.20
9.167	0.00	0.08	0.013	O					0.19
9.250	0.00	0.08	0.012	O					0.18
9.333	0.00	0.08	0.012	O					0.18
9.417	0.00	0.07	0.011	O					0.17
9.500	0.00	0.07	0.011	O					0.16
9.583	0.00	0.07	0.011	O					0.15
9.667	0.00	0.06	0.010	O					0.15
9.750	0.00	0.06	0.010	O					0.14
9.833	0.00	0.06	0.009	O					0.14
9.917	0.00	0.06	0.009	O					0.13
10.000	0.00	0.05	0.008	O					0.12
10.083	0.00	0.05	0.008	O					0.12
10.167	0.00	0.05	0.008	O					0.11
10.250	0.00	0.05	0.007	O					0.11
10.333	0.00	0.04	0.007	O					0.10
10.417	0.00	0.04	0.007	O					0.10
10.500	0.00	0.04	0.007	O					0.10
10.583	0.00	0.04	0.006	O					0.09
10.667	0.00	0.04	0.006	O					0.09
10.750	0.00	0.04	0.006	O					0.08
10.833	0.00	0.03	0.005	O					0.08
10.917	0.00	0.03	0.005	O					0.08
11.000	0.00	0.03	0.005	O					0.07
11.083	0.00	0.03	0.005	O					0.07
11.167	0.00	0.03	0.005	O					0.07
11.250	0.00	0.03	0.004	O					0.07
11.333	0.00	0.03	0.004	O					0.06
11.417	0.00	0.03	0.004	O					0.06
11.500	0.00	0.02	0.004	O					0.06
11.583	0.00	0.02	0.004	O					0.05
11.667	0.00	0.02	0.004	O					0.05
11.750	0.00	0.02	0.003	O					0.05
11.833	0.00	0.02	0.003	O					0.05
11.917	0.00	0.02	0.003	O					0.05
12.000	0.00	0.02	0.003	O					0.04
12.083	0.00	0.02	0.003	O					0.04
12.167	0.00	0.02	0.003	O					0.04
12.250	0.00	0.02	0.003	O					0.04
12.333	0.00	0.02	0.003	O					0.04
12.417	0.00	0.02	0.002	O					0.04
12.500	0.00	0.01	0.002	O					0.03
12.583	0.00	0.01	0.002	O					0.03
12.667	0.00	0.01	0.002	O					0.03
12.750	0.00	0.01	0.002	O					0.03
12.833	0.00	0.01	0.002	O					0.03
12.917	0.00	0.01	0.002	O					0.03
13.000	0.00	0.01	0.002	O					0.03
13.083	0.00	0.01	0.002	O					0.03
13.167	0.00	0.01	0.002	O					0.02
13.250	0.00	0.01	0.002	O					0.02
13.333	0.00	0.01	0.002	O					0.02
13.417	0.00	0.01	0.001	O					0.02
13.500	0.00	0.01	0.001	O					0.02
13.583	0.00	0.01	0.001	O					0.02
13.667	0.00	0.01	0.001	O					0.02
13.750	0.00	0.01	0.001	O					0.02
13.833	0.00	0.01	0.001	O					0.02

13.917	0.00	0.01	0.001	O	|	|	|	|	0.02
14.000	0.00	0.01	0.001	O	|	|	|	|	0.02
14.083	0.00	0.01	0.001	O	|	|	|	|	0.01
14.167	0.00	0.01	0.001	O	|	|	|	|	0.01
14.250	0.00	0.01	0.001	O	|	|	|	|	0.01
14.333	0.00	0.01	0.001	O	|	|	|	|	0.01
14.417	0.00	0.01	0.001	O	|	|	|	|	0.01
14.500	0.00	0.01	0.001	O	|	|	|	|	0.01
14.583	0.00	0.00	0.001	O	|	|	|	|	0.01
14.667	0.00	0.00	0.001	O	|	|	|	|	0.01
14.750	0.00	0.00	0.001	O	|	|	|	|	0.01
14.833	0.00	0.00	0.001	O	|	|	|	|	0.01
14.917	0.00	0.00	0.001	O	|	|	|	|	0.01
15.000	0.00	0.00	0.001	O	|	|	|	|	0.01
15.083	0.00	0.00	0.001	O	|	|	|	|	0.01
15.167	0.00	0.00	0.001	O	|	|	|	|	0.01
15.250	0.00	0.00	0.001	O	|	|	|	|	0.01
15.333	0.00	0.00	0.001	O	|	|	|	|	0.01
15.417	0.00	0.00	0.001	O	|	|	|	|	0.01
15.500	0.00	0.00	0.000	O	|	|	|	|	0.01
15.583	0.00	0.00	0.000	O	|	|	|	|	0.01
15.667	0.00	0.00	0.000	O	|	|	|	|	0.01
15.750	0.00	0.00	0.000	O	|	|	|	|	0.01
15.833	0.00	0.00	0.000	O	|	|	|	|	0.01
15.917	0.00	0.00	0.000	O	|	|	|	|	0.01
16.000	0.00	0.00	0.000	O	|	|	|	|	0.01
16.083	0.00	0.00	0.000	O	|	|	|	|	0.01
16.167	0.00	0.00	0.000	O	|	|	|	|	0.01
16.250	0.00	0.00	0.000	O	|	|	|	|	0.00
16.333	0.00	0.00	0.000	O	|	|	|	|	0.00
16.417	0.00	0.00	0.000	O	|	|	|	|	0.00
16.500	0.00	0.00	0.000	O	|	|	|	|	0.00
16.583	0.00	0.00	0.000	O	|	|	|	|	0.00
16.667	0.00	0.00	0.000	O	|	|	|	|	0.00
16.750	0.00	0.00	0.000	O	|	|	|	|	0.00
16.833	0.00	0.00	0.000	O	|	|	|	|	0.00
16.917	0.00	0.00	0.000	O	|	|	|	|	0.00
17.000	0.00	0.00	0.000	O	|	|	|	|	0.00
17.083	0.00	0.00	0.000	O	|	|	|	|	0.00
17.167	0.00	0.00	0.000	O	|	|	|	|	0.00
17.250	0.00	0.00	0.000	O	|	|	|	|	0.00
17.333	0.00	0.00	0.000	O	|	|	|	|	0.00
17.417	0.00	0.00	0.000	O	|	|	|	|	0.00
17.500	0.00	0.00	0.000	O	|	|	|	|	0.00
17.583	0.00	0.00	0.000	O	|	|	|	|	0.00
17.667	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 212
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.357 (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: 10/25/24

DEXTER VILLAGE
AREA C
5-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte

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

Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.630 (CFS)
Total volume = 0.556 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.9 3.81 5.72 7.63	Depth (Ft.)
0.083	0.56	0.01	0.002	O I	0.03
0.167	0.90	0.04	0.007	O I	0.10
0.250	0.87	0.08	0.012	O I	0.18
0.333	0.99	0.11	0.018	O I	0.27
0.417	1.08	0.15	0.024	O I	0.36
0.500	1.23	0.20	0.031	O I	0.46
0.583	1.18	0.24	0.038	O I	0.56
0.667	1.24	0.28	0.044	O I	0.65
0.750	1.31	0.32	0.051	O I	0.75
0.833	1.19	0.36	0.057	O I	0.84
0.917	1.15	0.39	0.063	O I	0.92
1.000	1.25	0.43	0.068	O I	1.00
1.083	1.48	0.47	0.075	O I	1.10
1.167	1.60	0.51	0.082	O I	1.20
1.250	1.61	0.56	0.089	O I	1.31
1.333	1.53	0.60	0.096	O I	1.41
1.417	1.73	0.64	0.103	O I	1.51
1.500	1.92	0.64	0.111	O I	1.60
1.583	1.84	0.64	0.120	O I	1.69
1.667	1.90	0.64	0.128	O I	1.77
1.750	2.22	0.64	0.138	O I	1.88
1.833	2.31	0.64	0.149	O I	1.99
1.917	2.19	0.64	0.160	O I	2.11
2.000	2.17	0.64	0.171	O I	2.22
2.083	2.24	0.64	0.182	O I	2.33
2.167	2.96	0.64	0.195	O I	2.47
2.250	3.93	0.64	0.214	O I	2.68
2.333	3.30	0.64	0.235	O I	2.89
2.417	4.98	0.64	0.259	O I	3.14
2.500	6.61	0.64	0.294	O I	3.51
2.583	7.63	0.64	0.339	O I	3.98
2.667	6.46	0.64	0.383	O I	4.44
2.750	3.23	0.64	0.412	O I	4.74
2.833	1.58	0.64	0.424	O I	4.87
2.917	1.33	0.64	0.430	O I	4.93
3.000	0.80	0.64	0.433	O I	4.96
3.083	0.23	0.64	0.432	I O	4.95
3.167	0.02	0.64	0.428	I O	4.91
3.250	0.00	0.64	0.424	I O	4.87
3.333	0.00	0.64	0.420	I O	4.82
3.417	0.00	0.64	0.415	I O	4.78
3.500	0.00	0.64	0.411	I O	4.73
3.583	0.00	0.64	0.406	I O	4.68
3.667	0.00	0.64	0.402	I O	4.64
3.750	0.00	0.64	0.398	I O	4.59
3.833	0.00	0.64	0.393	I O	4.55

3.917	0.00	0.64	0.389	I	O	|	|	|	|	4.50
4.000	0.00	0.64	0.384	I	O	|	|	|	|	4.45
4.083	0.00	0.64	0.380	I	O	|	|	|	|	4.41
4.167	0.00	0.64	0.376	I	O	|	|	|	|	4.36
4.250	0.00	0.64	0.371	I	O	|	|	|	|	4.32
4.333	0.00	0.64	0.367	I	O	|	|	|	|	4.27
4.417	0.00	0.64	0.362	I	O	|	|	|	|	4.22
4.500	0.00	0.64	0.358	I	O	|	|	|	|	4.18
4.583	0.00	0.64	0.354	I	O	|	|	|	|	4.13
4.667	0.00	0.64	0.349	I	O	|	|	|	|	4.09
4.750	0.00	0.64	0.345	I	O	|	|	|	|	4.04
4.833	0.00	0.64	0.340	I	O	|	|	|	|	3.99
4.917	0.00	0.64	0.336	I	O	|	|	|	|	3.95
5.000	0.00	0.64	0.332	I	O	|	|	|	|	3.90
5.083	0.00	0.64	0.327	I	O	|	|	|	|	3.85
5.167	0.00	0.64	0.323	I	O	|	|	|	|	3.81
5.250	0.00	0.64	0.318	I	O	|	|	|	|	3.76
5.333	0.00	0.64	0.314	I	O	|	|	|	|	3.72
5.417	0.00	0.64	0.309	I	O	|	|	|	|	3.67
5.500	0.00	0.64	0.305	I	O	|	|	|	|	3.62
5.583	0.00	0.64	0.301	I	O	|	|	|	|	3.58
5.667	0.00	0.64	0.296	I	O	|	|	|	|	3.53
5.750	0.00	0.64	0.292	I	O	|	|	|	|	3.49
5.833	0.00	0.64	0.287	I	O	|	|	|	|	3.44
5.917	0.00	0.64	0.283	I	O	|	|	|	|	3.39
6.000	0.00	0.64	0.279	I	O	|	|	|	|	3.35
6.083	0.00	0.64	0.274	I	O	|	|	|	|	3.30
6.167	0.00	0.64	0.270	I	O	|	|	|	|	3.26
6.250	0.00	0.64	0.265	I	O	|	|	|	|	3.21
6.333	0.00	0.64	0.261	I	O	|	|	|	|	3.16
6.417	0.00	0.64	0.257	I	O	|	|	|	|	3.12
6.500	0.00	0.64	0.252	I	O	|	|	|	|	3.07
6.583	0.00	0.64	0.248	I	O	|	|	|	|	3.02
6.667	0.00	0.64	0.243	I	O	|	|	|	|	2.98
6.750	0.00	0.64	0.239	I	O	|	|	|	|	2.93
6.833	0.00	0.64	0.235	I	O	|	|	|	|	2.89
6.917	0.00	0.64	0.230	I	O	|	|	|	|	2.84
7.000	0.00	0.64	0.226	I	O	|	|	|	|	2.79
7.083	0.00	0.64	0.221	I	O	|	|	|	|	2.75
7.167	0.00	0.64	0.217	I	O	|	|	|	|	2.70
7.250	0.00	0.64	0.213	I	O	|	|	|	|	2.66
7.333	0.00	0.64	0.208	I	O	|	|	|	|	2.61
7.417	0.00	0.64	0.204	I	O	|	|	|	|	2.56
7.500	0.00	0.64	0.199	I	O	|	|	|	|	2.52
7.583	0.00	0.64	0.195	I	O	|	|	|	|	2.47
7.667	0.00	0.64	0.190	I	O	|	|	|	|	2.43
7.750	0.00	0.64	0.186	I	O	|	|	|	|	2.38
7.833	0.00	0.64	0.182	I	O	|	|	|	|	2.33
7.917	0.00	0.64	0.177	I	O	|	|	|	|	2.29
8.000	0.00	0.64	0.173	I	O	|	|	|	|	2.24
8.083	0.00	0.64	0.168	I	O	|	|	|	|	2.20
8.167	0.00	0.64	0.164	I	O	|	|	|	|	2.15
8.250	0.00	0.64	0.160	I	O	|	|	|	|	2.10
8.333	0.00	0.64	0.155	I	O	|	|	|	|	2.06
8.417	0.00	0.64	0.151	I	O	|	|	|	|	2.01
8.500	0.00	0.64	0.146	I	O	|	|	|	|	1.96
8.583	0.00	0.64	0.142	I	O	|	|	|	|	1.92
8.667	0.00	0.64	0.138	I	O	|	|	|	|	1.87
8.750	0.00	0.64	0.133	I	O	|	|	|	|	1.83
8.833	0.00	0.64	0.129	I	O	|	|	|	|	1.78

8.917	0.00	0.64	0.124	I O	|	|	|	1.73
9.000	0.00	0.64	0.120	I O	|	|	|	1.69
9.083	0.00	0.64	0.116	I O	|	|	|	1.64
9.167	0.00	0.64	0.111	I O	|	|	|	1.60
9.250	0.00	0.64	0.107	I O	|	|	|	1.55
9.333	0.00	0.64	0.102	I O	|	|	|	1.50
9.417	0.00	0.61	0.098	I O	|	|	|	1.44
9.500	0.00	0.59	0.094	I O	|	|	|	1.38
9.583	0.00	0.56	0.090	I O	|	|	|	1.32
9.667	0.00	0.54	0.086	I O	|	|	|	1.27
9.750	0.00	0.52	0.082	I O	|	|	|	1.21
9.833	0.00	0.50	0.079	I O	|	|	|	1.16
9.917	0.00	0.47	0.076	IO	|	|	|	1.11
10.000	0.00	0.45	0.072	IO	|	|	|	1.07
10.083	0.00	0.44	0.069	IO	|	|	|	1.02
10.167	0.00	0.42	0.066	IO	|	|	|	0.98
10.250	0.00	0.40	0.064	IO	|	|	|	0.94
10.333	0.00	0.38	0.061	IO	|	|	|	0.90
10.417	0.00	0.37	0.058	IO	|	|	|	0.86
10.500	0.00	0.35	0.056	IO	|	|	|	0.82
10.583	0.00	0.34	0.054	IO	|	|	|	0.79
10.667	0.00	0.32	0.051	IO	|	|	|	0.75
10.750	0.00	0.31	0.049	IO	|	|	|	0.72
10.833	0.00	0.29	0.047	IO	|	|	|	0.69
10.917	0.00	0.28	0.045	IO	|	|	|	0.66
11.000	0.00	0.27	0.043	IO	|	|	|	0.63
11.083	0.00	0.26	0.041	IO	|	|	|	0.61
11.167	0.00	0.25	0.040	IO	|	|	|	0.58
11.250	0.00	0.24	0.038	O	|	|	|	0.56
11.333	0.00	0.23	0.036	O	|	|	|	0.53
11.417	0.00	0.22	0.035	O	|	|	|	0.51
11.500	0.00	0.21	0.033	O	|	|	|	0.49
11.583	0.00	0.20	0.032	O	|	|	|	0.47
11.667	0.00	0.19	0.031	O	|	|	|	0.45
11.750	0.00	0.18	0.029	O	|	|	|	0.43
11.833	0.00	0.18	0.028	O	|	|	|	0.41
11.917	0.00	0.17	0.027	O	|	|	|	0.39
12.000	0.00	0.16	0.026	O	|	|	|	0.38
12.083	0.00	0.15	0.025	O	|	|	|	0.36
12.167	0.00	0.15	0.024	O	|	|	|	0.35
12.250	0.00	0.14	0.023	O	|	|	|	0.33
12.333	0.00	0.14	0.022	O	|	|	|	0.32
12.417	0.00	0.13	0.021	O	|	|	|	0.30
12.500	0.00	0.12	0.020	O	|	|	|	0.29
12.583	0.00	0.12	0.019	O	|	|	|	0.28
12.667	0.00	0.11	0.018	O	|	|	|	0.27
12.750	0.00	0.11	0.017	O	|	|	|	0.26
12.833	0.00	0.10	0.017	O	|	|	|	0.25
12.917	0.00	0.10	0.016	O	|	|	|	0.23
13.000	0.00	0.10	0.015	O	|	|	|	0.22
13.083	0.00	0.09	0.015	O	|	|	|	0.22
13.167	0.00	0.09	0.014	O	|	|	|	0.21
13.250	0.00	0.08	0.013	O	|	|	|	0.20
13.333	0.00	0.08	0.013	O	|	|	|	0.19
13.417	0.00	0.08	0.012	O	|	|	|	0.18
13.500	0.00	0.07	0.012	O	|	|	|	0.17
13.583	0.00	0.07	0.011	O	|	|	|	0.17
13.667	0.00	0.07	0.011	O	|	|	|	0.16
13.750	0.00	0.06	0.010	O	|	|	|	0.15
13.833	0.00	0.06	0.010	O	|	|	|	0.15

13.917	0.00	0.06	0.009	O				0.14
14.000	0.00	0.06	0.009	O				0.13
14.083	0.00	0.05	0.009	O				0.13
14.167	0.00	0.05	0.008	O				0.12
14.250	0.00	0.05	0.008	O				0.12
14.333	0.00	0.05	0.008	O				0.11
14.417	0.00	0.05	0.007	O				0.11
14.500	0.00	0.04	0.007	O				0.10
14.583	0.00	0.04	0.007	O				0.10
14.667	0.00	0.04	0.006	O				0.09
14.750	0.00	0.04	0.006	O				0.09
14.833	0.00	0.04	0.006	O				0.09
14.917	0.00	0.04	0.006	O				0.08
15.000	0.00	0.03	0.005	O				0.08
15.083	0.00	0.03	0.005	O				0.08
15.167	0.00	0.03	0.005	O				0.07
15.250	0.00	0.03	0.005	O				0.07
15.333	0.00	0.03	0.005	O				0.07
15.417	0.00	0.03	0.004	O				0.06
15.500	0.00	0.03	0.004	O				0.06
15.583	0.00	0.03	0.004	O				0.06
15.667	0.00	0.02	0.004	O				0.06
15.750	0.00	0.02	0.004	O				0.05
15.833	0.00	0.02	0.004	O				0.05
15.917	0.00	0.02	0.003	O				0.05
16.000	0.00	0.02	0.003	O				0.05
16.083	0.00	0.02	0.003	O				0.05
16.167	0.00	0.02	0.003	O				0.04
16.250	0.00	0.02	0.003	O				0.04
16.333	0.00	0.02	0.003	O				0.04
16.417	0.00	0.02	0.003	O				0.04
16.500	0.00	0.02	0.002	O				0.04
16.583	0.00	0.01	0.002	O				0.04
16.667	0.00	0.01	0.002	O				0.03
16.750	0.00	0.01	0.002	O				0.03
16.833	0.00	0.01	0.002	O				0.03
16.917	0.00	0.01	0.002	O				0.03
17.000	0.00	0.01	0.002	O				0.03
17.083	0.00	0.01	0.002	O				0.03
17.167	0.00	0.01	0.002	O				0.03
17.250	0.00	0.01	0.002	O				0.02
17.333	0.00	0.01	0.002	O				0.02
17.417	0.00	0.01	0.002	O				0.02
17.500	0.00	0.01	0.001	O				0.02
17.583	0.00	0.01	0.001	O				0.02
17.667	0.00	0.01	0.001	O				0.02
17.750	0.00	0.01	0.001	O				0.02
17.833	0.00	0.01	0.001	O				0.02
17.917	0.00	0.01	0.001	O				0.02
18.000	0.00	0.01	0.001	O				0.02
18.083	0.00	0.01	0.001	O				0.02
18.167	0.00	0.01	0.001	O				0.02
18.250	0.00	0.01	0.001	O				0.01
18.333	0.00	0.01	0.001	O				0.01
18.417	0.00	0.01	0.001	O				0.01
18.500	0.00	0.01	0.001	O				0.01
18.583	0.00	0.01	0.001	O				0.01
18.667	0.00	0.01	0.001	O				0.01
18.750	0.00	0.00	0.001	O				0.01
18.833	0.00	0.00	0.001	O				0.01

18.917	0.00	0.00	0.001	O	|	|	|	|	0.01
19.000	0.00	0.00	0.001	O	|	|	|	|	0.01
19.083	0.00	0.00	0.001	O	|	|	|	|	0.01
19.167	0.00	0.00	0.001	O	|	|	|	|	0.01
19.250	0.00	0.00	0.001	O	|	|	|	|	0.01
19.333	0.00	0.00	0.001	O	|	|	|	|	0.01
19.417	0.00	0.00	0.001	O	|	|	|	|	0.01
19.500	0.00	0.00	0.001	O	|	|	|	|	0.01
19.583	0.00	0.00	0.001	O	|	|	|	|	0.01
19.667	0.00	0.00	0.000	O	|	|	|	|	0.01
19.750	0.00	0.00	0.000	O	|	|	|	|	0.01
19.833	0.00	0.00	0.000	O	|	|	|	|	0.01
19.917	0.00	0.00	0.000	O	|	|	|	|	0.01
20.000	0.00	0.00	0.000	O	|	|	|	|	0.01
20.083	0.00	0.00	0.000	O	|	|	|	|	0.01
20.167	0.00	0.00	0.000	O	|	|	|	|	0.01
20.250	0.00	0.00	0.000	O	|	|	|	|	0.01
20.333	0.00	0.00	0.000	O	|	|	|	|	0.01
20.417	0.00	0.00	0.000	O	|	|	|	|	0.00
20.500	0.00	0.00	0.000	O	|	|	|	|	0.00
20.583	0.00	0.00	0.000	O	|	|	|	|	0.00
20.667	0.00	0.00	0.000	O	|	|	|	|	0.00
20.750	0.00	0.00	0.000	O	|	|	|	|	0.00
20.833	0.00	0.00	0.000	O	|	|	|	|	0.00
20.917	0.00	0.00	0.000	O	|	|	|	|	0.00
21.000	0.00	0.00	0.000	O	|	|	|	|	0.00
21.083	0.00	0.00	0.000	O	|	|	|	|	0.00
21.167	0.00	0.00	0.000	O	|	|	|	|	0.00
21.250	0.00	0.00	0.000	O	|	|	|	|	0.00
21.333	0.00	0.00	0.000	O	|	|	|	|	0.00
21.417	0.00	0.00	0.000	O	|	|	|	|	0.00
21.500	0.00	0.00	0.000	O	|	|	|	|	0.00
21.583	0.00	0.00	0.000	O	|	|	|	|	0.00
21.667	0.00	0.00	0.000	O	|	|	|	|	0.00
21.750	0.00	0.00	0.000	O	|	|	|	|	0.00
21.833	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 262
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.556 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
5-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.027 (CFS)
Total volume = 0.752 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.8 3.51 5.27 7.03	Depth (Ft.)
0.083	0.30	0.01	0.001	OI | | | |	0.01
0.167	0.55	0.02	0.004	O I | | | |	0.06
0.250	0.61	0.05	0.008	O I | | | |	0.11
0.333	0.62	0.07	0.011	O I | | | |	0.17
0.417	0.62	0.09	0.015	O I | | | |	0.22
0.500	0.68	0.12	0.019	O I | | | |	0.28
0.583	0.71	0.14	0.023	O I | | | |	0.33
0.667	0.72	0.17	0.027	O I | | | |	0.39
0.750	0.72	0.19	0.030	O I | | | |	0.44
0.833	0.72	0.21	0.034	O I | | | |	0.50
0.917	0.72	0.23	0.037	|O I | | | |	0.55
1.000	0.78	0.26	0.041	|O I | | | |	0.60
1.083	0.81	0.28	0.044	|O I | | | |	0.65
1.167	0.82	0.30	0.048	|O I | | | |	0.71
1.250	0.82	0.32	0.051	|O I | | | |	0.76
1.333	0.82	0.34	0.055	|O I | | | |	0.81
1.417	0.82	0.36	0.058	|O I | | | |	0.85
1.500	0.82	0.38	0.061	|O I | | | |	0.90
1.583	0.82	0.40	0.064	|O I | | | |	0.94
1.667	0.82	0.42	0.067	|O I | | | |	0.98
1.750	0.82	0.44	0.070	|O I | | | |	1.02
1.833	0.82	0.45	0.072	| OI | | | |	1.06
1.917	0.82	0.47	0.075	| OI | | | |	1.10
2.000	0.88	0.48	0.077	| O I | | | |	1.14
2.083	0.86	0.50	0.080	| OI | | | |	1.17
2.167	0.89	0.52	0.082	| O I | | | |	1.21
2.250	0.92	0.53	0.085	| O I | | | |	1.25
2.333	0.92	0.55	0.088	| O I | | | |	1.29
2.417	0.92	0.56	0.090	| O I | | | |	1.32
2.500	0.92	0.58	0.092	| O I | | | |	1.36
2.583	0.92	0.59	0.095	| O I | | | |	1.39
2.667	0.92	0.61	0.097	| O I | | | |	1.43
2.750	0.98	0.62	0.099	| O I | | | |	1.46
2.833	1.02	0.64	0.102	| O I | | | |	1.50
2.917	1.03	0.64	0.104	| O I | | | |	1.53
3.000	1.03	0.64	0.107	| O I | | | |	1.55
3.083	1.03	0.64	0.110	| O I | | | |	1.58
3.167	1.09	0.64	0.113	| O I | | | |	1.61
3.250	1.12	0.64	0.116	| O I | | | |	1.64
3.333	1.13	0.64	0.119	| O I | | | |	1.68
3.417	1.19	0.64	0.123	| O I | | | |	1.72
3.500	1.29	0.64	0.127	| O I | | | |	1.76
3.583	1.39	0.64	0.132	| O I | | | |	1.81
3.667	1.43	0.64	0.137	| O I | | | |	1.87
3.750	1.50	0.64	0.143	| O I | | | |	1.92
3.833	1.53	0.64	0.149	| O I | | | |	1.99

3.917	1.60	0.64	0.155	O	I				2.05
4.000	1.64	0.64	0.162	O	I				2.12
4.083	1.70	0.64	0.169	O	I				2.20
4.167	1.80	0.64	0.176	O	I				2.28
4.250	1.90	0.64	0.185	O	I				2.37
4.333	2.00	0.64	0.194	O	I				2.46
4.417	2.11	0.64	0.204	O	I				2.56
4.500	2.15	0.64	0.214	O	I				2.67
4.583	2.21	0.64	0.224	O	I				2.78
4.667	2.31	0.64	0.236	O	I				2.90
4.750	2.42	0.64	0.247	O	I				3.02
4.833	2.46	0.64	0.260	O	I				3.15
4.917	2.56	0.64	0.273	O	I				3.29
5.000	2.71	0.64	0.286	O	I				3.43
5.083	3.26	0.64	0.303	O	I				3.60
5.167	4.04	0.64	0.323	O	I				3.82
5.250	4.66	0.64	0.349	O	I				4.08
5.333	5.17	0.64	0.378	O	I				4.39
5.417	5.85	0.64	0.412	O	I				4.74
5.500	7.03	0.64	0.452	O	I				5.16
5.583	4.23	0.64	0.486	O	I				5.52
5.667	1.64	0.64	0.502	O	I				5.68
5.750	0.80	0.64	0.506	OI					5.73
5.833	0.57	0.64	0.506	O					5.73
5.917	0.40	0.64	0.505	IO					5.72
6.000	0.26	0.64	0.503	IO					5.69
6.083	0.09	0.64	0.500	I O					5.66
6.167	0.01	0.64	0.496	I O					5.62
6.250	0.00	0.64	0.491	I O					5.57
6.333	0.00	0.64	0.487	I O					5.53
6.417	0.00	0.64	0.483	I O					5.48
6.500	0.00	0.64	0.478	I O					5.43
6.583	0.00	0.64	0.474	I O					5.39
6.667	0.00	0.64	0.469	I O					5.34
6.750	0.00	0.64	0.465	I O					5.30
6.833	0.00	0.64	0.461	I O					5.25
6.917	0.00	0.64	0.456	I O					5.20
7.000	0.00	0.64	0.452	I O					5.16
7.083	0.00	0.64	0.447	I O					5.11
7.167	0.00	0.64	0.443	I O					5.07
7.250	0.00	0.64	0.438	I O					5.02
7.333	0.00	0.64	0.434	I O					4.97
7.417	0.00	0.64	0.430	I O					4.93
7.500	0.00	0.64	0.425	I O					4.88
7.583	0.00	0.64	0.421	I O					4.84
7.667	0.00	0.64	0.416	I O					4.79
7.750	0.00	0.64	0.412	I O					4.74
7.833	0.00	0.64	0.408	I O					4.70
7.917	0.00	0.64	0.403	I O					4.65
8.000	0.00	0.64	0.399	I O					4.60
8.083	0.00	0.64	0.394	I O					4.56
8.167	0.00	0.64	0.390	I O					4.51
8.250	0.00	0.64	0.386	I O					4.47
8.333	0.00	0.64	0.381	I O					4.42
8.417	0.00	0.64	0.377	I O					4.37
8.500	0.00	0.64	0.372	I O					4.33
8.583	0.00	0.64	0.368	I O					4.28
8.667	0.00	0.64	0.364	I O					4.24
8.750	0.00	0.64	0.359	I O					4.19
8.833	0.00	0.64	0.355	I O					4.14

8.917	0.00	0.64	0.350	I	O	|	|	|	4.10
9.000	0.00	0.64	0.346	I	O	|	|	|	4.05
9.083	0.00	0.64	0.342	I	O	|	|	|	4.01
9.167	0.00	0.64	0.337	I	O	|	|	|	3.96
9.250	0.00	0.64	0.333	I	O	|	|	|	3.91
9.333	0.00	0.64	0.328	I	O	|	|	|	3.87
9.417	0.00	0.64	0.324	I	O	|	|	|	3.82
9.500	0.00	0.64	0.319	I	O	|	|	|	3.77
9.583	0.00	0.64	0.315	I	O	|	|	|	3.73
9.667	0.00	0.64	0.311	I	O	|	|	|	3.68
9.750	0.00	0.64	0.306	I	O	|	|	|	3.64
9.833	0.00	0.64	0.302	I	O	|	|	|	3.59
9.917	0.00	0.64	0.297	I	O	|	|	|	3.54
10.000	0.00	0.64	0.293	I	O	|	|	|	3.50
10.083	0.00	0.64	0.289	I	O	|	|	|	3.45
10.167	0.00	0.64	0.284	I	O	|	|	|	3.41
10.250	0.00	0.64	0.280	I	O	|	|	|	3.36
10.333	0.00	0.64	0.275	I	O	|	|	|	3.31
10.417	0.00	0.64	0.271	I	O	|	|	|	3.27
10.500	0.00	0.64	0.267	I	O	|	|	|	3.22
10.583	0.00	0.64	0.262	I	O	|	|	|	3.18
10.667	0.00	0.64	0.258	I	O	|	|	|	3.13
10.750	0.00	0.64	0.253	I	O	|	|	|	3.08
10.833	0.00	0.64	0.249	I	O	|	|	|	3.04
10.917	0.00	0.64	0.245	I	O	|	|	|	2.99
11.000	0.00	0.64	0.240	I	O	|	|	|	2.94
11.083	0.00	0.64	0.236	I	O	|	|	|	2.90
11.167	0.00	0.64	0.231	I	O	|	|	|	2.85
11.250	0.00	0.64	0.227	I	O	|	|	|	2.81
11.333	0.00	0.64	0.222	I	O	|	|	|	2.76
11.417	0.00	0.64	0.218	I	O	|	|	|	2.71
11.500	0.00	0.64	0.214	I	O	|	|	|	2.67
11.583	0.00	0.64	0.209	I	O	|	|	|	2.62
11.667	0.00	0.64	0.205	I	O	|	|	|	2.58
11.750	0.00	0.64	0.200	I	O	|	|	|	2.53
11.833	0.00	0.64	0.196	I	O	|	|	|	2.48
11.917	0.00	0.64	0.192	I	O	|	|	|	2.44
12.000	0.00	0.64	0.187	I	O	|	|	|	2.39
12.083	0.00	0.64	0.183	I	O	|	|	|	2.35
12.167	0.00	0.64	0.178	I	O	|	|	|	2.30
12.250	0.00	0.64	0.174	I	O	|	|	|	2.25
12.333	0.00	0.64	0.170	I	O	|	|	|	2.21
12.417	0.00	0.64	0.165	I	O	|	|	|	2.16
12.500	0.00	0.64	0.161	I	O	|	|	|	2.11
12.583	0.00	0.64	0.156	I	O	|	|	|	2.07
12.667	0.00	0.64	0.152	I	O	|	|	|	2.02
12.750	0.00	0.64	0.148	I	O	|	|	|	1.98
12.833	0.00	0.64	0.143	I	O	|	|	|	1.93
12.917	0.00	0.64	0.139	I	O	|	|	|	1.88
13.000	0.00	0.64	0.134	I	O	|	|	|	1.84
13.083	0.00	0.64	0.130	I	O	|	|	|	1.79
13.167	0.00	0.64	0.126	I	O	|	|	|	1.75
13.250	0.00	0.64	0.121	I	O	|	|	|	1.70
13.333	0.00	0.64	0.117	I	O	|	|	|	1.65
13.417	0.00	0.64	0.112	I	O	|	|	|	1.61
13.500	0.00	0.64	0.108	I	O	|	|	|	1.56
13.583	0.00	0.64	0.103	I	O	|	|	|	1.52
13.667	0.00	0.62	0.099	I	O	|	|	|	1.46
13.750	0.00	0.60	0.095	I	O	|	|	|	1.40
13.833	0.00	0.57	0.091	I	O	|	|	|	1.34

13.917	0.00	0.55	0.087	I O	|	|	|	1.28
14.000	0.00	0.52	0.083	I O	|	|	|	1.23
14.083	0.00	0.50	0.080	I O	|	|	|	1.17
14.167	0.00	0.48	0.076	I O	|	|	|	1.12
14.250	0.00	0.46	0.073	I O	|	|	|	1.08
14.333	0.00	0.44	0.070	I O	|	|	|	1.03
14.417	0.00	0.42	0.067	IO	|	|	|	0.99
14.500	0.00	0.40	0.064	IO	|	|	|	0.95
14.583	0.00	0.39	0.062	IO	|	|	|	0.91
14.667	0.00	0.37	0.059	IO	|	|	|	0.87
14.750	0.00	0.35	0.057	IO	|	|	|	0.83
14.833	0.00	0.34	0.054	IO	|	|	|	0.80
14.917	0.00	0.33	0.052	IO	|	|	|	0.76
15.000	0.00	0.31	0.050	IO	|	|	|	0.73
15.083	0.00	0.30	0.048	IO	|	|	|	0.70
15.167	0.00	0.29	0.046	IO	|	|	|	0.67
15.250	0.00	0.27	0.044	IO	|	|	|	0.64
15.333	0.00	0.26	0.042	IO	|	|	|	0.61
15.417	0.00	0.25	0.040	IO	|	|	|	0.59
15.500	0.00	0.24	0.038	IO	|	|	|	0.56
15.583	0.00	0.23	0.037	IO	|	|	|	0.54
15.667	0.00	0.22	0.035	IO	|	|	|	0.52
15.750	0.00	0.21	0.034	O	|	|	|	0.49
15.833	0.00	0.20	0.032	O	|	|	|	0.47
15.917	0.00	0.19	0.031	O	|	|	|	0.45
16.000	0.00	0.19	0.030	O	|	|	|	0.43
16.083	0.00	0.18	0.028	O	|	|	|	0.42
16.167	0.00	0.17	0.027	O	|	|	|	0.40
16.250	0.00	0.16	0.026	O	|	|	|	0.38
16.333	0.00	0.16	0.025	O	|	|	|	0.37
16.417	0.00	0.15	0.024	O	|	|	|	0.35
16.500	0.00	0.14	0.023	O	|	|	|	0.34
16.583	0.00	0.14	0.022	O	|	|	|	0.32
16.667	0.00	0.13	0.021	O	|	|	|	0.31
16.750	0.00	0.13	0.020	O	|	|	|	0.29
16.833	0.00	0.12	0.019	O	|	|	|	0.28
16.917	0.00	0.12	0.018	O	|	|	|	0.27
17.000	0.00	0.11	0.018	O	|	|	|	0.26
17.083	0.00	0.11	0.017	O	|	|	|	0.25
17.167	0.00	0.10	0.016	O	|	|	|	0.24
17.250	0.00	0.10	0.015	O	|	|	|	0.23
17.333	0.00	0.09	0.015	O	|	|	|	0.22
17.417	0.00	0.09	0.014	O	|	|	|	0.21
17.500	0.00	0.09	0.014	O	|	|	|	0.20
17.583	0.00	0.08	0.013	O	|	|	|	0.19
17.667	0.00	0.08	0.012	O	|	|	|	0.18
17.750	0.00	0.07	0.012	O	|	|	|	0.18
17.833	0.00	0.07	0.011	O	|	|	|	0.17
17.917	0.00	0.07	0.011	O	|	|	|	0.16
18.000	0.00	0.07	0.010	O	|	|	|	0.15
18.083	0.00	0.06	0.010	O	|	|	|	0.15
18.167	0.00	0.06	0.010	O	|	|	|	0.14
18.250	0.00	0.06	0.009	O	|	|	|	0.14
18.333	0.00	0.06	0.009	O	|	|	|	0.13
18.417	0.00	0.05	0.008	O	|	|	|	0.12
18.500	0.00	0.05	0.008	O	|	|	|	0.12
18.583	0.00	0.05	0.008	O	|	|	|	0.11
18.667	0.00	0.05	0.007	O	|	|	|	0.11
18.750	0.00	0.04	0.007	O	|	|	|	0.10
18.833	0.00	0.04	0.007	O	|	|	|	0.10

18.917	0.00	0.04	0.007	O	|	|	|	0.10
19.000	0.00	0.04	0.006	O	|	|	|	0.09
19.083	0.00	0.04	0.006	O	|	|	|	0.09
19.167	0.00	0.04	0.006	O	|	|	|	0.08
19.250	0.00	0.03	0.005	O	|	|	|	0.08
19.333	0.00	0.03	0.005	O	|	|	|	0.08
19.417	0.00	0.03	0.005	O	|	|	|	0.07
19.500	0.00	0.03	0.005	O	|	|	|	0.07
19.583	0.00	0.03	0.005	O	|	|	|	0.07
19.667	0.00	0.03	0.004	O	|	|	|	0.06
19.750	0.00	0.03	0.004	O	|	|	|	0.06
19.833	0.00	0.03	0.004	O	|	|	|	0.06
19.917	0.00	0.02	0.004	O	|	|	|	0.06
20.000	0.00	0.02	0.004	O	|	|	|	0.05
20.083	0.00	0.02	0.004	O	|	|	|	0.05
20.167	0.00	0.02	0.003	O	|	|	|	0.05
20.250	0.00	0.02	0.003	O	|	|	|	0.05
20.333	0.00	0.02	0.003	O	|	|	|	0.05
20.417	0.00	0.02	0.003	O	|	|	|	0.04
20.500	0.00	0.02	0.003	O	|	|	|	0.04
20.583	0.00	0.02	0.003	O	|	|	|	0.04
20.667	0.00	0.02	0.003	O	|	|	|	0.04
20.750	0.00	0.02	0.003	O	|	|	|	0.04
20.833	0.00	0.02	0.002	O	|	|	|	0.04
20.917	0.00	0.01	0.002	O	|	|	|	0.03
21.000	0.00	0.01	0.002	O	|	|	|	0.03
21.083	0.00	0.01	0.002	O	|	|	|	0.03
21.167	0.00	0.01	0.002	O	|	|	|	0.03
21.250	0.00	0.01	0.002	O	|	|	|	0.03
21.333	0.00	0.01	0.002	O	|	|	|	0.03
21.417	0.00	0.01	0.002	O	|	|	|	0.03
21.500	0.00	0.01	0.002	O	|	|	|	0.03
21.583	0.00	0.01	0.002	O	|	|	|	0.02
21.667	0.00	0.01	0.002	O	|	|	|	0.02
21.750	0.00	0.01	0.001	O	|	|	|	0.02
21.833	0.00	0.01	0.001	O	|	|	|	0.02
21.917	0.00	0.01	0.001	O	|	|	|	0.02
22.000	0.00	0.01	0.001	O	|	|	|	0.02
22.083	0.00	0.01	0.001	O	|	|	|	0.02
22.167	0.00	0.01	0.001	O	|	|	|	0.02
22.250	0.00	0.01	0.001	O	|	|	|	0.02
22.333	0.00	0.01	0.001	O	|	|	|	0.02
22.417	0.00	0.01	0.001	O	|	|	|	0.02
22.500	0.00	0.01	0.001	O	|	|	|	0.01
22.583	0.00	0.01	0.001	O	|	|	|	0.01
22.667	0.00	0.01	0.001	O	|	|	|	0.01
22.750	0.00	0.01	0.001	O	|	|	|	0.01
22.833	0.00	0.01	0.001	O	|	|	|	0.01
22.917	0.00	0.01	0.001	O	|	|	|	0.01
23.000	0.00	0.00	0.001	O	|	|	|	0.01
23.083	0.00	0.00	0.001	O	|	|	|	0.01
23.167	0.00	0.00	0.001	O	|	|	|	0.01
23.250	0.00	0.00	0.001	O	|	|	|	0.01
23.333	0.00	0.00	0.001	O	|	|	|	0.01
23.417	0.00	0.00	0.001	O	|	|	|	0.01
23.500	0.00	0.00	0.001	O	|	|	|	0.01
23.583	0.00	0.00	0.001	O	|	|	|	0.01
23.667	0.00	0.00	0.001	O	|	|	|	0.01
23.750	0.00	0.00	0.001	O	|	|	|	0.01
23.833	0.00	0.00	0.001	O	|	|	|	0.01

23.917	0.00	0.00	0.000	O	|	|	|	|	0.01
24.000	0.00	0.00	0.000	O	|	|	|	|	0.01
24.083	0.00	0.00	0.000	O	|	|	|	|	0.01
24.167	0.00	0.00	0.000	O	|	|	|	|	0.01
24.250	0.00	0.00	0.000	O	|	|	|	|	0.01
24.333	0.00	0.00	0.000	O	|	|	|	|	0.01
24.417	0.00	0.00	0.000	O	|	|	|	|	0.01
24.500	0.00	0.00	0.000	O	|	|	|	|	0.01
24.583	0.00	0.00	0.000	O	|	|	|	|	0.01
24.667	0.00	0.00	0.000	O	|	|	|	|	0.00
24.750	0.00	0.00	0.000	O	|	|	|	|	0.00
24.833	0.00	0.00	0.000	O	|	|	|	|	0.00
24.917	0.00	0.00	0.000	O	|	|	|	|	0.00
25.000	0.00	0.00	0.000	O	|	|	|	|	0.00
25.083	0.00	0.00	0.000	O	|	|	|	|	0.00
25.167	0.00	0.00	0.000	O	|	|	|	|	0.00
25.250	0.00	0.00	0.000	O	|	|	|	|	0.00
25.333	0.00	0.00	0.000	O	|	|	|	|	0.00
25.417	0.00	0.00	0.000	O	|	|	|	|	0.00
25.500	0.00	0.00	0.000	O	|	|	|	|	0.00
25.583	0.00	0.00	0.000	O	|	|	|	|	0.00
25.667	0.00	0.00	0.000	O	|	|	|	|	0.00
25.750	0.00	0.00	0.000	O	|	|	|	|	0.00
25.833	0.00	0.00	0.000	O	|	|	|	|	0.00
25.917	0.00	0.00	0.000	O	|	|	|	|	0.00
26.000	0.00	0.00	0.000	O	|	|	|	|	0.00
26.083	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 313
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.752 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
5-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.039 (CFS)
Total volume = 1.239 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.5	1.02	1.53	2.04	Depth (Ft.)
0.083	0.07	0.00	0.000	OI	|	|	|	|	0.00
0.167	0.11	0.01	0.001	OI	|	|	|	|	0.01
0.250	0.12	0.01	0.002	OI	|	|	|	|	0.02
0.333	0.16	0.02	0.002	O I	|	|	|	|	0.04
0.417	0.18	0.02	0.003	O I	|	|	|	|	0.05
0.500	0.18	0.03	0.005	O I	|	|	|	|	0.07
0.583	0.18	0.03	0.006	O I	|	|	|	|	0.08
0.667	0.18	0.04	0.007	O I	|	|	|	|	0.10
0.750	0.18	0.05	0.007	O I	|	|	|	|	0.11
0.833	0.22	0.05	0.008	O I	|	|	|	|	0.12
0.917	0.24	0.06	0.010	O I	|	|	|	|	0.14
1.000	0.24	0.07	0.011	O I	|	|	|	|	0.16
1.083	0.20	0.07	0.012	O I	|	|	|	|	0.17
1.167	0.18	0.08	0.013	OI	|	|	|	|	0.19
1.250	0.18	0.08	0.013	OI	|	|	|	|	0.20
1.333	0.18	0.09	0.014	OI	|	|	|	|	0.21
1.417	0.18	0.09	0.015	OI	|	|	|	|	0.22
1.500	0.18	0.10	0.015	OI	|	|	|	|	0.22
1.583	0.18	0.10	0.016	OI	|	|	|	|	0.23
1.667	0.18	0.10	0.016	OI	|	|	|	|	0.24
1.750	0.18	0.11	0.017	OI	|	|	|	|	0.25
1.833	0.22	0.11	0.017	O I	|	|	|	|	0.26
1.917	0.24	0.11	0.018	O I	|	|	|	|	0.27
2.000	0.24	0.12	0.019	O I	|	|	|	|	0.28
2.083	0.24	0.12	0.020	O I	|	|	|	|	0.29
2.167	0.24	0.13	0.021	OI	|	|	|	|	0.30
2.250	0.24	0.13	0.021	OI	|	|	|	|	0.32
2.333	0.24	0.14	0.022	OI	|	|	|	|	0.33
2.417	0.24	0.14	0.023	OI	|	|	|	|	0.34
2.500	0.24	0.15	0.023	OI	|	|	|	|	0.35
2.583	0.28	0.15	0.024	O I	|	|	|	|	0.36
2.667	0.30	0.16	0.025	O I	|	|	|	|	0.37
2.750	0.30	0.16	0.026	O I	|	|	|	|	0.38
2.833	0.30	0.17	0.027	O I	|	|	|	|	0.40
2.917	0.30	0.17	0.028	O I	|	|	|	|	0.41
3.000	0.30	0.18	0.029	O I	|	|	|	|	0.42
3.083	0.30	0.19	0.030	O I	|	|	|	|	0.43
3.167	0.30	0.19	0.030	O I	|	|	|	|	0.45
3.250	0.30	0.19	0.031	OI	|	|	|	|	0.46
3.333	0.30	0.20	0.032	OI	|	|	|	|	0.47
3.417	0.30	0.20	0.032	OI	|	|	|	|	0.48
3.500	0.30	0.21	0.033	OI	|	|	|	|	0.49
3.583	0.30	0.21	0.034	OI	|	|	|	|	0.50
3.667	0.30	0.22	0.034	OI	|	|	|	|	0.50
3.750	0.30	0.22	0.035	OI	|	|	|	|	0.51
3.833	0.34	0.22	0.036	O I	|	|	|	|	0.52

3.917	0.36	0.23	0.036	O I				0.53
4.000	0.36	0.23	0.037	O I				0.55
4.083	0.36	0.24	0.038	O I				0.56
4.167	0.36	0.24	0.039	O I				0.57
4.250	0.36	0.25	0.040	O I				0.58
4.333	0.40	0.25	0.041	O I				0.60
4.417	0.42	0.26	0.042	O I				0.61
4.500	0.42	0.27	0.043	O I				0.63
4.583	0.42	0.27	0.044	O I				0.64
4.667	0.42	0.28	0.045	O I				0.66
4.750	0.42	0.29	0.046	O I				0.67
4.833	0.46	0.29	0.047	O I				0.69
4.917	0.48	0.30	0.048	O I				0.70
5.000	0.48	0.31	0.049	O I				0.72
5.083	0.41	0.31	0.050	O I				0.73
5.167	0.37	0.32	0.050	OI				0.74
5.250	0.36	0.32	0.051	OI				0.75
5.333	0.40	0.32	0.051	OI				0.75
5.417	0.42	0.32	0.052	OI				0.76
5.500	0.42	0.33	0.052	OI				0.77
5.583	0.46	0.33	0.053	O I				0.78
5.667	0.48	0.34	0.054	O I				0.79
5.750	0.48	0.34	0.055	O I				0.81
5.833	0.48	0.35	0.056	O I				0.82
5.917	0.48	0.36	0.057	O I				0.83
6.000	0.48	0.36	0.058	O I				0.85
6.083	0.52	0.37	0.058	O I				0.86
6.167	0.54	0.37	0.060	O I				0.88
6.250	0.54	0.38	0.061	O I				0.89
6.333	0.54	0.39	0.062	O I				0.91
6.417	0.54	0.39	0.063	O I				0.92
6.500	0.54	0.40	0.064	O I				0.94
6.583	0.58	0.41	0.065	O I				0.95
6.667	0.60	0.41	0.066	O I				0.97
6.750	0.60	0.42	0.067	O I				0.99
6.833	0.60	0.43	0.068	O I				1.01
6.917	0.60	0.44	0.070	O I				1.02
7.000	0.60	0.44	0.071	O I				1.04
7.083	0.60	0.45	0.072	O I				1.05
7.167	0.60	0.46	0.073	O I				1.07
7.250	0.60	0.46	0.074	O I				1.08
7.333	0.64	0.47	0.075	O I				1.10
7.417	0.66	0.48	0.076	O I				1.12
7.500	0.66	0.48	0.077	O I				1.13
7.583	0.70	0.49	0.078	O I				1.15
7.667	0.72	0.50	0.080	O I				1.18
7.750	0.72	0.51	0.081	O I				1.20
7.833	0.76	0.52	0.083	O I				1.22
7.917	0.78	0.53	0.085	O I				1.24
8.000	0.78	0.54	0.086	O I				1.27
8.083	0.85	0.55	0.088	O I				1.30
8.167	0.89	0.57	0.090	O I				1.33
8.250	0.90	0.58	0.092	O I				1.36
8.333	0.90	0.59	0.095	O I				1.39
8.417	0.90	0.61	0.097	O I				1.42
8.500	0.90	0.62	0.099	O I				1.45
8.583	0.93	0.63	0.101	O I				1.48
8.667	0.96	0.64	0.103	O I				1.51
8.750	0.96	0.64	0.105	O I				1.53
8.833	0.99	0.64	0.107	O I				1.56

8.917	1.02	0.64	0.110	|	| O	I|	|	|	1.58
9.000	1.02	0.64	0.112	|	| O	I	|	|	1.61
9.083	1.09	0.64	0.115	|	| O	|I	|	|	1.64
9.167	1.13	0.64	0.119	|	| O	|I	|	|	1.67
9.250	1.14	0.64	0.122	|	| O	|I	|	|	1.71
9.333	1.17	0.64	0.126	|	| O	| I	|	|	1.75
9.417	1.20	0.64	0.129	|	| O	| I	|	|	1.79
9.500	1.20	0.64	0.133	|	| O	| I	|	|	1.83
9.583	1.23	0.64	0.137	|	| O	| I	|	|	1.87
9.667	1.26	0.64	0.141	|	| O	| I	|	|	1.91
9.750	1.26	0.64	0.146	|	| O	| I	|	|	1.96
9.833	1.29	0.64	0.150	|	| O	| I	|	|	2.00
9.917	1.32	0.64	0.154	|	| O	| I	|	|	2.05
10.000	1.32	0.64	0.159	|	| O	| I	|	|	2.10
10.083	1.07	0.64	0.163	|	| O	I	|	|	2.14
10.167	0.92	0.64	0.165	|	| O	I |	|	|	2.16
10.250	0.90	0.64	0.167	|	| O	I |	|	|	2.18
10.333	0.90	0.64	0.169	|	| O	I |	|	|	2.20
10.417	0.90	0.64	0.171	|	| O	I |	|	|	2.22
10.500	0.90	0.64	0.173	|	| O	I |	|	|	2.24
10.583	1.08	0.64	0.175	|	| O	I	|	|	2.26
10.667	1.18	0.64	0.178	|	| O	| I	|	|	2.30
10.750	1.20	0.64	0.182	|	| O	| I	|	|	2.34
10.833	1.20	0.64	0.186	|	| O	| I	|	|	2.38
10.917	1.20	0.64	0.190	|	| O	| I	|	|	2.42
11.000	1.20	0.64	0.194	|	| O	| I	|	|	2.46
11.083	1.16	0.64	0.198	|	| O	| I	|	|	2.50
11.167	1.14	0.64	0.201	|	| O	|I	|	|	2.54
11.250	1.14	0.64	0.205	|	| O	|I	|	|	2.57
11.333	1.14	0.64	0.208	|	| O	|I	|	|	2.61
11.417	1.14	0.64	0.211	|	| O	|I	|	|	2.64
11.500	1.14	0.64	0.215	|	| O	|I	|	|	2.68
11.583	1.07	0.64	0.218	|	| O	I	|	|	2.71
11.667	1.03	0.64	0.221	|	| O	I	|	|	2.74
11.750	1.02	0.64	0.223	|	| O	I	|	|	2.77
11.833	1.05	0.64	0.226	|	| O	I	|	|	2.80
11.917	1.08	0.64	0.229	|	| O	I	|	|	2.83
12.000	1.08	0.64	0.232	|	| O	I	|	|	2.86
12.083	1.33	0.64	0.236	|	| O	| I	|	|	2.90
12.167	1.48	0.64	0.241	|	| O	| I|	|	|	2.96
12.250	1.50	0.64	0.247	|	| O	| I|	|	|	3.02
12.333	1.53	0.64	0.253	|	| O	| I	|	|	3.08
12.417	1.56	0.64	0.259	|	| O	| I	|	|	3.15
12.500	1.56	0.64	0.266	|	| O	| I	|	|	3.21
12.583	1.63	0.64	0.272	|	| O	| |I	|	|	3.28
12.667	1.67	0.64	0.279	|	| O	| | I	|	|	3.35
12.750	1.68	0.64	0.286	|	| O	| | I	|	|	3.43
12.833	1.71	0.64	0.294	|	| O	| | I	|	|	3.51
12.917	1.74	0.64	0.301	|	| O	| | I	|	|	3.58
13.000	1.74	0.64	0.309	|	| O	| | I	|	|	3.66
13.083	1.92	0.64	0.317	|	| O	| | I	|	|	3.75
13.167	2.02	0.64	0.326	|	| O	| | I|	|	|	3.84
13.250	2.04	0.64	0.336	|	| O	| | I	|	|	3.94
13.333	2.04	0.64	0.345	|	| O	| | I	|	|	4.04
13.417	2.04	0.64	0.355	|	| O	| | I	|	|	4.15
13.500	2.04	0.64	0.365	|	| O	| | I	|	|	4.25
13.583	1.65	0.64	0.373	|	| O	| |I	|	|	4.33
13.667	1.41	0.64	0.379	|	| O	| I	|	|	4.40
13.750	1.38	0.64	0.384	|	| O	| I	|	|	4.45
13.833	1.38	0.64	0.389	|	| O	| I	|	|	4.51

13.917	1.38	0.64	0.394	|	| O	| I |	|	4.56
14.000	1.38	0.64	0.399	|	| O	| I |	|	4.61
14.083	1.52	0.64	0.405	|	| O	| I|	|	4.67
14.167	1.61	0.64	0.411	|	| O	| |I	|	4.74
14.250	1.62	0.64	0.418	|	| O	| |I	|	4.81
14.333	1.58	0.64	0.425	|	| O	| I	|	4.88
14.417	1.56	0.64	0.431	|	| O	| I	|	4.94
14.500	1.56	0.64	0.438	|	| O	| I	|	5.01
14.583	1.56	0.64	0.444	|	| O	| I	|	5.08
14.667	1.56	0.64	0.450	|	| O	| I	|	5.14
14.750	1.56	0.64	0.457	|	| O	| I	|	5.21
14.833	1.52	0.64	0.463	|	| O	| I|	|	5.27
14.917	1.50	0.64	0.469	|	| O	| I|	|	5.34
15.000	1.50	0.64	0.475	|	| O	| I|	|	5.40
15.083	1.46	0.64	0.480	|	| O	| I |	|	5.46
15.167	1.44	0.64	0.486	|	| O	| I |	|	5.52
15.250	1.44	0.64	0.492	|	| O	| I |	|	5.58
15.333	1.40	0.64	0.497	|	| O	| I |	|	5.63
15.417	1.38	0.64	0.502	|	| O	| I |	|	5.69
15.500	1.38	0.64	0.507	|	| O	| I |	|	5.74
15.583	1.24	0.64	0.512	|	| O	| I |	|	5.79
15.667	1.15	0.64	0.516	|	| O	|I |	|	5.83
15.750	1.14	0.64	0.519	|	| O	|I |	|	5.86
15.833	1.14	0.64	0.523	|	| O	|I |	|	5.90
15.917	1.14	0.64	0.526	|	| O	|I |	|	5.94
16.000	1.14	0.64	0.529	|	| O	|I |	|	5.97
16.083	0.61	0.64	0.531	|	|IO	|	|	5.99
16.167	0.29	0.64	0.530	| I |	| O	|	|	5.97
16.250	0.24	0.64	0.527	| I |	| O	|	|	5.95
16.333	0.24	0.64	0.524	| I |	| O	|	|	5.92
16.417	0.24	0.64	0.522	| I |	| O	|	|	5.89
16.500	0.24	0.64	0.519	| I |	| O	|	|	5.86
16.583	0.20	0.64	0.516	| I |	| O	|	|	5.83
16.667	0.18	0.64	0.513	| I |	| O	|	|	5.80
16.750	0.18	0.64	0.510	| I |	| O	|	|	5.77
16.833	0.18	0.64	0.507	| I |	| O	|	|	5.73
16.917	0.18	0.64	0.503	| I |	| O	|	|	5.70
17.000	0.18	0.64	0.500	| I |	| O	|	|	5.67
17.083	0.25	0.64	0.497	| I |	| O	|	|	5.64
17.167	0.29	0.64	0.495	| I |	| O	|	|	5.61
17.250	0.30	0.64	0.492	| I |	| O	|	|	5.58
17.333	0.30	0.64	0.490	| I |	| O	|	|	5.56
17.417	0.30	0.64	0.488	| I |	| O	|	|	5.54
17.500	0.30	0.64	0.485	| I |	| O	|	|	5.51
17.583	0.30	0.64	0.483	| I |	| O	|	|	5.49
17.667	0.30	0.64	0.481	| I |	| O	|	|	5.46
17.750	0.30	0.64	0.478	| I |	| O	|	|	5.44
17.833	0.26	0.64	0.476	| I |	| O	|	|	5.41
17.917	0.24	0.64	0.473	| I |	| O	|	|	5.38
18.000	0.24	0.64	0.471	| I |	| O	|	|	5.36
18.083	0.24	0.64	0.468	| I |	| O	|	|	5.33
18.167	0.24	0.64	0.465	| I |	| O	|	|	5.30
18.250	0.24	0.64	0.462	| I |	| O	|	|	5.27
18.333	0.24	0.64	0.460	| I |	| O	|	|	5.24
18.417	0.24	0.64	0.457	| I |	| O	|	|	5.21
18.500	0.24	0.64	0.454	| I |	| O	|	|	5.18
18.583	0.20	0.64	0.451	| I |	| O	|	|	5.15
18.667	0.18	0.64	0.448	| I |	| O	|	|	5.12
18.750	0.18	0.64	0.445	| I |	| O	|	|	5.09
18.833	0.14	0.64	0.442	| I |	| O	|	|	5.05

18.917	0.12	0.64	0.438	I	O			5.02
19.000	0.12	0.64	0.435	I	O			4.98
19.083	0.16	0.64	0.431	I	O			4.94
19.167	0.18	0.64	0.428	I	O			4.91
19.250	0.18	0.64	0.425	I	O			4.88
19.333	0.22	0.64	0.422	I	O			4.84
19.417	0.24	0.64	0.419	I	O			4.81
19.500	0.24	0.64	0.416	I	O			4.78
19.583	0.20	0.64	0.413	I	O			4.75
19.667	0.18	0.64	0.410	I	O			4.72
19.750	0.18	0.64	0.407	I	O			4.69
19.833	0.14	0.64	0.404	I	O			4.66
19.917	0.12	0.64	0.400	I	O			4.62
20.000	0.12	0.64	0.397	I	O			4.58
20.083	0.16	0.64	0.393	I	O			4.55
20.167	0.18	0.64	0.390	I	O			4.51
20.250	0.18	0.64	0.387	I	O			4.48
20.333	0.18	0.64	0.383	I	O			4.44
20.417	0.18	0.64	0.380	I	O			4.41
20.500	0.18	0.64	0.377	I	O			4.38
20.583	0.18	0.64	0.374	I	O			4.35
20.667	0.18	0.64	0.371	I	O			4.31
20.750	0.18	0.64	0.368	I	O			4.28
20.833	0.14	0.64	0.364	I	O			4.24
20.917	0.12	0.64	0.361	I	O			4.21
21.000	0.12	0.64	0.357	I	O			4.17
21.083	0.16	0.64	0.354	I	O			4.13
21.167	0.18	0.64	0.351	I	O			4.10
21.250	0.18	0.64	0.347	I	O			4.07
21.333	0.14	0.64	0.344	I	O			4.03
21.417	0.12	0.64	0.341	I	O			4.00
21.500	0.12	0.64	0.337	I	O			3.96
21.583	0.16	0.64	0.334	I	O			3.92
21.667	0.18	0.64	0.330	I	O			3.89
21.750	0.18	0.64	0.327	I	O			3.86
21.833	0.14	0.64	0.324	I	O			3.82
21.917	0.12	0.64	0.320	I	O			3.78
22.000	0.12	0.64	0.317	I	O			3.75
22.083	0.16	0.64	0.313	I	O			3.71
22.167	0.18	0.64	0.310	I	O			3.68
22.250	0.18	0.64	0.307	I	O			3.64
22.333	0.14	0.64	0.304	I	O			3.61
22.417	0.12	0.64	0.300	I	O			3.57
22.500	0.12	0.64	0.297	I	O			3.54
22.583	0.12	0.64	0.293	I	O			3.50
22.667	0.12	0.64	0.289	I	O			3.46
22.750	0.12	0.64	0.286	I	O			3.42
22.833	0.12	0.64	0.282	I	O			3.39
22.917	0.12	0.64	0.279	I	O			3.35
23.000	0.12	0.64	0.275	I	O			3.31
23.083	0.12	0.64	0.271	I	O			3.27
23.167	0.12	0.64	0.268	I	O			3.24
23.250	0.12	0.64	0.264	I	O			3.20
23.333	0.12	0.64	0.261	I	O			3.16
23.417	0.12	0.64	0.257	I	O			3.12
23.500	0.12	0.64	0.254	I	O			3.09
23.583	0.12	0.64	0.250	I	O			3.05
23.667	0.12	0.64	0.246	I	O			3.01
23.750	0.12	0.64	0.243	I	O			2.97
23.833	0.12	0.64	0.239	I	O			2.94

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23.917    0.12    0.64      0.236  |I      | O     |       |       |     2.90
24.000    0.12    0.64      0.232  |I      | O     |       |       |     2.86
24.083    0.05    0.64      0.228  I       | O     |       |       |     2.82
24.167    0.01    0.64      0.224  I       | O     |       |       |     2.78
24.250    0.00    0.64      0.220  I       | O     |       |       |     2.73
24.333    0.00    0.64      0.215  I       | O     |       |       |     2.68
24.417    0.00    0.64      0.211  I       | O     |       |       |     2.64
24.500    0.00    0.64      0.206  I       | O     |       |       |     2.59
24.583    0.00    0.64      0.202  I       | O     |       |       |     2.55
24.667    0.00    0.64      0.198  I       | O     |       |       |     2.50
24.750    0.00    0.64      0.193  I       | O     |       |       |     2.45
24.833    0.00    0.64      0.189  I       | O     |       |       |     2.41
24.917    0.00    0.64      0.184  I       | O     |       |       |     2.36
25.000    0.00    0.64      0.180  I       | O     |       |       |     2.32
25.083    0.00    0.64      0.176  I       | O     |       |       |     2.27
25.167    0.00    0.64      0.171  I       | O     |       |       |     2.22
25.250    0.00    0.64      0.167  I       | O     |       |       |     2.18
25.333    0.00    0.64      0.162  I       | O     |       |       |     2.13
25.417    0.00    0.64      0.158  I       | O     |       |       |     2.09
25.500    0.00    0.64      0.154  I       | O     |       |       |     2.04
25.583    0.00    0.64      0.149  I       | O     |       |       |     1.99
25.667    0.00    0.64      0.145  I       | O     |       |       |     1.95
25.750    0.00    0.64      0.140  I       | O     |       |       |     1.90
25.833    0.00    0.64      0.136  I       | O     |       |       |     1.85
25.917    0.00    0.64      0.132  I       | O     |       |       |     1.81
26.000    0.00    0.64      0.127  I       | O     |       |       |     1.76
26.083    0.00    0.64      0.123  I       | O     |       |       |     1.72
26.167    0.00    0.64      0.118  I       | O     |       |       |     1.67
26.250    0.00    0.64      0.114  I       | O     |       |       |     1.62
26.333    0.00    0.64      0.109  I       | O     |       |       |     1.58
26.417    0.00    0.64      0.105  I       | O     |       |       |     1.53
26.500    0.00    0.63      0.101  I       |O      |       |       |     1.48
26.583    0.00    0.60      0.096  I       |O      |       |       |     1.42
26.667    0.00    0.58      0.092  I       |O      |       |       |     1.36
26.750    0.00    0.55      0.088  I        O      |       |       |     1.30
26.833    0.00    0.53      0.085  I        O      |       |       |     1.25
26.917    0.00    0.51      0.081  I      O|       |       |       |     1.19
27.000    0.00    0.49      0.078  I      O|       |       |       |     1.14
27.083    0.00    0.47      0.074  I      O|       |       |       |     1.09
27.167    0.00    0.45      0.071  I      O|       |       |       |     1.05
27.250    0.00    0.43      0.068  I     O |       |       |       |     1.00
27.333    0.00    0.41      0.065  I     O |       |       |       |     0.96
27.417    0.00    0.39      0.063  I     O |       |       |       |     0.92
27.500    0.00    0.38      0.060  I    O  |       |       |       |     0.88
27.583    0.00    0.36      0.057  I    O  |       |       |       |     0.84
27.667    0.00    0.34      0.055  I    O  |       |       |       |     0.81
27.750    0.00    0.33      0.053  I    O  |       |       |       |     0.77
27.833    0.00    0.32      0.050  I   O   |       |       |       |     0.74
27.917    0.00    0.30      0.048  I   O   |       |       |       |     0.71
28.000    0.00    0.29      0.046  I   O   |       |       |       |     0.68
28.083    0.00    0.28      0.044  I   O   |       |       |       |     0.65
28.167    0.00    0.27      0.042  I   O   |       |       |       |     0.62
28.250    0.00    0.25      0.041  I  O    |       |       |       |     0.60
28.333    0.00    0.24      0.039  I  O    |       |       |       |     0.57
28.417    0.00    0.23      0.037  I  O    |       |       |       |     0.55
28.500    0.00    0.22      0.036  I  O    |       |       |       |     0.52
28.583    0.00    0.21      0.034  I  O    |       |       |       |     0.50
28.667    0.00    0.21      0.033  I  O    |       |       |       |     0.48
28.750    0.00    0.20      0.031  I  O    |       |       |       |     0.46
28.833    0.00    0.19      0.030  I O     |       |       |       |     0.44
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28.917	0.00	0.18	0.029	I O	|	|	|	0.42
29.000	0.00	0.17	0.028	I O	|	|	|	0.40
29.083	0.00	0.17	0.026	I O	|	|	|	0.39
29.167	0.00	0.16	0.025	I O	|	|	|	0.37
29.250	0.00	0.15	0.024	I O	|	|	|	0.36
29.333	0.00	0.15	0.023	I O	|	|	|	0.34
29.417	0.00	0.14	0.022	I O	|	|	|	0.33
29.500	0.00	0.13	0.021	I O	|	|	|	0.31
29.583	0.00	0.13	0.020	I O	|	|	|	0.30
29.667	0.00	0.12	0.019	IO	|	|	|	0.29
29.750	0.00	0.12	0.019	IO	|	|	|	0.27
29.833	0.00	0.11	0.018	IO	|	|	|	0.26
29.917	0.00	0.11	0.017	IO	|	|	|	0.25
30.000	0.00	0.10	0.016	IO	|	|	|	0.24
30.083	0.00	0.10	0.016	IO	|	|	|	0.23
30.167	0.00	0.09	0.015	IO	|	|	|	0.22
30.250	0.00	0.09	0.014	IO	|	|	|	0.21
30.333	0.00	0.09	0.014	IO	|	|	|	0.20
30.417	0.00	0.08	0.013	IO	|	|	|	0.19
30.500	0.00	0.08	0.013	IO	|	|	|	0.19
30.583	0.00	0.08	0.012	IO	|	|	|	0.18
30.667	0.00	0.07	0.012	IO	|	|	|	0.17
30.750	0.00	0.07	0.011	IO	|	|	|	0.16
30.833	0.00	0.07	0.011	IO	|	|	|	0.16
30.917	0.00	0.06	0.010	IO	|	|	|	0.15
31.000	0.00	0.06	0.010	O	|	|	|	0.14
31.083	0.00	0.06	0.009	O	|	|	|	0.14
31.167	0.00	0.06	0.009	O	|	|	|	0.13
31.250	0.00	0.05	0.009	O	|	|	|	0.13
31.333	0.00	0.05	0.008	O	|	|	|	0.12
31.417	0.00	0.05	0.008	O	|	|	|	0.12
31.500	0.00	0.05	0.008	O	|	|	|	0.11
31.583	0.00	0.05	0.007	O	|	|	|	0.11
31.667	0.00	0.04	0.007	O	|	|	|	0.10
31.750	0.00	0.04	0.007	O	|	|	|	0.10
31.833	0.00	0.04	0.006	O	|	|	|	0.09
31.917	0.00	0.04	0.006	O	|	|	|	0.09
32.000	0.00	0.04	0.006	O	|	|	|	0.09
32.083	0.00	0.03	0.006	O	|	|	|	0.08
32.167	0.00	0.03	0.005	O	|	|	|	0.08
32.250	0.00	0.03	0.005	O	|	|	|	0.08
32.333	0.00	0.03	0.005	O	|	|	|	0.07
32.417	0.00	0.03	0.005	O	|	|	|	0.07
32.500	0.00	0.03	0.004	O	|	|	|	0.07
32.583	0.00	0.03	0.004	O	|	|	|	0.06
32.667	0.00	0.03	0.004	O	|	|	|	0.06
32.750	0.00	0.02	0.004	O	|	|	|	0.06
32.833	0.00	0.02	0.004	O	|	|	|	0.06
32.917	0.00	0.02	0.004	O	|	|	|	0.05
33.000	0.00	0.02	0.003	O	|	|	|	0.05
33.083	0.00	0.02	0.003	O	|	|	|	0.05
33.167	0.00	0.02	0.003	O	|	|	|	0.05
33.250	0.00	0.02	0.003	O	|	|	|	0.04
33.333	0.00	0.02	0.003	O	|	|	|	0.04
33.417	0.00	0.02	0.003	O	|	|	|	0.04
33.500	0.00	0.02	0.003	O	|	|	|	0.04
33.583	0.00	0.02	0.003	O	|	|	|	0.04
33.667	0.00	0.02	0.002	O	|	|	|	0.04
33.750	0.00	0.01	0.002	O	|	|	|	0.03
33.833	0.00	0.01	0.002	O	|	|	|	0.03

33.917	0.00	0.01	0.002	O				0.03
34.000	0.00	0.01	0.002	O				0.03
34.083	0.00	0.01	0.002	O				0.03
34.167	0.00	0.01	0.002	O				0.03
34.250	0.00	0.01	0.002	O				0.03
34.333	0.00	0.01	0.002	O				0.03
34.417	0.00	0.01	0.002	O				0.02
34.500	0.00	0.01	0.002	O				0.02
34.583	0.00	0.01	0.002	O				0.02
34.667	0.00	0.01	0.001	O				0.02
34.750	0.00	0.01	0.001	O				0.02
34.833	0.00	0.01	0.001	O				0.02
34.917	0.00	0.01	0.001	O				0.02
35.000	0.00	0.01	0.001	O				0.02
35.083	0.00	0.01	0.001	O				0.02
35.167	0.00	0.01	0.001	O				0.02
35.250	0.00	0.01	0.001	O				0.02
35.333	0.00	0.01	0.001	O				0.02
35.417	0.00	0.01	0.001	O				0.01
35.500	0.00	0.01	0.001	O				0.01
35.583	0.00	0.01	0.001	O				0.01
35.667	0.00	0.01	0.001	O				0.01
35.750	0.00	0.01	0.001	O				0.01
35.833	0.00	0.00	0.001	O				0.01
35.917	0.00	0.00	0.001	O				0.01
36.000	0.00	0.00	0.001	O				0.01
36.083	0.00	0.00	0.001	O				0.01
36.167	0.00	0.00	0.001	O				0.01
36.250	0.00	0.00	0.001	O				0.01
36.333	0.00	0.00	0.001	O				0.01
36.417	0.00	0.00	0.001	O				0.01
36.500	0.00	0.00	0.001	O				0.01
36.583	0.00	0.00	0.001	O				0.01
36.667	0.00	0.00	0.001	O				0.01
36.750	0.00	0.00	0.000	O				0.01
36.833	0.00	0.00	0.000	O				0.01
36.917	0.00	0.00	0.000	O				0.01
37.000	0.00	0.00	0.000	O				0.01
37.083	0.00	0.00	0.000	O				0.01
37.167	0.00	0.00	0.000	O				0.01
37.250	0.00	0.00	0.000	O				0.01
37.333	0.00	0.00	0.000	O				0.01
37.417	0.00	0.00	0.000	O				0.01
37.500	0.00	0.00	0.000	O				0.00
37.583	0.00	0.00	0.000	O				0.00
37.667	0.00	0.00	0.000	O				0.00
37.750	0.00	0.00	0.000	O				0.00
37.833	0.00	0.00	0.000	O				0.00
37.917	0.00	0.00	0.000	O				0.00
38.000	0.00	0.00	0.000	O				0.00
38.083	0.00	0.00	0.000	O				0.00
38.167	0.00	0.00	0.000	O				0.00
38.250	0.00	0.00	0.000	O				0.00
38.333	0.00	0.00	0.000	O				0.00
38.417	0.00	0.00	0.000	O				0.00
38.500	0.00	0.00	0.000	O				0.00
38.583	0.00	0.00	0.000	O				0.00
38.667	0.00	0.00	0.000	O				0.00
38.750	0.00	0.00	0.000	O				0.00
38.833	0.00	0.00	0.000	O				0.00

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38.917    0.00    0.00      0.000  O       |       |       |       |     0.00
39.000    0.00    0.00      0.000  O       |       |       |       |     0.00

     ****************************HYDROGRAPH DATA****************************
               Number of intervals =   468
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.640 (CFS)
               Total volume =       1.239 (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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10-YEAR STORM

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
10-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 16
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.150 (CFS)
Total volume = 0.442 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 16
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.0 6.08 9.11 12.15	Depth (Ft.)
0.083	1.00	0.02	0.003	O I | | | | |	0.04
0.167	2.12	0.08	0.014	O I | | | | |	0.17
0.250	2.62	0.16	0.029	O I | | | | |	0.35
0.333	2.98	0.26	0.047	O I| | | | |	0.57
0.417	3.17	0.37	0.066	O I | | | |	0.80
0.500	3.51	0.46	0.086	|O |I | | |	1.02
0.583	4.24	0.46	0.110	|O | I | | |	1.19
0.667	5.17	0.46	0.139	|O | I | | |	1.41
0.750	6.84	0.46	0.177	|O | | I | |	1.68
0.833	12.15	0.46	0.239	|O | | | I	2.13
0.917	11.33	0.46	0.317	|O | | | I |	2.69
1.000	5.50	0.46	0.372	|O | I | | |	3.09
1.083	2.54	0.46	0.396	|O I | | | |	3.27
1.167	0.75	0.46	0.405	|O | | | |	3.33
1.250	0.19	0.46	0.405	IO | | | |	3.33
1.333	0.05	0.46	0.402	IO | | | |	3.31
1.417	0.00	0.46	0.399	IO | | | |	3.29
1.500	0.00	0.46	0.396	IO | | | |	3.27
1.583	0.00	0.46	0.393	IO | | | |	3.24
1.667	0.00	0.46	0.390	IO | | | |	3.22
1.750	0.00	0.46	0.387	IO | | | |	3.20
1.833	0.00	0.46	0.383	IO | | | |	3.17
1.917	0.00	0.46	0.380	IO | | | |	3.15
2.000	0.00	0.46	0.377	IO | | | |	3.13
2.083	0.00	0.46	0.374	IO | | | |	3.11
2.167	0.00	0.46	0.371	IO | | | |	3.08
2.250	0.00	0.46	0.368	IO | | | |	3.06
2.333	0.00	0.46	0.364	IO | | | |	3.04
2.417	0.00	0.46	0.361	IO | | | |	3.01
2.500	0.00	0.46	0.358	IO | | | |	2.99
2.583	0.00	0.46	0.355	IO | | | |	2.97
2.667	0.00	0.46	0.352	IO | | | |	2.94
2.750	0.00	0.46	0.349	IO | | | |	2.92
2.833	0.00	0.46	0.345	IO | | | |	2.90
2.917	0.00	0.46	0.342	IO | | | |	2.88
3.000	0.00	0.46	0.339	IO | | | |	2.85
3.083	0.00	0.46	0.336	IO | | | |	2.83
3.167	0.00	0.46	0.333	IO | | | |	2.81
3.250	0.00	0.46	0.330	IO | | | |	2.78
3.333	0.00	0.46	0.326	IO | | | |	2.76
3.417	0.00	0.46	0.323	IO | | | |	2.74
3.500	0.00	0.46	0.320	IO | | | |	2.72
3.583	0.00	0.46	0.317	IO | | | |	2.69
3.667	0.00	0.46	0.314	IO | | | |	2.67
3.750	0.00	0.46	0.311	IO | | | |	2.65

3.833	0.00	0.46	0.307	IO				2.62
3.917	0.00	0.46	0.304	IO				2.60
4.000	0.00	0.46	0.301	IO				2.58
4.083	0.00	0.46	0.298	IO				2.55
4.167	0.00	0.46	0.295	IO				2.53
4.250	0.00	0.46	0.292	IO				2.51
4.333	0.00	0.46	0.288	IO				2.49
4.417	0.00	0.46	0.285	IO				2.46
4.500	0.00	0.46	0.282	IO				2.44
4.583	0.00	0.46	0.279	IO				2.42
4.667	0.00	0.46	0.276	IO				2.39
4.750	0.00	0.46	0.273	IO				2.37
4.833	0.00	0.46	0.269	IO				2.35
4.917	0.00	0.46	0.266	IO				2.33
5.000	0.00	0.46	0.263	IO				2.30
5.083	0.00	0.46	0.260	IO				2.28
5.167	0.00	0.46	0.257	IO				2.26
5.250	0.00	0.46	0.254	IO				2.23
5.333	0.00	0.46	0.250	IO				2.21
5.417	0.00	0.46	0.247	IO				2.19
5.500	0.00	0.46	0.244	IO				2.17
5.583	0.00	0.46	0.241	IO				2.14
5.667	0.00	0.46	0.238	IO				2.12
5.750	0.00	0.46	0.235	IO				2.10
5.833	0.00	0.46	0.231	IO				2.07
5.917	0.00	0.46	0.228	IO				2.05
6.000	0.00	0.46	0.225	IO				2.03
6.083	0.00	0.46	0.222	IO				2.00
6.167	0.00	0.46	0.219	IO				1.98
6.250	0.00	0.46	0.216	IO				1.96
6.333	0.00	0.46	0.212	IO				1.94
6.417	0.00	0.46	0.209	IO				1.91
6.500	0.00	0.46	0.206	IO				1.89
6.583	0.00	0.46	0.203	IO				1.87
6.667	0.00	0.46	0.200	IO				1.84
6.750	0.00	0.46	0.197	IO				1.82
6.833	0.00	0.46	0.193	IO				1.80
6.917	0.00	0.46	0.190	IO				1.78
7.000	0.00	0.46	0.187	IO				1.75
7.083	0.00	0.46	0.184	IO				1.73
7.167	0.00	0.46	0.181	IO				1.71
7.250	0.00	0.46	0.178	IO				1.68
7.333	0.00	0.46	0.174	IO				1.66
7.417	0.00	0.46	0.171	IO				1.64
7.500	0.00	0.46	0.168	IO				1.62
7.583	0.00	0.46	0.165	IO				1.59
7.667	0.00	0.46	0.162	IO				1.57
7.750	0.00	0.46	0.159	IO				1.55
7.833	0.00	0.46	0.155	IO				1.52
7.917	0.00	0.46	0.152	IO				1.50
8.000	0.00	0.46	0.149	IO				1.48
8.083	0.00	0.46	0.146	IO				1.45
8.167	0.00	0.46	0.143	IO				1.43
8.250	0.00	0.46	0.139	IO				1.41
8.333	0.00	0.46	0.136	IO				1.39
8.417	0.00	0.46	0.133	IO				1.36
8.500	0.00	0.46	0.130	IO				1.34
8.583	0.00	0.46	0.127	IO				1.32
8.667	0.00	0.46	0.124	IO				1.29
8.750	0.00	0.46	0.120	IO				1.27

8.833	0.00	0.46	0.117	IO				1.25
8.917	0.00	0.46	0.114	IO				1.23
9.000	0.00	0.46	0.111	IO				1.20
9.083	0.00	0.46	0.108	IO				1.18
9.167	0.00	0.46	0.105	IO				1.16
9.250	0.00	0.46	0.101	IO				1.13
9.333	0.00	0.46	0.098	IO				1.11
9.417	0.00	0.46	0.095	IO				1.09
9.500	0.00	0.46	0.092	IO				1.06
9.583	0.00	0.46	0.089	IO				1.04
9.667	0.00	0.46	0.086	IO				1.02
9.750	0.00	0.46	0.082	IO				0.99
9.833	0.00	0.44	0.079	IO				0.96
9.917	0.00	0.42	0.076	IO				0.92
10.000	0.00	0.41	0.074	IO				0.89
10.083	0.00	0.39	0.071	IO				0.85
10.167	0.00	0.38	0.068	O				0.82
10.250	0.00	0.36	0.066	O				0.79
10.333	0.00	0.35	0.063	O				0.76
10.417	0.00	0.34	0.061	O				0.73
10.500	0.00	0.32	0.058	O				0.70
10.583	0.00	0.31	0.056	O				0.68
10.667	0.00	0.30	0.054	O				0.65
10.750	0.00	0.29	0.052	O				0.63
10.833	0.00	0.28	0.050	O				0.60
10.917	0.00	0.27	0.048	O				0.58
11.000	0.00	0.26	0.047	O				0.56
11.083	0.00	0.25	0.045	O				0.54
11.167	0.00	0.24	0.043	O				0.52
11.250	0.00	0.23	0.041	O				0.50
11.333	0.00	0.22	0.040	O				0.48
11.417	0.00	0.21	0.038	O				0.46
11.500	0.00	0.21	0.037	O				0.45
11.583	0.00	0.20	0.036	O				0.43
11.667	0.00	0.19	0.034	O				0.41
11.750	0.00	0.18	0.033	O				0.40
11.833	0.00	0.18	0.032	O				0.38
11.917	0.00	0.17	0.031	O				0.37
12.000	0.00	0.16	0.029	O				0.35
12.083	0.00	0.16	0.028	O				0.34
12.167	0.00	0.15	0.027	O				0.33
12.250	0.00	0.15	0.026	O				0.32
12.333	0.00	0.14	0.025	O				0.30
12.417	0.00	0.13	0.024	O				0.29
12.500	0.00	0.13	0.023	O				0.28
12.583	0.00	0.12	0.023	O				0.27
12.667	0.00	0.12	0.022	O				0.26
12.750	0.00	0.12	0.021	O				0.25
12.833	0.00	0.11	0.020	O				0.24
12.917	0.00	0.11	0.019	O				0.23
13.000	0.00	0.10	0.019	O				0.22
13.083	0.00	0.10	0.018	O				0.22
13.167	0.00	0.10	0.017	O				0.21
13.250	0.00	0.09	0.017	O				0.20
13.333	0.00	0.09	0.016	O				0.19
13.417	0.00	0.09	0.015	O				0.19
13.500	0.00	0.08	0.015	O				0.18
13.583	0.00	0.08	0.014	O				0.17
13.667	0.00	0.08	0.014	O				0.17
13.750	0.00	0.07	0.013	O				0.16

13.833	0.00	0.07	0.013	O	|	|	|	0.15
13.917	0.00	0.07	0.012	O	|	|	|	0.15
14.000	0.00	0.07	0.012	O	|	|	|	0.14
14.083	0.00	0.06	0.011	O	|	|	|	0.14
14.167	0.00	0.06	0.011	O	|	|	|	0.13
14.250	0.00	0.06	0.010	O	|	|	|	0.13
14.333	0.00	0.06	0.010	O	|	|	|	0.12
14.417	0.00	0.05	0.010	O	|	|	|	0.12
14.500	0.00	0.05	0.009	O	|	|	|	0.11
14.583	0.00	0.05	0.009	O	|	|	|	0.11
14.667	0.00	0.05	0.009	O	|	|	|	0.10
14.750	0.00	0.05	0.008	O	|	|	|	0.10
14.833	0.00	0.04	0.008	O	|	|	|	0.10
14.917	0.00	0.04	0.008	O	|	|	|	0.09
15.000	0.00	0.04	0.007	O	|	|	|	0.09
15.083	0.00	0.04	0.007	O	|	|	|	0.09
15.167	0.00	0.04	0.007	O	|	|	|	0.08
15.250	0.00	0.04	0.007	O	|	|	|	0.08
15.333	0.00	0.04	0.006	O	|	|	|	0.08
15.417	0.00	0.03	0.006	O	|	|	|	0.07
15.500	0.00	0.03	0.006	O	|	|	|	0.07
15.583	0.00	0.03	0.006	O	|	|	|	0.07
15.667	0.00	0.03	0.005	O	|	|	|	0.07
15.750	0.00	0.03	0.005	O	|	|	|	0.06
15.833	0.00	0.03	0.005	O	|	|	|	0.06
15.917	0.00	0.03	0.005	O	|	|	|	0.06
16.000	0.00	0.03	0.005	O	|	|	|	0.06
16.083	0.00	0.03	0.005	O	|	|	|	0.05
16.167	0.00	0.02	0.004	O	|	|	|	0.05
16.250	0.00	0.02	0.004	O	|	|	|	0.05
16.333	0.00	0.02	0.004	O	|	|	|	0.05
16.417	0.00	0.02	0.004	O	|	|	|	0.05
16.500	0.00	0.02	0.004	O	|	|	|	0.05
16.583	0.00	0.02	0.004	O	|	|	|	0.04
16.667	0.00	0.02	0.003	O	|	|	|	0.04
16.750	0.00	0.02	0.003	O	|	|	|	0.04
16.833	0.00	0.02	0.003	O	|	|	|	0.04
16.917	0.00	0.02	0.003	O	|	|	|	0.04
17.000	0.00	0.02	0.003	O	|	|	|	0.04
17.083	0.00	0.02	0.003	O	|	|	|	0.03
17.167	0.00	0.02	0.003	O	|	|	|	0.03
17.250	0.00	0.01	0.003	O	|	|	|	0.03
17.333	0.00	0.01	0.003	O	|	|	|	0.03
17.417	0.00	0.01	0.002	O	|	|	|	0.03
17.500	0.00	0.01	0.002	O	|	|	|	0.03
17.583	0.00	0.01	0.002	O	|	|	|	0.03
17.667	0.00	0.01	0.002	O	|	|	|	0.03
17.750	0.00	0.01	0.002	O	|	|	|	0.03
17.833	0.00	0.01	0.002	O	|	|	|	0.02
17.917	0.00	0.01	0.002	O	|	|	|	0.02
18.000	0.00	0.01	0.002	O	|	|	|	0.02
18.083	0.00	0.01	0.002	O	|	|	|	0.02
18.167	0.00	0.01	0.002	O	|	|	|	0.02
18.250	0.00	0.01	0.002	O	|	|	|	0.02
18.333	0.00	0.01	0.002	O	|	|	|	0.02
18.417	0.00	0.01	0.002	O	|	|	|	0.02
18.500	0.00	0.01	0.001	O	|	|	|	0.02
18.583	0.00	0.01	0.001	O	|	|	|	0.02
18.667	0.00	0.01	0.001	O	|	|	|	0.02
18.750	0.00	0.01	0.001	O	|	|	|	0.02

18.833	0.00	0.01	0.001	O	|	|	|	|	0.02
18.917	0.00	0.01	0.001	O	|	|	|	|	0.01
19.000	0.00	0.01	0.001	O	|	|	|	|	0.01
19.083	0.00	0.01	0.001	O	|	|	|	|	0.01
19.167	0.00	0.01	0.001	O	|	|	|	|	0.01
19.250	0.00	0.01	0.001	O	|	|	|	|	0.01
19.333	0.00	0.01	0.001	O	|	|	|	|	0.01
19.417	0.00	0.01	0.001	O	|	|	|	|	0.01
19.500	0.00	0.01	0.001	O	|	|	|	|	0.01
19.583	0.00	0.01	0.001	O	|	|	|	|	0.01
19.667	0.00	0.00	0.001	O	|	|	|	|	0.01
19.750	0.00	0.00	0.001	O	|	|	|	|	0.01
19.833	0.00	0.00	0.001	O	|	|	|	|	0.01
19.917	0.00	0.00	0.001	O	|	|	|	|	0.01
20.000	0.00	0.00	0.001	O	|	|	|	|	0.01
20.083	0.00	0.00	0.001	O	|	|	|	|	0.01
20.167	0.00	0.00	0.001	O	|	|	|	|	0.01
20.250	0.00	0.00	0.001	O	|	|	|	|	0.01
20.333	0.00	0.00	0.001	O	|	|	|	|	0.01
20.417	0.00	0.00	0.001	O	|	|	|	|	0.01
20.500	0.00	0.00	0.001	O	|	|	|	|	0.01
20.583	0.00	0.00	0.001	O	|	|	|	|	0.01
20.667	0.00	0.00	0.001	O	|	|	|	|	0.01
20.750	0.00	0.00	0.001	O	|	|	|	|	0.01
20.833	0.00	0.00	0.001	O	|	|	|	|	0.01
20.917	0.00	0.00	0.000	O	|	|	|	|	0.01
21.000	0.00	0.00	0.000	O	|	|	|	|	0.01
21.083	0.00	0.00	0.000	O	|	|	|	|	0.01
21.167	0.00	0.00	0.000	O	|	|	|	|	0.01
21.250	0.00	0.00	0.000	O	|	|	|	|	0.01
21.333	0.00	0.00	0.000	O	|	|	|	|	0.00
21.417	0.00	0.00	0.000	O	|	|	|	|	0.00
21.500	0.00	0.00	0.000	O	|	|	|	|	0.00
21.583	0.00	0.00	0.000	O	|	|	|	|	0.00
21.667	0.00	0.00	0.000	O	|	|	|	|	0.00
21.750	0.00	0.00	0.000	O	|	|	|	|	0.00
21.833	0.00	0.00	0.000	O	|	|	|	|	0.00
21.917	0.00	0.00	0.000	O	|	|	|	|	0.00
22.000	0.00	0.00	0.000	O	|	|	|	|	0.00
22.083	0.00	0.00	0.000	O	|	|	|	|	0.00
22.167	0.00	0.00	0.000	O	|	|	|	|	0.00
22.250	0.00	0.00	0.000	O	|	|	|	|	0.00
22.333	0.00	0.00	0.000	O	|	|	|	|	0.00
22.417	0.00	0.00	0.000	O	|	|	|	|	0.00
22.500	0.00	0.00	0.000	O	|	|	|	|	0.00
22.583	0.00	0.00	0.000	O	|	|	|	|	0.00
22.667	0.00	0.00	0.000	O	|	|	|	|	0.00
22.750	0.00	0.00	0.000	O	|	|	|	|	0.00
22.833	0.00	0.00	0.000	O	|	|	|	|	0.00
22.917	0.00	0.00	0.000	O	|	|	|	|	0.00
23.000	0.00	0.00	0.000	O	|	|	|	|	0.00
23.083	0.00	0.00	0.000	O	|	|	|	|	0.00
23.167	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 278
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.442 (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: 10/28/24

DEXTER VILLAGE
AREA A
10-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 40
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.781 (CFS)
Total volume = 0.720 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 40
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.2 4.39 6.59 8.78	Depth (Ft.)
0.083	0.51	0.01	0.002	OI | | | | |	0.02
0.167	1.07	0.04	0.007	O I | | | | |	0.08
0.250	1.11	0.08	0.014	O I | | | | |	0.17
0.333	1.23	0.12	0.022	O I | | | | |	0.26
0.417	1.41	0.16	0.030	O I | | | | |	0.36
0.500	1.56	0.21	0.039	O I | | | | |	0.46
0.583	1.58	0.26	0.048	O I | | | | |	0.57
0.667	1.60	0.31	0.057	|O I | | | |	0.68
0.750	1.71	0.36	0.066	|O I | | | |	0.79
0.833	1.62	0.41	0.075	|O I | | | |	0.90
0.917	1.53	0.46	0.082	|O I | | | |	0.99
1.000	1.63	0.46	0.090	|O I | | | |	1.05
1.083	1.87	0.46	0.099	|O I | | | |	1.12
1.167	2.06	0.46	0.109	|O I| | | |	1.19
1.250	2.11	0.46	0.121	|O I| | | |	1.27
1.333	2.05	0.46	0.132	|O I| | | |	1.35
1.417	2.21	0.46	0.143	|O I | | |	1.44
1.500	2.49	0.46	0.156	|O |I | | |	1.53
1.583	2.46	0.46	0.170	|O I | | |	1.63
1.667	2.48	0.46	0.184	|O |I | | |	1.73
1.750	2.89	0.46	0.199	|O | I | | |	1.84
1.833	3.13	0.46	0.217	|O | I | | |	1.97
1.917	2.98	0.46	0.235	|O | I | | |	2.10
2.000	2.93	0.46	0.252	|O | I | | |	2.22
2.083	3.02	0.46	0.269	|O | I | | |	2.35
2.167	3.66	0.46	0.289	|O | I | | |	2.49
2.250	4.74	0.46	0.315	|O | |I | |	2.68
2.333	4.55	0.46	0.344	|O | I | |	2.89
2.417	5.59	0.46	0.375	|O | | I | |	3.12
2.500	7.66	0.46	0.418	|O | | | I |	3.42
2.583	8.78	0.46	0.471	|O | | | | I	3.81
2.667	8.27	0.46	0.527	|O | | | I |	4.21
2.750	5.18	0.46	0.570	|O | | I | |	4.52
2.833	2.73	0.46	0.594	|O |I | | |	4.70
2.917	2.09	0.46	0.608	|O | I| | | |	4.80
3.000	1.36	0.46	0.616	|O I | | | |	4.86
3.083	0.52	0.46	0.620	|O | | | |	4.88
3.167	0.15	0.46	0.619	IO | | | |	4.88
3.250	0.05	0.46	0.616	IO | | | |	4.86
3.333	0.01	0.46	0.613	IO | | | |	4.84
3.417	0.00	0.46	0.610	IO | | | |	4.81
3.500	0.00	0.46	0.607	IO | | | |	4.79
3.583	0.00	0.46	0.604	IO | | | |	4.77
3.667	0.00	0.46	0.601	IO | | | |	4.75
3.750	0.00	0.46	0.598	IO | | | |	4.72

3.833	0.00	0.46	0.594	IO				4.70
3.917	0.00	0.46	0.591	IO				4.68
4.000	0.00	0.46	0.588	IO				4.65
4.083	0.00	0.46	0.585	IO				4.63
4.167	0.00	0.46	0.582	IO				4.61
4.250	0.00	0.46	0.579	IO				4.59
4.333	0.00	0.46	0.575	IO				4.56
4.417	0.00	0.46	0.572	IO				4.54
4.500	0.00	0.46	0.569	IO				4.52
4.583	0.00	0.46	0.566	IO				4.49
4.667	0.00	0.46	0.563	IO				4.47
4.750	0.00	0.46	0.559	IO				4.45
4.833	0.00	0.46	0.556	IO				4.42
4.917	0.00	0.46	0.553	IO				4.40
5.000	0.00	0.46	0.550	IO				4.38
5.083	0.00	0.46	0.547	IO				4.36
5.167	0.00	0.46	0.544	IO				4.33
5.250	0.00	0.46	0.540	IO				4.31
5.333	0.00	0.46	0.537	IO				4.29
5.417	0.00	0.46	0.534	IO				4.26
5.500	0.00	0.46	0.531	IO				4.24
5.583	0.00	0.46	0.528	IO				4.22
5.667	0.00	0.46	0.525	IO				4.20
5.750	0.00	0.46	0.521	IO				4.17
5.833	0.00	0.46	0.518	IO				4.15
5.917	0.00	0.46	0.515	IO				4.13
6.000	0.00	0.46	0.512	IO				4.10
6.083	0.00	0.46	0.509	IO				4.08
6.167	0.00	0.46	0.506	IO				4.06
6.250	0.00	0.46	0.502	IO				4.04
6.333	0.00	0.46	0.499	IO				4.01
6.417	0.00	0.46	0.496	IO				3.99
6.500	0.00	0.46	0.493	IO				3.97
6.583	0.00	0.46	0.490	IO				3.94
6.667	0.00	0.46	0.487	IO				3.92
6.750	0.00	0.46	0.483	IO				3.90
6.833	0.00	0.46	0.480	IO				3.87
6.917	0.00	0.46	0.477	IO				3.85
7.000	0.00	0.46	0.474	IO				3.83
7.083	0.00	0.46	0.471	IO				3.81
7.167	0.00	0.46	0.468	IO				3.78
7.250	0.00	0.46	0.464	IO				3.76
7.333	0.00	0.46	0.461	IO				3.74
7.417	0.00	0.46	0.458	IO				3.71
7.500	0.00	0.46	0.455	IO				3.69
7.583	0.00	0.46	0.452	IO				3.67
7.667	0.00	0.46	0.449	IO				3.65
7.750	0.00	0.46	0.445	IO				3.62
7.833	0.00	0.46	0.442	IO				3.60
7.917	0.00	0.46	0.439	IO				3.58
8.000	0.00	0.46	0.436	IO				3.55
8.083	0.00	0.46	0.433	IO				3.53
8.167	0.00	0.46	0.430	IO				3.51
8.250	0.00	0.46	0.426	IO				3.49
8.333	0.00	0.46	0.423	IO				3.46
8.417	0.00	0.46	0.420	IO				3.44
8.500	0.00	0.46	0.417	IO				3.42
8.583	0.00	0.46	0.414	IO				3.39
8.667	0.00	0.46	0.411	IO				3.37
8.750	0.00	0.46	0.407	IO				3.35

8.833	0.00	0.46	0.404	IO				3.32
8.917	0.00	0.46	0.401	IO				3.30
9.000	0.00	0.46	0.398	IO				3.28
9.083	0.00	0.46	0.395	IO				3.26
9.167	0.00	0.46	0.392	IO				3.23
9.250	0.00	0.46	0.388	IO				3.21
9.333	0.00	0.46	0.385	IO				3.19
9.417	0.00	0.46	0.382	IO				3.16
9.500	0.00	0.46	0.379	IO				3.14
9.583	0.00	0.46	0.376	IO				3.12
9.667	0.00	0.46	0.373	IO				3.10
9.750	0.00	0.46	0.369	IO				3.07
9.833	0.00	0.46	0.366	IO				3.05
9.917	0.00	0.46	0.363	IO				3.03
10.000	0.00	0.46	0.360	IO				3.00
10.083	0.00	0.46	0.357	IO				2.98
10.167	0.00	0.46	0.354	IO				2.96
10.250	0.00	0.46	0.350	IO				2.93
10.333	0.00	0.46	0.347	IO				2.91
10.417	0.00	0.46	0.344	IO				2.89
10.500	0.00	0.46	0.341	IO				2.87
10.583	0.00	0.46	0.338	IO				2.84
10.667	0.00	0.46	0.335	IO				2.82
10.750	0.00	0.46	0.331	IO				2.80
10.833	0.00	0.46	0.328	IO				2.77
10.917	0.00	0.46	0.325	IO				2.75
11.000	0.00	0.46	0.322	IO				2.73
11.083	0.00	0.46	0.319	IO				2.71
11.167	0.00	0.46	0.316	IO				2.68
11.250	0.00	0.46	0.312	IO				2.66
11.333	0.00	0.46	0.309	IO				2.64
11.417	0.00	0.46	0.306	IO				2.61
11.500	0.00	0.46	0.303	IO				2.59
11.583	0.00	0.46	0.300	IO				2.57
11.667	0.00	0.46	0.297	IO				2.55
11.750	0.00	0.46	0.293	IO				2.52
11.833	0.00	0.46	0.290	IO				2.50
11.917	0.00	0.46	0.287	IO				2.48
12.000	0.00	0.46	0.284	IO				2.45
12.083	0.00	0.46	0.281	IO				2.43
12.167	0.00	0.46	0.278	IO				2.41
12.250	0.00	0.46	0.274	IO				2.38
12.333	0.00	0.46	0.271	IO				2.36
12.417	0.00	0.46	0.268	IO				2.34
12.500	0.00	0.46	0.265	IO				2.32
12.583	0.00	0.46	0.262	IO				2.29
12.667	0.00	0.46	0.259	IO				2.27
12.750	0.00	0.46	0.255	IO				2.25
12.833	0.00	0.46	0.252	IO				2.22
12.917	0.00	0.46	0.249	IO				2.20
13.000	0.00	0.46	0.246	IO				2.18
13.083	0.00	0.46	0.243	IO				2.16
13.167	0.00	0.46	0.240	IO				2.13
13.250	0.00	0.46	0.236	IO				2.11
13.333	0.00	0.46	0.233	IO				2.09
13.417	0.00	0.46	0.230	IO				2.06
13.500	0.00	0.46	0.227	IO				2.04
13.583	0.00	0.46	0.224	IO				2.02
13.667	0.00	0.46	0.221	IO				2.00
13.750	0.00	0.46	0.217	IO				1.97

13.833	0.00	0.46	0.214	IO				1.95
13.917	0.00	0.46	0.211	IO				1.93
14.000	0.00	0.46	0.208	IO				1.90
14.083	0.00	0.46	0.205	IO				1.88
14.167	0.00	0.46	0.202	IO				1.86
14.250	0.00	0.46	0.198	IO				1.83
14.333	0.00	0.46	0.195	IO				1.81
14.417	0.00	0.46	0.192	IO				1.79
14.500	0.00	0.46	0.189	IO				1.77
14.583	0.00	0.46	0.186	IO				1.74
14.667	0.00	0.46	0.182	IO				1.72
14.750	0.00	0.46	0.179	IO				1.70
14.833	0.00	0.46	0.176	IO				1.67
14.917	0.00	0.46	0.173	IO				1.65
15.000	0.00	0.46	0.170	IO				1.63
15.083	0.00	0.46	0.167	IO				1.61
15.167	0.00	0.46	0.163	IO				1.58
15.250	0.00	0.46	0.160	IO				1.56
15.333	0.00	0.46	0.157	IO				1.54
15.417	0.00	0.46	0.154	IO				1.51
15.500	0.00	0.46	0.151	IO				1.49
15.583	0.00	0.46	0.148	IO				1.47
15.667	0.00	0.46	0.144	IO				1.44
15.750	0.00	0.46	0.141	IO				1.42
15.833	0.00	0.46	0.138	IO				1.40
15.917	0.00	0.46	0.135	IO				1.38
16.000	0.00	0.46	0.132	IO				1.35
16.083	0.00	0.46	0.129	IO				1.33
16.167	0.00	0.46	0.125	IO				1.31
16.250	0.00	0.46	0.122	IO				1.28
16.333	0.00	0.46	0.119	IO				1.26
16.417	0.00	0.46	0.116	IO				1.24
16.500	0.00	0.46	0.113	IO				1.22
16.583	0.00	0.46	0.110	IO				1.19
16.667	0.00	0.46	0.106	IO				1.17
16.750	0.00	0.46	0.103	IO				1.15
16.833	0.00	0.46	0.100	IO				1.12
16.917	0.00	0.46	0.097	IO				1.10
17.000	0.00	0.46	0.094	IO				1.08
17.083	0.00	0.46	0.091	IO				1.06
17.167	0.00	0.46	0.087	IO				1.03
17.250	0.00	0.46	0.084	IO				1.01
17.333	0.00	0.45	0.081	IO				0.98
17.417	0.00	0.43	0.078	IO				0.94
17.500	0.00	0.42	0.075	IO				0.91
17.583	0.00	0.40	0.072	IO				0.87
17.667	0.00	0.39	0.070	IO				0.84
17.750	0.00	0.37	0.067	IO				0.81
17.833	0.00	0.36	0.065	IO				0.78
17.917	0.00	0.34	0.062	IO				0.75
18.000	0.00	0.33	0.060	IO				0.72
18.083	0.00	0.32	0.058	IO				0.69
18.167	0.00	0.31	0.055	IO				0.67
18.250	0.00	0.30	0.053	IO				0.64
18.333	0.00	0.28	0.051	IO				0.62
18.417	0.00	0.27	0.049	O				0.60
18.500	0.00	0.26	0.048	O				0.57
18.583	0.00	0.25	0.046	O				0.55
18.667	0.00	0.24	0.044	O				0.53
18.750	0.00	0.24	0.042	O				0.51

18.833	0.00	0.23	0.041	O	|	|	|	|	0.49
18.917	0.00	0.22	0.039	O	|	|	|	|	0.47
19.000	0.00	0.21	0.038	O	|	|	|	|	0.46
19.083	0.00	0.20	0.036	O	|	|	|	|	0.44
19.167	0.00	0.19	0.035	O	|	|	|	|	0.42
19.250	0.00	0.19	0.034	O	|	|	|	|	0.41
19.333	0.00	0.18	0.032	O	|	|	|	|	0.39
19.417	0.00	0.17	0.031	O	|	|	|	|	0.38
19.500	0.00	0.17	0.030	O	|	|	|	|	0.36
19.583	0.00	0.16	0.029	O	|	|	|	|	0.35
19.667	0.00	0.15	0.028	O	|	|	|	|	0.34
19.750	0.00	0.15	0.027	O	|	|	|	|	0.32
19.833	0.00	0.14	0.026	O	|	|	|	|	0.31
19.917	0.00	0.14	0.025	O	|	|	|	|	0.30
20.000	0.00	0.13	0.024	O	|	|	|	|	0.29
20.083	0.00	0.13	0.023	O	|	|	|	|	0.28
20.167	0.00	0.12	0.022	O	|	|	|	|	0.27
20.250	0.00	0.12	0.021	O	|	|	|	|	0.26
20.333	0.00	0.11	0.021	O	|	|	|	|	0.25
20.417	0.00	0.11	0.020	O	|	|	|	|	0.24
20.500	0.00	0.11	0.019	O	|	|	|	|	0.23
20.583	0.00	0.10	0.018	O	|	|	|	|	0.22
20.667	0.00	0.10	0.018	O	|	|	|	|	0.21
20.750	0.00	0.09	0.017	O	|	|	|	|	0.20
20.833	0.00	0.09	0.016	O	|	|	|	|	0.20
20.917	0.00	0.09	0.016	O	|	|	|	|	0.19
21.000	0.00	0.08	0.015	O	|	|	|	|	0.18
21.083	0.00	0.08	0.015	O	|	|	|	|	0.18
21.167	0.00	0.08	0.014	O	|	|	|	|	0.17
21.250	0.00	0.07	0.013	O	|	|	|	|	0.16
21.333	0.00	0.07	0.013	O	|	|	|	|	0.16
21.417	0.00	0.07	0.013	O	|	|	|	|	0.15
21.500	0.00	0.07	0.012	O	|	|	|	|	0.14
21.583	0.00	0.06	0.012	O	|	|	|	|	0.14
21.667	0.00	0.06	0.011	O	|	|	|	|	0.13
21.750	0.00	0.06	0.011	O	|	|	|	|	0.13
21.833	0.00	0.06	0.010	O	|	|	|	|	0.12
21.917	0.00	0.06	0.010	O	|	|	|	|	0.12
22.000	0.00	0.05	0.010	O	|	|	|	|	0.12
22.083	0.00	0.05	0.009	O	|	|	|	|	0.11
22.167	0.00	0.05	0.009	O	|	|	|	|	0.11
22.250	0.00	0.05	0.009	O	|	|	|	|	0.10
22.333	0.00	0.05	0.008	O	|	|	|	|	0.10
22.417	0.00	0.04	0.008	O	|	|	|	|	0.10
22.500	0.00	0.04	0.008	O	|	|	|	|	0.09
22.583	0.00	0.04	0.007	O	|	|	|	|	0.09
22.667	0.00	0.04	0.007	O	|	|	|	|	0.08
22.750	0.00	0.04	0.007	O	|	|	|	|	0.08
22.833	0.00	0.04	0.007	O	|	|	|	|	0.08
22.917	0.00	0.03	0.006	O	|	|	|	|	0.08
23.000	0.00	0.03	0.006	O	|	|	|	|	0.07
23.083	0.00	0.03	0.006	O	|	|	|	|	0.07
23.167	0.00	0.03	0.006	O	|	|	|	|	0.07
23.250	0.00	0.03	0.005	O	|	|	|	|	0.07
23.333	0.00	0.03	0.005	O	|	|	|	|	0.06
23.417	0.00	0.03	0.005	O	|	|	|	|	0.06
23.500	0.00	0.03	0.005	O	|	|	|	|	0.06
23.583	0.00	0.03	0.005	O	|	|	|	|	0.06
23.667	0.00	0.02	0.004	O	|	|	|	|	0.05
23.750	0.00	0.02	0.004	O	|	|	|	|	0.05

23.833	0.00	0.02	0.004	O	|	|	|	0.05
23.917	0.00	0.02	0.004	O	|	|	|	0.05
24.000	0.00	0.02	0.004	O	|	|	|	0.05
24.083	0.00	0.02	0.004	O	|	|	|	0.04
24.167	0.00	0.02	0.004	O	|	|	|	0.04
24.250	0.00	0.02	0.003	O	|	|	|	0.04
24.333	0.00	0.02	0.003	O	|	|	|	0.04
24.417	0.00	0.02	0.003	O	|	|	|	0.04
24.500	0.00	0.02	0.003	O	|	|	|	0.04
24.583	0.00	0.02	0.003	O	|	|	|	0.04
24.667	0.00	0.02	0.003	O	|	|	|	0.03
24.750	0.00	0.02	0.003	O	|	|	|	0.03
24.833	0.00	0.01	0.003	O	|	|	|	0.03
24.917	0.00	0.01	0.003	O	|	|	|	0.03
25.000	0.00	0.01	0.002	O	|	|	|	0.03
25.083	0.00	0.01	0.002	O	|	|	|	0.03
25.167	0.00	0.01	0.002	O	|	|	|	0.03
25.250	0.00	0.01	0.002	O	|	|	|	0.03
25.333	0.00	0.01	0.002	O	|	|	|	0.03
25.417	0.00	0.01	0.002	O	|	|	|	0.02
25.500	0.00	0.01	0.002	O	|	|	|	0.02
25.583	0.00	0.01	0.002	O	|	|	|	0.02
25.667	0.00	0.01	0.002	O	|	|	|	0.02
25.750	0.00	0.01	0.002	O	|	|	|	0.02
25.833	0.00	0.01	0.002	O	|	|	|	0.02
25.917	0.00	0.01	0.002	O	|	|	|	0.02
26.000	0.00	0.01	0.002	O	|	|	|	0.02
26.083	0.00	0.01	0.001	O	|	|	|	0.02
26.167	0.00	0.01	0.001	O	|	|	|	0.02
26.250	0.00	0.01	0.001	O	|	|	|	0.02
26.333	0.00	0.01	0.001	O	|	|	|	0.02
26.417	0.00	0.01	0.001	O	|	|	|	0.02
26.500	0.00	0.01	0.001	O	|	|	|	0.01
26.583	0.00	0.01	0.001	O	|	|	|	0.01
26.667	0.00	0.01	0.001	O	|	|	|	0.01
26.750	0.00	0.01	0.001	O	|	|	|	0.01
26.833	0.00	0.01	0.001	O	|	|	|	0.01
26.917	0.00	0.01	0.001	O	|	|	|	0.01
27.000	0.00	0.01	0.001	O	|	|	|	0.01
27.083	0.00	0.01	0.001	O	|	|	|	0.01
27.167	0.00	0.00	0.001	O	|	|	|	0.01
27.250	0.00	0.00	0.001	O	|	|	|	0.01
27.333	0.00	0.00	0.001	O	|	|	|	0.01
27.417	0.00	0.00	0.001	O	|	|	|	0.01
27.500	0.00	0.00	0.001	O	|	|	|	0.01
27.583	0.00	0.00	0.001	O	|	|	|	0.01
27.667	0.00	0.00	0.001	O	|	|	|	0.01
27.750	0.00	0.00	0.001	O	|	|	|	0.01
27.833	0.00	0.00	0.001	O	|	|	|	0.01
27.917	0.00	0.00	0.001	O	|	|	|	0.01
28.000	0.00	0.00	0.001	O	|	|	|	0.01
28.083	0.00	0.00	0.001	O	|	|	|	0.01
28.167	0.00	0.00	0.001	O	|	|	|	0.01
28.250	0.00	0.00	0.001	O	|	|	|	0.01
28.333	0.00	0.00	0.001	O	|	|	|	0.01
28.417	0.00	0.00	0.001	O	|	|	|	0.01
28.500	0.00	0.00	0.000	O	|	|	|	0.01
28.583	0.00	0.00	0.000	O	|	|	|	0.01
28.667	0.00	0.00	0.000	O	|	|	|	0.01
28.750	0.00	0.00	0.000	O	|	|	|	0.01

28.833	0.00	0.00	0.000	O	|	|	|	|	0.01
28.917	0.00	0.00	0.000	O	|	|	|	|	0.00
29.000	0.00	0.00	0.000	O	|	|	|	|	0.00
29.083	0.00	0.00	0.000	O	|	|	|	|	0.00
29.167	0.00	0.00	0.000	O	|	|	|	|	0.00
29.250	0.00	0.00	0.000	O	|	|	|	|	0.00
29.333	0.00	0.00	0.000	O	|	|	|	|	0.00
29.417	0.00	0.00	0.000	O	|	|	|	|	0.00
29.500	0.00	0.00	0.000	O	|	|	|	|	0.00
29.583	0.00	0.00	0.000	O	|	|	|	|	0.00
29.667	0.00	0.00	0.000	O	|	|	|	|	0.00
29.750	0.00	0.00	0.000	O	|	|	|	|	0.00
29.833	0.00	0.00	0.000	O	|	|	|	|	0.00
29.917	0.00	0.00	0.000	O	|	|	|	|	0.00
30.000	0.00	0.00	0.000	O	|	|	|	|	0.00
30.083	0.00	0.00	0.000	O	|	|	|	|	0.00
30.167	0.00	0.00	0.000	O	|	|	|	|	0.00
30.250	0.00	0.00	0.000	O	|	|	|	|	0.00
30.333	0.00	0.00	0.000	O	|	|	|	|	0.00
30.417	0.00	0.00	0.000	O	|	|	|	|	0.00
30.500	0.00	0.00	0.000	O	|	|	|	|	0.00
30.583	0.00	0.00	0.000	O	|	|	|	|	0.00
30.667	0.00	0.00	0.000	O	|	|	|	|	0.00
30.750	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 369
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.720 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
10-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte

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

Number of intervals = 76
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.155 (CFS)
Total volume = 0.986 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 76
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.0 4.08 6.12 8.16	Depth (Ft.)
0.083	0.28	0.01	0.001	OI | | | |	0.01
0.167	0.63	0.02	0.004	O I | | | |	0.05
0.250	0.76	0.05	0.009	O I | | | |	0.10
0.333	0.80	0.07	0.013	O I | | | |	0.16
0.417	0.81	0.10	0.018	O I | | | |	0.22
0.500	0.87	0.13	0.023	O I | | | |	0.28
0.583	0.93	0.16	0.029	O I | | | |	0.34
0.667	0.94	0.19	0.034	O I | | | |	0.41
0.750	0.95	0.22	0.039	O I | | | |	0.47
0.833	0.95	0.24	0.044	O I | | | |	0.53
0.917	0.95	0.27	0.049	|O I | | | |	0.59
1.000	1.01	0.30	0.053	|O I | | | |	0.64
1.083	1.07	0.32	0.058	|O I | | | |	0.70
1.167	1.08	0.35	0.064	|O I | | | |	0.77
1.250	1.08	0.38	0.068	|O I | | | |	0.83
1.333	1.09	0.41	0.073	|O I | | | |	0.88
1.417	1.09	0.43	0.078	|O I | | | |	0.94
1.500	1.09	0.46	0.082	|O I | | | |	0.99
1.583	1.09	0.46	0.087	|O I | | | |	1.03
1.667	1.09	0.46	0.091	|O I | | | |	1.06
1.750	1.09	0.46	0.095	|O I | | | |	1.09
1.833	1.09	0.46	0.100	|O I | | | |	1.12
1.917	1.09	0.46	0.104	|O I | | | |	1.15
2.000	1.14	0.46	0.108	|O I | | | |	1.18
2.083	1.15	0.46	0.113	|O I | | | |	1.22
2.167	1.15	0.46	0.118	|O I | | | |	1.25
2.250	1.21	0.46	0.123	|O I | | | |	1.29
2.333	1.22	0.46	0.128	|O I | | | |	1.33
2.417	1.22	0.46	0.133	|O I | | | |	1.36
2.500	1.22	0.46	0.138	|O I | | | |	1.40
2.583	1.22	0.46	0.144	|O I | | | |	1.44
2.667	1.22	0.46	0.149	|O I | | | |	1.48
2.750	1.28	0.46	0.154	|O I | | | |	1.52
2.833	1.34	0.46	0.160	|O I | | | |	1.56
2.917	1.35	0.46	0.166	|O I | | | |	1.60
3.000	1.36	0.46	0.172	|O I | | | |	1.65
3.083	1.36	0.46	0.179	|O I | | | |	1.69
3.167	1.41	0.46	0.185	|O I | | | |	1.74
3.250	1.47	0.46	0.192	|O I | | | |	1.79
3.333	1.49	0.46	0.199	|O I | | | |	1.84
3.417	1.55	0.46	0.206	|O I | | | |	1.89
3.500	1.66	0.46	0.214	|O I | | | |	1.95
3.583	1.79	0.46	0.223	|O I| | | |	2.01
3.667	1.87	0.46	0.232	|O I| | | |	2.08
3.750	1.95	0.46	0.242	|O I| | | |	2.15

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3.833    2.01    0.46      0.253  |O     I|       |       |       |     2.23
3.917    2.09    0.46      0.264  |O      I       |       |       |     2.31
4.000    2.15    0.46      0.275  |O      I       |       |       |     2.39
4.083    2.22    0.46      0.287  |O      I       |       |       |     2.48
4.167    2.34    0.46      0.299  |O      |I      |       |       |     2.57
4.250    2.47    0.46      0.313  |O      |I      |       |       |     2.66
4.333    2.61    0.46      0.327  |O      | I     |       |       |     2.77
4.417    2.76    0.46      0.342  |O      | I     |       |       |     2.88
4.500    2.85    0.46      0.359  |O      |  I    |       |       |     2.99
4.583    2.95    0.46      0.375  |O      |  I    |       |       |     3.12
4.667    3.12    0.46      0.393  |O      |   I   |       |       |     3.24
4.750    3.29    0.46      0.412  |O      |   I   |       |       |     3.38
4.833    3.40    0.46      0.432  |O      |    I  |       |       |     3.52
4.917    3.50    0.46      0.453  |O      |    I  |       |       |     3.67
5.000    3.67    0.46      0.474  |O      |     I |       |       |     3.83
5.083    4.14    0.46      0.498  |O      |       I       |       |     4.00
5.167    4.95    0.46      0.526  |O      |       |  I    |       |     4.20
5.250    5.67    0.46      0.559  |O      |       |     I |       |     4.45
5.333    6.27    0.46      0.597  |O      |       |       I       |     4.72
5.417    6.99    0.46      0.640  |O      |       |       |  I    |     5.03
5.500    8.16    0.46      0.689  |O      |       |       |       I     5.38
5.583    6.27    0.46      0.735  |O      |       |       I       |     5.72
5.667    2.93    0.46      0.764  |O      |  I    |       |       |     5.93
5.750    1.60    0.46      0.776  |O    I |       |       |       |     6.03
5.833    1.01    0.46      0.782  |O I    |       |       |       |     6.10
5.917    0.63    0.46      0.784  |OI     |       |       |       |     6.13
6.000    0.41    0.46      0.785  |O      |       |       |       |     6.13
6.083    0.20    0.46      0.784  IO      |       |       |       |     6.12
6.167    0.05    0.46      0.781  IO      |       |       |       |     6.09
6.250    0.02    0.46      0.778  IO      |       |       |       |     6.05
6.333    0.00    0.46      0.775  IO      |       |       |       |     6.02
6.417    0.00    0.46      0.772  IO      |       |       |       |     5.99
6.500    0.00    0.46      0.769  IO      |       |       |       |     5.96
6.583    0.00    0.46      0.766  IO      |       |       |       |     5.94
6.667    0.00    0.46      0.763  IO      |       |       |       |     5.92
6.750    0.00    0.46      0.760  IO      |       |       |       |     5.90
6.833    0.00    0.46      0.756  IO      |       |       |       |     5.87
6.917    0.00    0.46      0.753  IO      |       |       |       |     5.85
7.000    0.00    0.46      0.750  IO      |       |       |       |     5.83
7.083    0.00    0.46      0.747  IO      |       |       |       |     5.80
7.167    0.00    0.46      0.744  IO      |       |       |       |     5.78
7.250    0.00    0.46      0.741  IO      |       |       |       |     5.76
7.333    0.00    0.46      0.737  IO      |       |       |       |     5.74
7.417    0.00    0.46      0.734  IO      |       |       |       |     5.71
7.500    0.00    0.46      0.731  IO      |       |       |       |     5.69
7.583    0.00    0.46      0.728  IO      |       |       |       |     5.67
7.667    0.00    0.46      0.725  IO      |       |       |       |     5.64
7.750    0.00    0.46      0.722  IO      |       |       |       |     5.62
7.833    0.00    0.46      0.718  IO      |       |       |       |     5.60
7.917    0.00    0.46      0.715  IO      |       |       |       |     5.57
8.000    0.00    0.46      0.712  IO      |       |       |       |     5.55
8.083    0.00    0.46      0.709  IO      |       |       |       |     5.53
8.167    0.00    0.46      0.706  IO      |       |       |       |     5.51
8.250    0.00    0.46      0.703  IO      |       |       |       |     5.48
8.333    0.00    0.46      0.699  IO      |       |       |       |     5.46
8.417    0.00    0.46      0.696  IO      |       |       |       |     5.44
8.500    0.00    0.46      0.693  IO      |       |       |       |     5.41
8.583    0.00    0.46      0.690  IO      |       |       |       |     5.39
8.667    0.00    0.46      0.687  IO      |       |       |       |     5.37
8.750    0.00    0.46      0.684  IO      |       |       |       |     5.35
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8.833	0.00	0.46	0.680	IO				5.32
8.917	0.00	0.46	0.677	IO				5.30
9.000	0.00	0.46	0.674	IO				5.28
9.083	0.00	0.46	0.671	IO				5.25
9.167	0.00	0.46	0.668	IO				5.23
9.250	0.00	0.46	0.665	IO				5.21
9.333	0.00	0.46	0.661	IO				5.18
9.417	0.00	0.46	0.658	IO				5.16
9.500	0.00	0.46	0.655	IO				5.14
9.583	0.00	0.46	0.652	IO				5.12
9.667	0.00	0.46	0.649	IO				5.09
9.750	0.00	0.46	0.646	IO				5.07
9.833	0.00	0.46	0.642	IO				5.05
9.917	0.00	0.46	0.639	IO				5.02
10.000	0.00	0.46	0.636	IO				5.00
10.083	0.00	0.46	0.633	IO				4.98
10.167	0.00	0.46	0.630	IO				4.96
10.250	0.00	0.46	0.627	IO				4.93
10.333	0.00	0.46	0.623	IO				4.91
10.417	0.00	0.46	0.620	IO				4.89
10.500	0.00	0.46	0.617	IO				4.86
10.583	0.00	0.46	0.614	IO				4.84
10.667	0.00	0.46	0.611	IO				4.82
10.750	0.00	0.46	0.608	IO				4.80
10.833	0.00	0.46	0.604	IO				4.77
10.917	0.00	0.46	0.601	IO				4.75
11.000	0.00	0.46	0.598	IO				4.73
11.083	0.00	0.46	0.595	IO				4.70
11.167	0.00	0.46	0.592	IO				4.68
11.250	0.00	0.46	0.588	IO				4.66
11.333	0.00	0.46	0.585	IO				4.63
11.417	0.00	0.46	0.582	IO				4.61
11.500	0.00	0.46	0.579	IO				4.59
11.583	0.00	0.46	0.576	IO				4.57
11.667	0.00	0.46	0.573	IO				4.54
11.750	0.00	0.46	0.569	IO				4.52
11.833	0.00	0.46	0.566	IO				4.50
11.917	0.00	0.46	0.563	IO				4.47
12.000	0.00	0.46	0.560	IO				4.45
12.083	0.00	0.46	0.557	IO				4.43
12.167	0.00	0.46	0.554	IO				4.41
12.250	0.00	0.46	0.550	IO				4.38
12.333	0.00	0.46	0.547	IO				4.36
12.417	0.00	0.46	0.544	IO				4.34
12.500	0.00	0.46	0.541	IO				4.31
12.583	0.00	0.46	0.538	IO				4.29
12.667	0.00	0.46	0.535	IO				4.27
12.750	0.00	0.46	0.531	IO				4.25
12.833	0.00	0.46	0.528	IO				4.22
12.917	0.00	0.46	0.525	IO				4.20
13.000	0.00	0.46	0.522	IO				4.18
13.083	0.00	0.46	0.519	IO				4.15
13.167	0.00	0.46	0.516	IO				4.13
13.250	0.00	0.46	0.512	IO				4.11
13.333	0.00	0.46	0.509	IO				4.08
13.417	0.00	0.46	0.506	IO				4.06
13.500	0.00	0.46	0.503	IO				4.04
13.583	0.00	0.46	0.500	IO				4.02
13.667	0.00	0.46	0.497	IO				3.99
13.750	0.00	0.46	0.493	IO				3.97

13.833	0.00	0.46	0.490	IO				3.95
13.917	0.00	0.46	0.487	IO				3.92
14.000	0.00	0.46	0.484	IO				3.90
14.083	0.00	0.46	0.481	IO				3.88
14.167	0.00	0.46	0.478	IO				3.86
14.250	0.00	0.46	0.474	IO				3.83
14.333	0.00	0.46	0.471	IO				3.81
14.417	0.00	0.46	0.468	IO				3.79
14.500	0.00	0.46	0.465	IO				3.76
14.583	0.00	0.46	0.462	IO				3.74
14.667	0.00	0.46	0.459	IO				3.72
14.750	0.00	0.46	0.455	IO				3.69
14.833	0.00	0.46	0.452	IO				3.67
14.917	0.00	0.46	0.449	IO				3.65
15.000	0.00	0.46	0.446	IO				3.63
15.083	0.00	0.46	0.443	IO				3.60
15.167	0.00	0.46	0.440	IO				3.58
15.250	0.00	0.46	0.436	IO				3.56
15.333	0.00	0.46	0.433	IO				3.53
15.417	0.00	0.46	0.430	IO				3.51
15.500	0.00	0.46	0.427	IO				3.49
15.583	0.00	0.46	0.424	IO				3.47
15.667	0.00	0.46	0.421	IO				3.44
15.750	0.00	0.46	0.417	IO				3.42
15.833	0.00	0.46	0.414	IO				3.40
15.917	0.00	0.46	0.411	IO				3.37
16.000	0.00	0.46	0.408	IO				3.35
16.083	0.00	0.46	0.405	IO				3.33
16.167	0.00	0.46	0.402	IO				3.31
16.250	0.00	0.46	0.398	IO				3.28
16.333	0.00	0.46	0.395	IO				3.26
16.417	0.00	0.46	0.392	IO				3.24
16.500	0.00	0.46	0.389	IO				3.21
16.583	0.00	0.46	0.386	IO				3.19
16.667	0.00	0.46	0.383	IO				3.17
16.750	0.00	0.46	0.379	IO				3.14
16.833	0.00	0.46	0.376	IO				3.12
16.917	0.00	0.46	0.373	IO				3.10
17.000	0.00	0.46	0.370	IO				3.08
17.083	0.00	0.46	0.367	IO				3.05
17.167	0.00	0.46	0.364	IO				3.03
17.250	0.00	0.46	0.360	IO				3.01
17.333	0.00	0.46	0.357	IO				2.98
17.417	0.00	0.46	0.354	IO				2.96
17.500	0.00	0.46	0.351	IO				2.94
17.583	0.00	0.46	0.348	IO				2.92
17.667	0.00	0.46	0.345	IO				2.89
17.750	0.00	0.46	0.341	IO				2.87
17.833	0.00	0.46	0.338	IO				2.85
17.917	0.00	0.46	0.335	IO				2.82
18.000	0.00	0.46	0.332	IO				2.80
18.083	0.00	0.46	0.329	IO				2.78
18.167	0.00	0.46	0.326	IO				2.76
18.250	0.00	0.46	0.322	IO				2.73
18.333	0.00	0.46	0.319	IO				2.71
18.417	0.00	0.46	0.316	IO				2.69
18.500	0.00	0.46	0.313	IO				2.66
18.583	0.00	0.46	0.310	IO				2.64
18.667	0.00	0.46	0.307	IO				2.62
18.750	0.00	0.46	0.303	IO				2.59

18.833	0.00	0.46	0.300	IO				2.57
18.917	0.00	0.46	0.297	IO				2.55
19.000	0.00	0.46	0.294	IO				2.53
19.083	0.00	0.46	0.291	IO				2.50
19.167	0.00	0.46	0.288	IO				2.48
19.250	0.00	0.46	0.284	IO				2.46
19.333	0.00	0.46	0.281	IO				2.43
19.417	0.00	0.46	0.278	IO				2.41
19.500	0.00	0.46	0.275	IO				2.39
19.583	0.00	0.46	0.272	IO				2.37
19.667	0.00	0.46	0.269	IO				2.34
19.750	0.00	0.46	0.265	IO				2.32
19.833	0.00	0.46	0.262	IO				2.30
19.917	0.00	0.46	0.259	IO				2.27
20.000	0.00	0.46	0.256	IO				2.25
20.083	0.00	0.46	0.253	IO				2.23
20.167	0.00	0.46	0.250	IO				2.20
20.250	0.00	0.46	0.246	IO				2.18
20.333	0.00	0.46	0.243	IO				2.16
20.417	0.00	0.46	0.240	IO				2.14
20.500	0.00	0.46	0.237	IO				2.11
20.583	0.00	0.46	0.234	IO				2.09
20.667	0.00	0.46	0.231	IO				2.07
20.750	0.00	0.46	0.227	IO				2.04
20.833	0.00	0.46	0.224	IO				2.02
20.917	0.00	0.46	0.221	IO				2.00
21.000	0.00	0.46	0.218	IO				1.98
21.083	0.00	0.46	0.215	IO				1.95
21.167	0.00	0.46	0.211	IO				1.93
21.250	0.00	0.46	0.208	IO				1.91
21.333	0.00	0.46	0.205	IO				1.88
21.417	0.00	0.46	0.202	IO				1.86
21.500	0.00	0.46	0.199	IO				1.84
21.583	0.00	0.46	0.196	IO				1.82
21.667	0.00	0.46	0.192	IO				1.79
21.750	0.00	0.46	0.189	IO				1.77
21.833	0.00	0.46	0.186	IO				1.75
21.917	0.00	0.46	0.183	IO				1.72
22.000	0.00	0.46	0.180	IO				1.70
22.083	0.00	0.46	0.177	IO				1.68
22.167	0.00	0.46	0.173	IO				1.65
22.250	0.00	0.46	0.170	IO				1.63
22.333	0.00	0.46	0.167	IO				1.61
22.417	0.00	0.46	0.164	IO				1.59
22.500	0.00	0.46	0.161	IO				1.56
22.583	0.00	0.46	0.158	IO				1.54
22.667	0.00	0.46	0.154	IO				1.52
22.750	0.00	0.46	0.151	IO				1.49
22.833	0.00	0.46	0.148	IO				1.47
22.917	0.00	0.46	0.145	IO				1.45
23.000	0.00	0.46	0.142	IO				1.43
23.083	0.00	0.46	0.139	IO				1.40
23.167	0.00	0.46	0.135	IO				1.38
23.250	0.00	0.46	0.132	IO				1.36
23.333	0.00	0.46	0.129	IO				1.33
23.417	0.00	0.46	0.126	IO				1.31
23.500	0.00	0.46	0.123	IO				1.29
23.583	0.00	0.46	0.120	IO				1.27
23.667	0.00	0.46	0.116	IO				1.24
23.750	0.00	0.46	0.113	IO				1.22

23.833	0.00	0.46	0.110	IO				1.20
23.917	0.00	0.46	0.107	IO				1.17
24.000	0.00	0.46	0.104	IO				1.15
24.083	0.00	0.46	0.101	IO				1.13
24.167	0.00	0.46	0.097	IO				1.10
24.250	0.00	0.46	0.094	IO				1.08
24.333	0.00	0.46	0.091	IO				1.06
24.417	0.00	0.46	0.088	IO				1.04
24.500	0.00	0.46	0.085	IO				1.01
24.583	0.00	0.45	0.082	IO				0.98
24.667	0.00	0.44	0.079	IO				0.95
24.750	0.00	0.42	0.076	IO				0.91
24.833	0.00	0.40	0.073	IO				0.88
24.917	0.00	0.39	0.070	IO				0.84
25.000	0.00	0.37	0.067	IO				0.81
25.083	0.00	0.36	0.065	IO				0.78
25.167	0.00	0.35	0.062	IO				0.75
25.250	0.00	0.33	0.060	IO				0.72
25.333	0.00	0.32	0.058	IO				0.70
25.417	0.00	0.31	0.056	IO				0.67
25.500	0.00	0.30	0.054	IO				0.65
25.583	0.00	0.29	0.052	IO				0.62
25.667	0.00	0.28	0.050	IO				0.60
25.750	0.00	0.27	0.048	IO				0.58
25.833	0.00	0.26	0.046	IO				0.55
25.917	0.00	0.25	0.044	O				0.53
26.000	0.00	0.24	0.043	O				0.51
26.083	0.00	0.23	0.041	O				0.49
26.167	0.00	0.22	0.040	O				0.48
26.250	0.00	0.21	0.038	O				0.46
26.333	0.00	0.20	0.037	O				0.44
26.417	0.00	0.20	0.035	O				0.42
26.500	0.00	0.19	0.034	O				0.41
26.583	0.00	0.18	0.033	O				0.39
26.667	0.00	0.17	0.031	O				0.38
26.750	0.00	0.17	0.030	O				0.36
26.833	0.00	0.16	0.029	O				0.35
26.917	0.00	0.16	0.028	O				0.34
27.000	0.00	0.15	0.027	O				0.33
27.083	0.00	0.14	0.026	O				0.31
27.167	0.00	0.14	0.025	O				0.30
27.250	0.00	0.13	0.024	O				0.29
27.333	0.00	0.13	0.023	O				0.28
27.417	0.00	0.12	0.022	O				0.27
27.500	0.00	0.12	0.021	O				0.26
27.583	0.00	0.11	0.021	O				0.25
27.667	0.00	0.11	0.020	O				0.24
27.750	0.00	0.11	0.019	O				0.23
27.833	0.00	0.10	0.018	O				0.22
27.917	0.00	0.10	0.018	O				0.21
28.000	0.00	0.09	0.017	O				0.21
28.083	0.00	0.09	0.016	O				0.20
28.167	0.00	0.09	0.016	O				0.19
28.250	0.00	0.08	0.015	O				0.18
28.333	0.00	0.08	0.015	O				0.18
28.417	0.00	0.08	0.014	O				0.17
28.500	0.00	0.08	0.014	O				0.16
28.583	0.00	0.07	0.013	O				0.16
28.667	0.00	0.07	0.013	O				0.15
28.750	0.00	0.07	0.012	O				0.15

28.833	0.00	0.06	0.012	O	|	|	|	0.14
28.917	0.00	0.06	0.011	O	|	|	|	0.14
29.000	0.00	0.06	0.011	O	|	|	|	0.13
29.083	0.00	0.06	0.010	O	|	|	|	0.13
29.167	0.00	0.06	0.010	O	|	|	|	0.12
29.250	0.00	0.05	0.010	O	|	|	|	0.12
29.333	0.00	0.05	0.009	O	|	|	|	0.11
29.417	0.00	0.05	0.009	O	|	|	|	0.11
29.500	0.00	0.05	0.009	O	|	|	|	0.10
29.583	0.00	0.05	0.008	O	|	|	|	0.10
29.667	0.00	0.04	0.008	O	|	|	|	0.10
29.750	0.00	0.04	0.008	O	|	|	|	0.09
29.833	0.00	0.04	0.007	O	|	|	|	0.09
29.917	0.00	0.04	0.007	O	|	|	|	0.09
30.000	0.00	0.04	0.007	O	|	|	|	0.08
30.083	0.00	0.04	0.007	O	|	|	|	0.08
30.167	0.00	0.04	0.006	O	|	|	|	0.08
30.250	0.00	0.03	0.006	O	|	|	|	0.07
30.333	0.00	0.03	0.006	O	|	|	|	0.07
30.417	0.00	0.03	0.006	O	|	|	|	0.07
30.500	0.00	0.03	0.005	O	|	|	|	0.07
30.583	0.00	0.03	0.005	O	|	|	|	0.06
30.667	0.00	0.03	0.005	O	|	|	|	0.06
30.750	0.00	0.03	0.005	O	|	|	|	0.06
30.833	0.00	0.03	0.005	O	|	|	|	0.06
30.917	0.00	0.02	0.004	O	|	|	|	0.05
31.000	0.00	0.02	0.004	O	|	|	|	0.05
31.083	0.00	0.02	0.004	O	|	|	|	0.05
31.167	0.00	0.02	0.004	O	|	|	|	0.05
31.250	0.00	0.02	0.004	O	|	|	|	0.05
31.333	0.00	0.02	0.004	O	|	|	|	0.04
31.417	0.00	0.02	0.004	O	|	|	|	0.04
31.500	0.00	0.02	0.003	O	|	|	|	0.04
31.583	0.00	0.02	0.003	O	|	|	|	0.04
31.667	0.00	0.02	0.003	O	|	|	|	0.04
31.750	0.00	0.02	0.003	O	|	|	|	0.04
31.833	0.00	0.02	0.003	O	|	|	|	0.04
31.917	0.00	0.02	0.003	O	|	|	|	0.03
32.000	0.00	0.02	0.003	O	|	|	|	0.03
32.083	0.00	0.01	0.003	O	|	|	|	0.03
32.167	0.00	0.01	0.003	O	|	|	|	0.03
32.250	0.00	0.01	0.002	O	|	|	|	0.03
32.333	0.00	0.01	0.002	O	|	|	|	0.03
32.417	0.00	0.01	0.002	O	|	|	|	0.03
32.500	0.00	0.01	0.002	O	|	|	|	0.03
32.583	0.00	0.01	0.002	O	|	|	|	0.03
32.667	0.00	0.01	0.002	O	|	|	|	0.02
32.750	0.00	0.01	0.002	O	|	|	|	0.02
32.833	0.00	0.01	0.002	O	|	|	|	0.02
32.917	0.00	0.01	0.002	O	|	|	|	0.02
33.000	0.00	0.01	0.002	O	|	|	|	0.02
33.083	0.00	0.01	0.002	O	|	|	|	0.02
33.167	0.00	0.01	0.002	O	|	|	|	0.02
33.250	0.00	0.01	0.002	O	|	|	|	0.02
33.333	0.00	0.01	0.001	O	|	|	|	0.02
33.417	0.00	0.01	0.001	O	|	|	|	0.02
33.500	0.00	0.01	0.001	O	|	|	|	0.02
33.583	0.00	0.01	0.001	O	|	|	|	0.02
33.667	0.00	0.01	0.001	O	|	|	|	0.02
33.750	0.00	0.01	0.001	O	|	|	|	0.01

33.833	0.00	0.01	0.001	O	|	|	|	|	0.01
33.917	0.00	0.01	0.001	O	|	|	|	|	0.01
34.000	0.00	0.01	0.001	O	|	|	|	|	0.01
34.083	0.00	0.01	0.001	O	|	|	|	|	0.01
34.167	0.00	0.01	0.001	O	|	|	|	|	0.01
34.250	0.00	0.01	0.001	O	|	|	|	|	0.01
34.333	0.00	0.01	0.001	O	|	|	|	|	0.01
34.417	0.00	0.01	0.001	O	|	|	|	|	0.01
34.500	0.00	0.00	0.001	O	|	|	|	|	0.01
34.583	0.00	0.00	0.001	O	|	|	|	|	0.01
34.667	0.00	0.00	0.001	O	|	|	|	|	0.01
34.750	0.00	0.00	0.001	O	|	|	|	|	0.01
34.833	0.00	0.00	0.001	O	|	|	|	|	0.01
34.917	0.00	0.00	0.001	O	|	|	|	|	0.01
35.000	0.00	0.00	0.001	O	|	|	|	|	0.01
35.083	0.00	0.00	0.001	O	|	|	|	|	0.01
35.167	0.00	0.00	0.001	O	|	|	|	|	0.01
35.250	0.00	0.00	0.001	O	|	|	|	|	0.01
35.333	0.00	0.00	0.001	O	|	|	|	|	0.01
35.417	0.00	0.00	0.001	O	|	|	|	|	0.01
35.500	0.00	0.00	0.001	O	|	|	|	|	0.01
35.583	0.00	0.00	0.001	O	|	|	|	|	0.01
35.667	0.00	0.00	0.001	O	|	|	|	|	0.01
35.750	0.00	0.00	0.000	O	|	|	|	|	0.01
35.833	0.00	0.00	0.000	O	|	|	|	|	0.01
35.917	0.00	0.00	0.000	O	|	|	|	|	0.01
36.000	0.00	0.00	0.000	O	|	|	|	|	0.01
36.083	0.00	0.00	0.000	O	|	|	|	|	0.01
36.167	0.00	0.00	0.000	O	|	|	|	|	0.00
36.250	0.00	0.00	0.000	O	|	|	|	|	0.00
36.333	0.00	0.00	0.000	O	|	|	|	|	0.00
36.417	0.00	0.00	0.000	O	|	|	|	|	0.00
36.500	0.00	0.00	0.000	O	|	|	|	|	0.00
36.583	0.00	0.00	0.000	O	|	|	|	|	0.00
36.667	0.00	0.00	0.000	O	|	|	|	|	0.00
36.750	0.00	0.00	0.000	O	|	|	|	|	0.00
36.833	0.00	0.00	0.000	O	|	|	|	|	0.00
36.917	0.00	0.00	0.000	O	|	|	|	|	0.00
37.000	0.00	0.00	0.000	O	|	|	|	|	0.00
37.083	0.00	0.00	0.000	O	|	|	|	|	0.00
37.167	0.00	0.00	0.000	O	|	|	|	|	0.00
37.250	0.00	0.00	0.000	O	|	|	|	|	0.00
37.333	0.00	0.00	0.000	O	|	|	|	|	0.00
37.417	0.00	0.00	0.000	O	|	|	|	|	0.00
37.500	0.00	0.00	0.000	O	|	|	|	|	0.00
37.583	0.00	0.00	0.000	O	|	|	|	|	0.00
37.667	0.00	0.00	0.000	O	|	|	|	|	0.00
37.750	0.00	0.00	0.000	O	|	|	|	|	0.00
37.833	0.00	0.00	0.000	O	|	|	|	|	0.00
37.917	0.00	0.00	0.000	O	|	|	|	|	0.00
38.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 456
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.986 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
10-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.789 (CFS)
Total volume = 1.632 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.7	1.39	2.09	2.79	Depth (Ft.)
0.083	0.06	0.00	0.000	O	|	|	|	|	0.00
0.167	0.13	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.15	0.01	0.002	OI	|	|	|	|	0.02
0.333	0.19	0.02	0.003	O I	|	|	|	|	0.03
0.417	0.22	0.02	0.004	O I	|	|	|	|	0.05
0.500	0.23	0.03	0.006	O I	|	|	|	|	0.07
0.583	0.24	0.04	0.007	O I	|	|	|	|	0.08
0.667	0.24	0.05	0.008	O I	|	|	|	|	0.10
0.750	0.24	0.05	0.010	O I	|	|	|	|	0.11
0.833	0.27	0.06	0.011	O I	|	|	|	|	0.13
0.917	0.30	0.07	0.012	O I	|	|	|	|	0.15
1.000	0.31	0.08	0.014	O I	|	|	|	|	0.17
1.083	0.28	0.09	0.015	O I	|	|	|	|	0.19
1.167	0.25	0.09	0.017	|OI	|	|	|	|	0.20
1.250	0.24	0.10	0.018	|OI	|	|	|	|	0.21
1.333	0.24	0.10	0.019	|OI	|	|	|	|	0.23
1.417	0.24	0.11	0.020	|OI	|	|	|	|	0.24
1.500	0.24	0.11	0.020	|OI	|	|	|	|	0.25
1.583	0.24	0.12	0.021	|OI	|	|	|	|	0.26
1.667	0.24	0.12	0.022	|OI	|	|	|	|	0.27
1.750	0.24	0.13	0.023	|OI	|	|	|	|	0.28
1.833	0.27	0.13	0.024	|O I	|	|	|	|	0.29
1.917	0.30	0.14	0.025	|O I	|	|	|	|	0.30
2.000	0.31	0.14	0.026	|O I	|	|	|	|	0.31
2.083	0.31	0.15	0.027	|O I	|	|	|	|	0.33
2.167	0.32	0.16	0.028	|O I	|	|	|	|	0.34
2.250	0.32	0.16	0.029	|O I	|	|	|	|	0.35
2.333	0.32	0.17	0.030	|O I	|	|	|	|	0.36
2.417	0.32	0.17	0.031	|O I	|	|	|	|	0.38
2.500	0.32	0.18	0.032	| OI	|	|	|	|	0.39
2.583	0.35	0.18	0.033	| OI	|	|	|	|	0.40
2.667	0.38	0.19	0.034	| O I	|	|	|	|	0.42
2.750	0.39	0.20	0.036	| O I	|	|	|	|	0.43
2.833	0.39	0.21	0.037	| O I	|	|	|	|	0.45
2.917	0.39	0.21	0.038	| O I	|	|	|	|	0.46
3.000	0.39	0.22	0.040	| O I	|	|	|	|	0.48
3.083	0.39	0.23	0.041	| O I	|	|	|	|	0.49
3.167	0.39	0.23	0.042	| O I	|	|	|	|	0.50
3.250	0.39	0.24	0.043	| O I	|	|	|	|	0.52
3.333	0.39	0.24	0.044	| O I	|	|	|	|	0.53
3.417	0.39	0.25	0.045	| O I	|	|	|	|	0.54
3.500	0.39	0.26	0.046	| O I	|	|	|	|	0.55
3.583	0.39	0.26	0.047	| O I	|	|	|	|	0.57
3.667	0.39	0.27	0.048	| OI	|	|	|	|	0.58
3.750	0.39	0.27	0.049	| OI	|	|	|	|	0.59

3.833	0.43	0.28	0.050	OI				0.60
3.917	0.46	0.28	0.051	O I				0.61
4.000	0.47	0.29	0.052	O I				0.63
4.083	0.47	0.30	0.053	O I				0.64
4.167	0.47	0.30	0.054	O I				0.66
4.250	0.47	0.31	0.056	O I				0.67
4.333	0.50	0.32	0.057	O I				0.68
4.417	0.54	0.32	0.058	O I				0.70
4.500	0.55	0.33	0.060	O I				0.72
4.583	0.55	0.34	0.061	O I				0.74
4.667	0.55	0.35	0.063	O I				0.75
4.750	0.55	0.35	0.064	O I				0.77
4.833	0.58	0.36	0.065	O I				0.79
4.917	0.62	0.37	0.067	O I				0.81
5.000	0.63	0.38	0.069	O I				0.83
5.083	0.56	0.39	0.070	O I				0.85
5.167	0.50	0.39	0.071	OI				0.86
5.250	0.48	0.40	0.072	OI				0.87
5.333	0.51	0.40	0.072	OI				0.87
5.417	0.54	0.41	0.073	O I				0.88
5.500	0.55	0.41	0.074	O I				0.89
5.583	0.58	0.42	0.075	O I				0.91
5.667	0.62	0.42	0.076	O I				0.92
5.750	0.63	0.43	0.078	O I				0.94
5.833	0.63	0.44	0.079	O I				0.95
5.917	0.63	0.45	0.080	O I				0.97
6.000	0.63	0.45	0.082	O I				0.98
6.083	0.66	0.46	0.083	O I				1.00
6.167	0.70	0.46	0.085	O I				1.01
6.250	0.70	0.46	0.086	O I				1.02
6.333	0.71	0.46	0.088	O I				1.04
6.417	0.71	0.46	0.090	O I				1.05
6.500	0.71	0.46	0.091	O I				1.06
6.583	0.74	0.46	0.093	O I				1.07
6.667	0.78	0.46	0.095	O I				1.09
6.750	0.78	0.46	0.097	O I				1.10
6.833	0.79	0.46	0.100	O	I			1.12
6.917	0.79	0.46	0.102	O	I			1.14
7.000	0.79	0.46	0.104	O	I			1.15
7.083	0.79	0.46	0.106	O	I			1.17
7.167	0.79	0.46	0.109	O	I			1.19
7.250	0.79	0.46	0.111	O	I			1.20
7.333	0.82	0.46	0.113	O	I			1.22
7.417	0.85	0.46	0.116	O	I			1.24
7.500	0.86	0.46	0.119	O	I			1.26
7.583	0.90	0.46	0.122	O	I			1.28
7.667	0.93	0.46	0.125	O	I			1.30
7.750	0.94	0.46	0.128	O	I			1.33
7.833	0.98	0.46	0.131	O	I			1.35
7.917	1.01	0.46	0.135	O	I			1.38
8.000	1.02	0.46	0.139	O	I			1.40
8.083	1.09	0.46	0.143	O	I			1.43
8.167	1.16	0.46	0.148	O	I			1.47
8.250	1.17	0.46	0.152	O	I			1.50
8.333	1.18	0.46	0.157	O	I			1.54
8.417	1.18	0.46	0.162	O	I			1.57
8.500	1.18	0.46	0.167	O	I			1.61
8.583	1.21	0.46	0.172	O	I			1.65
8.667	1.25	0.46	0.178	O	I			1.68
8.750	1.26	0.46	0.183	O	I			1.72

8.833	1.29	0.46	0.189	O	I				1.76
8.917	1.33	0.46	0.195	O	I				1.81
9.000	1.34	0.46	0.201	O	I				1.85
9.083	1.40	0.46	0.207	O	I				1.90
9.167	1.47	0.46	0.214	O	I				1.94
9.250	1.49	0.46	0.221	O	I				2.00
9.333	1.53	0.46	0.228	O	I				2.05
9.417	1.56	0.46	0.235	O	I				2.10
9.500	1.57	0.46	0.243	O	I				2.16
9.583	1.61	0.46	0.251	O	I				2.21
9.667	1.64	0.46	0.259	O	I				2.27
9.750	1.65	0.46	0.267	O	I				2.33
9.833	1.69	0.46	0.275	O	I				2.39
9.917	1.72	0.46	0.284	O	I				2.45
10.000	1.73	0.46	0.292	O	I				2.52
10.083	1.51	0.46	0.300	O	I				2.57
10.167	1.26	0.46	0.307	O	I				2.62
10.250	1.21	0.46	0.312	O	I				2.66
10.333	1.19	0.46	0.317	O	I				2.70
10.417	1.18	0.46	0.322	O	I				2.73
10.500	1.18	0.46	0.327	O	I				2.77
10.583	1.34	0.46	0.333	O	I				2.81
10.667	1.52	0.46	0.339	O	I				2.86
10.750	1.55	0.46	0.347	O	I				2.91
10.833	1.57	0.46	0.354	O	I				2.96
10.917	1.58	0.46	0.362	O	I				3.02
11.000	1.58	0.46	0.370	O	I				3.08
11.083	1.54	0.46	0.377	O	I				3.13
11.167	1.51	0.46	0.385	O	I				3.18
11.250	1.50	0.46	0.392	O	I				3.24
11.333	1.50	0.46	0.399	O	I				3.29
11.417	1.50	0.46	0.406	O	I				3.34
11.500	1.50	0.46	0.413	O	I				3.39
11.583	1.43	0.46	0.420	O	I				3.44
11.667	1.36	0.46	0.427	O	I				3.49
11.750	1.35	0.46	0.433	O	I				3.53
11.833	1.37	0.46	0.439	O	I				3.58
11.917	1.41	0.46	0.446	O	I				3.62
12.000	1.41	0.46	0.452	O	I				3.67
12.083	1.64	0.46	0.459	O	I				3.72
12.167	1.89	0.46	0.468	O	I				3.79
12.250	1.94	0.46	0.478	O	I				3.86
12.333	1.99	0.46	0.489	O	I				3.94
12.417	2.04	0.46	0.499	O	I				4.01
12.500	2.04	0.46	0.510	O	I				4.09
12.583	2.11	0.46	0.522	O	I				4.17
12.667	2.18	0.46	0.533	O	I				4.26
12.750	2.20	0.46	0.545	O	I				4.34
12.833	2.24	0.46	0.557	O	I				4.43
12.917	2.27	0.46	0.569	O	I				4.52
13.000	2.28	0.46	0.582	O	I				4.61
13.083	2.48	0.46	0.595	O	I				4.71
13.167	2.70	0.46	0.610	O	I				4.81
13.250	2.75	0.46	0.626	O	I				4.93
13.333	2.77	0.46	0.641	O	I				5.04
13.417	2.78	0.46	0.657	O	I				5.16
13.500	2.79	0.46	0.673	O	I				5.27
13.583	2.39	0.46	0.688	O	I				5.38
13.667	1.96	0.46	0.700	O	I				5.46
13.750	1.87	0.46	0.710	O	I				5.54

13.833	1.83	0.46	0.719	| O |	|	| I |	|	5.60
13.917	1.81	0.46	0.729	| O |	|	| I |	|	5.67
14.000	1.81	0.46	0.738	| O |	|	| I |	|	5.74
14.083	1.94	0.46	0.748	| O |	|	| I |	|	5.81
14.167	2.08	0.46	0.758	| O |	|	| I|	|	5.89
14.250	2.11	0.46	0.770	| O |	|	| I	|	5.97
14.333	2.09	0.46	0.781	| O |	|	| I|	|	6.09
14.417	2.06	0.46	0.792	| O |	|	| I|	|	6.22
14.500	2.05	0.46	0.803	| O |	|	| I|	|	6.35
14.583	2.05	0.46	0.814	| O |	|	| I|	|	6.49
14.667	2.05	0.46	0.825	| O |	|	| I|	|	6.62
14.750	2.05	0.46	0.836	| O |	|	| I|	|	6.75
14.833	2.02	0.46	0.847	| O |	|	| I|	|	6.88
14.917	1.98	0.46	0.857	| O |	|	| I |	|	7.01
15.000	1.97	0.46	0.868	| O |	|	| I |	|	7.14
15.083	1.94	0.46	0.878	| O |	|	| I |	|	7.26
15.167	1.90	0.46	0.888	| O |	|	| I |	|	7.39
15.250	1.90	0.46	0.898	| O |	|	| I |	|	7.51
15.333	1.86	0.46	0.908	| O |	|	| I |	|	7.62
15.417	1.82	0.46	0.917	| O |	|	| I |	|	7.74
15.500	1.82	0.46	0.927	| O |	|	| I |	|	7.85
15.583	1.69	0.46	0.936	| O |	|	| I |	|	7.96
15.667	1.54	0.49	0.944	| O |	|	|I |	|	8.06
15.750	1.51	0.53	0.951	| O |	|	|I |	|	8.14
15.833	1.50	0.57	0.957	| O |	|	|I |	|	8.22
15.917	1.50	0.60	0.964	| O |	|	|I |	|	8.30
16.000	1.50	0.64	0.970	| O|	|	|I |	|	8.37
16.083	1.02	0.66	0.974	| O|	| I	|	|	8.42
16.167	0.49	0.67	0.974	| I O|	|	|	|	8.43
16.250	0.38	0.66	0.973	| I O|	|	|	|	8.41
16.333	0.33	0.65	0.971	| I O|	|	|	|	8.38
16.417	0.32	0.63	0.969	| I O|	|	|	|	8.36
16.500	0.32	0.62	0.966	| I O|	|	|	|	8.33
16.583	0.28	0.61	0.964	| I O |	|	|	|	8.30
16.667	0.25	0.60	0.962	| I O |	|	|	|	8.28
16.750	0.24	0.58	0.960	| I O |	|	|	|	8.25
16.833	0.24	0.57	0.957	| I O |	|	|	|	8.22
16.917	0.24	0.55	0.955	| I O |	|	|	|	8.19
17.000	0.24	0.54	0.953	| I O |	|	|	|	8.17
17.083	0.30	0.53	0.951	| I O |	|	|	|	8.14
17.167	0.37	0.52	0.950	| IO |	|	|	|	8.13
17.250	0.39	0.52	0.949	| IO |	|	|	|	8.12
17.333	0.39	0.51	0.948	| IO |	|	|	|	8.11
17.417	0.39	0.51	0.947	| IO |	|	|	|	8.10
17.500	0.39	0.50	0.946	| IO |	|	|	|	8.09
17.583	0.39	0.50	0.946	| IO |	|	|	|	8.08
17.667	0.39	0.49	0.945	| IO |	|	|	|	8.07
17.750	0.39	0.49	0.944	| IO |	|	|	|	8.06
17.833	0.36	0.49	0.943	| IO |	|	|	|	8.05
17.917	0.33	0.48	0.942	| I O |	|	|	|	8.04
18.000	0.32	0.47	0.941	| I O |	|	|	|	8.03
18.083	0.32	0.47	0.940	| I O |	|	|	|	8.02
18.167	0.32	0.46	0.939	| I O |	|	|	|	8.00
18.250	0.32	0.46	0.938	| I O |	|	|	|	7.99
18.333	0.32	0.46	0.937	| I O |	|	|	|	7.98
18.417	0.32	0.46	0.936	| I O |	|	|	|	7.97
18.500	0.32	0.46	0.935	| I O |	|	|	|	7.95
18.583	0.28	0.46	0.934	| I O |	|	|	|	7.94
18.667	0.25	0.46	0.933	| I O |	|	|	|	7.93
18.750	0.24	0.46	0.931	| I O |	|	|	|	7.91

18.833	0.21	0.46	0.930	| I O |	|	|	|	7.89
18.917	0.17	0.46	0.928	|I O |	|	|	|	7.86
19.000	0.16	0.46	0.926	|I O |	|	|	|	7.84
19.083	0.19	0.46	0.924	| I O |	|	|	|	7.82
19.167	0.22	0.46	0.922	| I O |	|	|	|	7.80
19.250	0.23	0.46	0.921	| I O |	|	|	|	7.78
19.333	0.27	0.46	0.919	| I O |	|	|	|	7.76
19.417	0.30	0.46	0.918	| I O |	|	|	|	7.74
19.500	0.31	0.46	0.917	| I O |	|	|	|	7.73
19.583	0.28	0.46	0.916	| I O |	|	|	|	7.72
19.667	0.25	0.46	0.914	| I O |	|	|	|	7.70
19.750	0.24	0.46	0.913	| I O |	|	|	|	7.68
19.833	0.21	0.46	0.911	| I O |	|	|	|	7.66
19.917	0.17	0.46	0.909	|I O |	|	|	|	7.64
20.000	0.16	0.46	0.907	|I O |	|	|	|	7.62
20.083	0.19	0.46	0.905	| I O |	|	|	|	7.59
20.167	0.22	0.46	0.904	| I O |	|	|	|	7.57
20.250	0.23	0.46	0.902	| I O |	|	|	|	7.55
20.333	0.24	0.46	0.900	| I O |	|	|	|	7.53
20.417	0.24	0.46	0.899	| I O |	|	|	|	7.51
20.500	0.24	0.46	0.897	| I O |	|	|	|	7.50
20.583	0.24	0.46	0.896	| I O |	|	|	|	7.48
20.667	0.24	0.46	0.894	| I O |	|	|	|	7.46
20.750	0.24	0.46	0.893	| I O |	|	|	|	7.44
20.833	0.20	0.46	0.891	| I O |	|	|	|	7.42
20.917	0.17	0.46	0.889	|I O |	|	|	|	7.40
21.000	0.16	0.46	0.887	|I O |	|	|	|	7.37
21.083	0.19	0.46	0.885	| I O |	|	|	|	7.35
21.167	0.22	0.46	0.884	| I O |	|	|	|	7.33
21.250	0.23	0.46	0.882	| I O |	|	|	|	7.31
21.333	0.20	0.46	0.880	| I O |	|	|	|	7.29
21.417	0.17	0.46	0.878	|I O |	|	|	|	7.27
21.500	0.16	0.46	0.876	|I O |	|	|	|	7.24
21.583	0.19	0.46	0.874	| I O |	|	|	|	7.22
21.667	0.22	0.46	0.873	| I O |	|	|	|	7.20
21.750	0.23	0.46	0.871	| I O |	|	|	|	7.18
21.833	0.20	0.46	0.869	| I O |	|	|	|	7.16
21.917	0.17	0.46	0.868	|I O |	|	|	|	7.13
22.000	0.16	0.46	0.865	|I O |	|	|	|	7.11
22.083	0.19	0.46	0.864	| I O |	|	|	|	7.09
22.167	0.22	0.46	0.862	| I O |	|	|	|	7.06
22.250	0.23	0.46	0.860	| I O |	|	|	|	7.04
22.333	0.20	0.46	0.859	| I O |	|	|	|	7.02
22.417	0.17	0.46	0.857	|I O |	|	|	|	7.00
22.500	0.16	0.46	0.855	|I O |	|	|	|	6.98
22.583	0.16	0.46	0.853	|I O |	|	|	|	6.95
22.667	0.16	0.46	0.850	|I O |	|	|	|	6.93
22.750	0.16	0.46	0.848	|I O |	|	|	|	6.90
22.833	0.16	0.46	0.846	|I O |	|	|	|	6.88
22.917	0.16	0.46	0.844	|I O |	|	|	|	6.85
23.000	0.16	0.46	0.842	|I O |	|	|	|	6.83
23.083	0.16	0.46	0.840	|I O |	|	|	|	6.80
23.167	0.16	0.46	0.838	|I O |	|	|	|	6.78
23.250	0.16	0.46	0.836	|I O |	|	|	|	6.75
23.333	0.16	0.46	0.834	|I O |	|	|	|	6.72
23.417	0.16	0.46	0.832	|I O |	|	|	|	6.70
23.500	0.16	0.46	0.830	|I O |	|	|	|	6.67
23.583	0.16	0.46	0.828	|I O |	|	|	|	6.65
23.667	0.16	0.46	0.825	|I O |	|	|	|	6.62
23.750	0.16	0.46	0.823	|I O |	|	|	|	6.60

23.833	0.16	0.46	0.821	|I	O	|	|	|	6.57
23.917	0.16	0.46	0.819	|I	O	|	|	|	6.55
24.000	0.16	0.46	0.817	|I	O	|	|	|	6.52
24.083	0.09	0.46	0.815	|I	O	|	|	|	6.50
24.167	0.02	0.46	0.812	I	O	|	|	|	6.46
24.250	0.01	0.46	0.809	I	O	|	|	|	6.42
24.333	0.00	0.46	0.806	I	O	|	|	|	6.39
24.417	0.00	0.46	0.803	I	O	|	|	|	6.35
24.500	0.00	0.46	0.800	I	O	|	|	|	6.31
24.583	0.00	0.46	0.796	I	O	|	|	|	6.27
24.667	0.00	0.46	0.793	I	O	|	|	|	6.23
24.750	0.00	0.46	0.790	I	O	|	|	|	6.19
24.833	0.00	0.46	0.787	I	O	|	|	|	6.16
24.917	0.00	0.46	0.784	I	O	|	|	|	6.12
25.000	0.00	0.46	0.781	I	O	|	|	|	6.08
25.083	0.00	0.46	0.777	I	O	|	|	|	6.04
25.167	0.00	0.46	0.774	I	O	|	|	|	6.00
25.250	0.00	0.46	0.771	I	O	|	|	|	5.98
25.333	0.00	0.46	0.768	I	O	|	|	|	5.96
25.417	0.00	0.46	0.765	I	O	|	|	|	5.93
25.500	0.00	0.46	0.762	I	O	|	|	|	5.91
25.583	0.00	0.46	0.758	I	O	|	|	|	5.89
25.667	0.00	0.46	0.755	I	O	|	|	|	5.86
25.750	0.00	0.46	0.752	I	O	|	|	|	5.84
25.833	0.00	0.46	0.749	I	O	|	|	|	5.82
25.917	0.00	0.46	0.746	I	O	|	|	|	5.80
26.000	0.00	0.46	0.743	I	O	|	|	|	5.77
26.083	0.00	0.46	0.739	I	O	|	|	|	5.75
26.167	0.00	0.46	0.736	I	O	|	|	|	5.73
26.250	0.00	0.46	0.733	I	O	|	|	|	5.70
26.333	0.00	0.46	0.730	I	O	|	|	|	5.68
26.417	0.00	0.46	0.727	I	O	|	|	|	5.66
26.500	0.00	0.46	0.724	I	O	|	|	|	5.63
26.583	0.00	0.46	0.720	I	O	|	|	|	5.61
26.667	0.00	0.46	0.717	I	O	|	|	|	5.59
26.750	0.00	0.46	0.714	I	O	|	|	|	5.57
26.833	0.00	0.46	0.711	I	O	|	|	|	5.54
26.917	0.00	0.46	0.708	I	O	|	|	|	5.52
27.000	0.00	0.46	0.705	I	O	|	|	|	5.50
27.083	0.00	0.46	0.701	I	O	|	|	|	5.47
27.167	0.00	0.46	0.698	I	O	|	|	|	5.45
27.250	0.00	0.46	0.695	I	O	|	|	|	5.43
27.333	0.00	0.46	0.692	I	O	|	|	|	5.41
27.417	0.00	0.46	0.689	I	O	|	|	|	5.38
27.500	0.00	0.46	0.686	I	O	|	|	|	5.36
27.583	0.00	0.46	0.682	I	O	|	|	|	5.34
27.667	0.00	0.46	0.679	I	O	|	|	|	5.31
27.750	0.00	0.46	0.676	I	O	|	|	|	5.29
27.833	0.00	0.46	0.673	I	O	|	|	|	5.27
27.917	0.00	0.46	0.670	I	O	|	|	|	5.25
28.000	0.00	0.46	0.667	I	O	|	|	|	5.22
28.083	0.00	0.46	0.663	I	O	|	|	|	5.20
28.167	0.00	0.46	0.660	I	O	|	|	|	5.18
28.250	0.00	0.46	0.657	I	O	|	|	|	5.15
28.333	0.00	0.46	0.654	I	O	|	|	|	5.13
28.417	0.00	0.46	0.651	I	O	|	|	|	5.11
28.500	0.00	0.46	0.647	I	O	|	|	|	5.08
28.583	0.00	0.46	0.644	I	O	|	|	|	5.06
28.667	0.00	0.46	0.641	I	O	|	|	|	5.04
28.750	0.00	0.46	0.638	I	O	|	|	|	5.02

28.833	0.00	0.46	0.635	I	O	|	|	|	|	4.99
28.917	0.00	0.46	0.632	I	O	|	|	|	|	4.97
29.000	0.00	0.46	0.628	I	O	|	|	|	|	4.95
29.083	0.00	0.46	0.625	I	O	|	|	|	|	4.92
29.167	0.00	0.46	0.622	I	O	|	|	|	|	4.90
29.250	0.00	0.46	0.619	I	O	|	|	|	|	4.88
29.333	0.00	0.46	0.616	I	O	|	|	|	|	4.86
29.417	0.00	0.46	0.613	I	O	|	|	|	|	4.83
29.500	0.00	0.46	0.609	I	O	|	|	|	|	4.81
29.583	0.00	0.46	0.606	I	O	|	|	|	|	4.79
29.667	0.00	0.46	0.603	I	O	|	|	|	|	4.76
29.750	0.00	0.46	0.600	I	O	|	|	|	|	4.74
29.833	0.00	0.46	0.597	I	O	|	|	|	|	4.72
29.917	0.00	0.46	0.594	I	O	|	|	|	|	4.69
30.000	0.00	0.46	0.590	I	O	|	|	|	|	4.67
30.083	0.00	0.46	0.587	I	O	|	|	|	|	4.65
30.167	0.00	0.46	0.584	I	O	|	|	|	|	4.63
30.250	0.00	0.46	0.581	I	O	|	|	|	|	4.60
30.333	0.00	0.46	0.578	I	O	|	|	|	|	4.58
30.417	0.00	0.46	0.575	I	O	|	|	|	|	4.56
30.500	0.00	0.46	0.571	I	O	|	|	|	|	4.53
30.583	0.00	0.46	0.568	I	O	|	|	|	|	4.51
30.667	0.00	0.46	0.565	I	O	|	|	|	|	4.49
30.750	0.00	0.46	0.562	I	O	|	|	|	|	4.47
30.833	0.00	0.46	0.559	I	O	|	|	|	|	4.44
30.917	0.00	0.46	0.556	I	O	|	|	|	|	4.42
31.000	0.00	0.46	0.552	I	O	|	|	|	|	4.40
31.083	0.00	0.46	0.549	I	O	|	|	|	|	4.37
31.167	0.00	0.46	0.546	I	O	|	|	|	|	4.35
31.250	0.00	0.46	0.543	I	O	|	|	|	|	4.33
31.333	0.00	0.46	0.540	I	O	|	|	|	|	4.31
31.417	0.00	0.46	0.537	I	O	|	|	|	|	4.28
31.500	0.00	0.46	0.533	I	O	|	|	|	|	4.26
31.583	0.00	0.46	0.530	I	O	|	|	|	|	4.24
31.667	0.00	0.46	0.527	I	O	|	|	|	|	4.21
31.750	0.00	0.46	0.524	I	O	|	|	|	|	4.19
31.833	0.00	0.46	0.521	I	O	|	|	|	|	4.17
31.917	0.00	0.46	0.518	I	O	|	|	|	|	4.14
32.000	0.00	0.46	0.514	I	O	|	|	|	|	4.12
32.083	0.00	0.46	0.511	I	O	|	|	|	|	4.10
32.167	0.00	0.46	0.508	I	O	|	|	|	|	4.08
32.250	0.00	0.46	0.505	I	O	|	|	|	|	4.05
32.333	0.00	0.46	0.502	I	O	|	|	|	|	4.03
32.417	0.00	0.46	0.499	I	O	|	|	|	|	4.01
32.500	0.00	0.46	0.495	I	O	|	|	|	|	3.98
32.583	0.00	0.46	0.492	I	O	|	|	|	|	3.96
32.667	0.00	0.46	0.489	I	O	|	|	|	|	3.94
32.750	0.00	0.46	0.486	I	O	|	|	|	|	3.92
32.833	0.00	0.46	0.483	I	O	|	|	|	|	3.89
32.917	0.00	0.46	0.480	I	O	|	|	|	|	3.87
33.000	0.00	0.46	0.476	I	O	|	|	|	|	3.85
33.083	0.00	0.46	0.473	I	O	|	|	|	|	3.82
33.167	0.00	0.46	0.470	I	O	|	|	|	|	3.80
33.250	0.00	0.46	0.467	I	O	|	|	|	|	3.78
33.333	0.00	0.46	0.464	I	O	|	|	|	|	3.76
33.417	0.00	0.46	0.461	I	O	|	|	|	|	3.73
33.500	0.00	0.46	0.457	I	O	|	|	|	|	3.71
33.583	0.00	0.46	0.454	I	O	|	|	|	|	3.69
33.667	0.00	0.46	0.451	I	O	|	|	|	|	3.66
33.750	0.00	0.46	0.448	I	O	|	|	|	|	3.64

33.833	0.00	0.46	0.445	I	O	|	|	|	|	3.62
33.917	0.00	0.46	0.442	I	O	|	|	|	|	3.59
34.000	0.00	0.46	0.438	I	O	|	|	|	|	3.57
34.083	0.00	0.46	0.435	I	O	|	|	|	|	3.55
34.167	0.00	0.46	0.432	I	O	|	|	|	|	3.53
34.250	0.00	0.46	0.429	I	O	|	|	|	|	3.50
34.333	0.00	0.46	0.426	I	O	|	|	|	|	3.48
34.417	0.00	0.46	0.423	I	O	|	|	|	|	3.46
34.500	0.00	0.46	0.419	I	O	|	|	|	|	3.43
34.583	0.00	0.46	0.416	I	O	|	|	|	|	3.41
34.667	0.00	0.46	0.413	I	O	|	|	|	|	3.39
34.750	0.00	0.46	0.410	I	O	|	|	|	|	3.37
34.833	0.00	0.46	0.407	I	O	|	|	|	|	3.34
34.917	0.00	0.46	0.404	I	O	|	|	|	|	3.32
35.000	0.00	0.46	0.400	I	O	|	|	|	|	3.30
35.083	0.00	0.46	0.397	I	O	|	|	|	|	3.27
35.167	0.00	0.46	0.394	I	O	|	|	|	|	3.25
35.250	0.00	0.46	0.391	I	O	|	|	|	|	3.23
35.333	0.00	0.46	0.388	I	O	|	|	|	|	3.20
35.417	0.00	0.46	0.385	I	O	|	|	|	|	3.18
35.500	0.00	0.46	0.381	I	O	|	|	|	|	3.16
35.583	0.00	0.46	0.378	I	O	|	|	|	|	3.14
35.667	0.00	0.46	0.375	I	O	|	|	|	|	3.11
35.750	0.00	0.46	0.372	I	O	|	|	|	|	3.09
35.833	0.00	0.46	0.369	I	O	|	|	|	|	3.07
35.917	0.00	0.46	0.366	I	O	|	|	|	|	3.04
36.000	0.00	0.46	0.362	I	O	|	|	|	|	3.02
36.083	0.00	0.46	0.359	I	O	|	|	|	|	3.00
36.167	0.00	0.46	0.356	I	O	|	|	|	|	2.98
36.250	0.00	0.46	0.353	I	O	|	|	|	|	2.95
36.333	0.00	0.46	0.350	I	O	|	|	|	|	2.93
36.417	0.00	0.46	0.347	I	O	|	|	|	|	2.91
36.500	0.00	0.46	0.343	I	O	|	|	|	|	2.88
36.583	0.00	0.46	0.340	I	O	|	|	|	|	2.86
36.667	0.00	0.46	0.337	I	O	|	|	|	|	2.84
36.750	0.00	0.46	0.334	I	O	|	|	|	|	2.82
36.833	0.00	0.46	0.331	I	O	|	|	|	|	2.79
36.917	0.00	0.46	0.328	I	O	|	|	|	|	2.77
37.000	0.00	0.46	0.324	I	O	|	|	|	|	2.75
37.083	0.00	0.46	0.321	I	O	|	|	|	|	2.72
37.167	0.00	0.46	0.318	I	O	|	|	|	|	2.70
37.250	0.00	0.46	0.315	I	O	|	|	|	|	2.68
37.333	0.00	0.46	0.312	I	O	|	|	|	|	2.65
37.417	0.00	0.46	0.309	I	O	|	|	|	|	2.63
37.500	0.00	0.46	0.305	I	O	|	|	|	|	2.61
37.583	0.00	0.46	0.302	I	O	|	|	|	|	2.59
37.667	0.00	0.46	0.299	I	O	|	|	|	|	2.56
37.750	0.00	0.46	0.296	I	O	|	|	|	|	2.54
37.833	0.00	0.46	0.293	I	O	|	|	|	|	2.52
37.917	0.00	0.46	0.290	I	O	|	|	|	|	2.49
38.000	0.00	0.46	0.286	I	O	|	|	|	|	2.47
38.083	0.00	0.46	0.283	I	O	|	|	|	|	2.45
38.167	0.00	0.46	0.280	I	O	|	|	|	|	2.43
38.250	0.00	0.46	0.277	I	O	|	|	|	|	2.40
38.333	0.00	0.46	0.274	I	O	|	|	|	|	2.38
38.417	0.00	0.46	0.270	I	O	|	|	|	|	2.36
38.500	0.00	0.46	0.267	I	O	|	|	|	|	2.33
38.583	0.00	0.46	0.264	I	O	|	|	|	|	2.31
38.667	0.00	0.46	0.261	I	O	|	|	|	|	2.29
38.750	0.00	0.46	0.258	I	O	|	|	|	|	2.27

38.833	0.00	0.46	0.255	I	O	|	|	|	|	2.24
38.917	0.00	0.46	0.251	I	O	|	|	|	|	2.22
39.000	0.00	0.46	0.248	I	O	|	|	|	|	2.20
39.083	0.00	0.46	0.245	I	O	|	|	|	|	2.17
39.167	0.00	0.46	0.242	I	O	|	|	|	|	2.15
39.250	0.00	0.46	0.239	I	O	|	|	|	|	2.13
39.333	0.00	0.46	0.236	I	O	|	|	|	|	2.10
39.417	0.00	0.46	0.232	I	O	|	|	|	|	2.08
39.500	0.00	0.46	0.229	I	O	|	|	|	|	2.06
39.583	0.00	0.46	0.226	I	O	|	|	|	|	2.04
39.667	0.00	0.46	0.223	I	O	|	|	|	|	2.01
39.750	0.00	0.46	0.220	I	O	|	|	|	|	1.99
39.833	0.00	0.46	0.217	I	O	|	|	|	|	1.97
39.917	0.00	0.46	0.213	I	O	|	|	|	|	1.94
40.000	0.00	0.46	0.210	I	O	|	|	|	|	1.92
40.083	0.00	0.46	0.207	I	O	|	|	|	|	1.90
40.167	0.00	0.46	0.204	I	O	|	|	|	|	1.88
40.250	0.00	0.46	0.201	I	O	|	|	|	|	1.85
40.333	0.00	0.46	0.198	I	O	|	|	|	|	1.83
40.417	0.00	0.46	0.194	I	O	|	|	|	|	1.81
40.500	0.00	0.46	0.191	I	O	|	|	|	|	1.78
40.583	0.00	0.46	0.188	I	O	|	|	|	|	1.76
40.667	0.00	0.46	0.185	I	O	|	|	|	|	1.74
40.750	0.00	0.46	0.182	I	O	|	|	|	|	1.71
40.833	0.00	0.46	0.179	I	O	|	|	|	|	1.69
40.917	0.00	0.46	0.175	I	O	|	|	|	|	1.67
41.000	0.00	0.46	0.172	I	O	|	|	|	|	1.65
41.083	0.00	0.46	0.169	I	O	|	|	|	|	1.62
41.167	0.00	0.46	0.166	I	O	|	|	|	|	1.60
41.250	0.00	0.46	0.163	I	O	|	|	|	|	1.58
41.333	0.00	0.46	0.160	I	O	|	|	|	|	1.55
41.417	0.00	0.46	0.156	I	O	|	|	|	|	1.53
41.500	0.00	0.46	0.153	I	O	|	|	|	|	1.51
41.583	0.00	0.46	0.150	I	O	|	|	|	|	1.49
41.667	0.00	0.46	0.147	I	O	|	|	|	|	1.46
41.750	0.00	0.46	0.144	I	O	|	|	|	|	1.44
41.833	0.00	0.46	0.141	I	O	|	|	|	|	1.42
41.917	0.00	0.46	0.137	I	O	|	|	|	|	1.39
42.000	0.00	0.46	0.134	I	O	|	|	|	|	1.37
42.083	0.00	0.46	0.131	I	O	|	|	|	|	1.35
42.167	0.00	0.46	0.128	I	O	|	|	|	|	1.33
42.250	0.00	0.46	0.125	I	O	|	|	|	|	1.30
42.333	0.00	0.46	0.122	I	O	|	|	|	|	1.28
42.417	0.00	0.46	0.118	I	O	|	|	|	|	1.26
42.500	0.00	0.46	0.115	I	O	|	|	|	|	1.23
42.583	0.00	0.46	0.112	I	O	|	|	|	|	1.21
42.667	0.00	0.46	0.109	I	O	|	|	|	|	1.19
42.750	0.00	0.46	0.106	I	O	|	|	|	|	1.16
42.833	0.00	0.46	0.103	I	O	|	|	|	|	1.14
42.917	0.00	0.46	0.099	I	O	|	|	|	|	1.12
43.000	0.00	0.46	0.096	I	O	|	|	|	|	1.10
43.083	0.00	0.46	0.093	I	O	|	|	|	|	1.07
43.167	0.00	0.46	0.090	I	O	|	|	|	|	1.05
43.250	0.00	0.46	0.087	I	O	|	|	|	|	1.03
43.333	0.00	0.46	0.084	I	O	|	|	|	|	1.00
43.417	0.00	0.45	0.080	I	O	|	|	|	|	0.97
43.500	0.00	0.43	0.077	I	O	|	|	|	|	0.93
43.583	0.00	0.41	0.075	I	O	|	|	|	|	0.90
43.667	0.00	0.40	0.072	I	O	|	|	|	|	0.86
43.750	0.00	0.38	0.069	I	O	|	|	|	|	0.83

43.833	0.00	0.37	0.066	I O	|	|	|	0.80
43.917	0.00	0.35	0.064	I O	|	|	|	0.77
44.000	0.00	0.34	0.062	I O	|	|	|	0.74
44.083	0.00	0.33	0.059	I O	|	|	|	0.71
44.167	0.00	0.32	0.057	I O	|	|	|	0.69
44.250	0.00	0.30	0.055	I O	|	|	|	0.66
44.333	0.00	0.29	0.053	I O	|	|	|	0.64
44.417	0.00	0.28	0.051	I O	|	|	|	0.61
44.500	0.00	0.27	0.049	I O	|	|	|	0.59
44.583	0.00	0.26	0.047	I O	|	|	|	0.57
44.667	0.00	0.25	0.045	I O	|	|	|	0.55
44.750	0.00	0.24	0.044	I O	|	|	|	0.53
44.833	0.00	0.23	0.042	I O	|	|	|	0.51
44.917	0.00	0.22	0.040	I O	|	|	|	0.49
45.000	0.00	0.22	0.039	I O	|	|	|	0.47
45.083	0.00	0.21	0.037	I O	|	|	|	0.45
45.167	0.00	0.20	0.036	I O	|	|	|	0.43
45.250	0.00	0.19	0.035	I O	|	|	|	0.42
45.333	0.00	0.19	0.033	I O	|	|	|	0.40
45.417	0.00	0.18	0.032	I O	|	|	|	0.39
45.500	0.00	0.17	0.031	IO	|	|	|	0.37
45.583	0.00	0.17	0.030	IO	|	|	|	0.36
45.667	0.00	0.16	0.029	IO	|	|	|	0.35
45.750	0.00	0.15	0.028	IO	|	|	|	0.33
45.833	0.00	0.15	0.027	IO	|	|	|	0.32
45.917	0.00	0.14	0.026	IO	|	|	|	0.31
46.000	0.00	0.14	0.025	IO	|	|	|	0.30
46.083	0.00	0.13	0.024	IO	|	|	|	0.29
46.167	0.00	0.13	0.023	IO	|	|	|	0.28
46.250	0.00	0.12	0.022	IO	|	|	|	0.26
46.333	0.00	0.12	0.021	IO	|	|	|	0.25
46.417	0.00	0.11	0.020	IO	|	|	|	0.25
46.500	0.00	0.11	0.020	IO	|	|	|	0.24
46.583	0.00	0.10	0.019	IO	|	|	|	0.23
46.667	0.00	0.10	0.018	IO	|	|	|	0.22
46.750	0.00	0.10	0.017	IO	|	|	|	0.21
46.833	0.00	0.09	0.017	IO	|	|	|	0.20
46.917	0.00	0.09	0.016	IO	|	|	|	0.20
47.000	0.00	0.09	0.016	O	|	|	|	0.19
47.083	0.00	0.08	0.015	O	|	|	|	0.18
47.167	0.00	0.08	0.014	O	|	|	|	0.17
47.250	0.00	0.08	0.014	O	|	|	|	0.17
47.333	0.00	0.07	0.013	O	|	|	|	0.16
47.417	0.00	0.07	0.013	O	|	|	|	0.16
47.500	0.00	0.07	0.012	O	|	|	|	0.15
47.583	0.00	0.07	0.012	O	|	|	|	0.14
47.667	0.00	0.06	0.011	O	|	|	|	0.14
47.750	0.00	0.06	0.011	O	|	|	|	0.13
47.833	0.00	0.06	0.011	O	|	|	|	0.13
47.917	0.00	0.06	0.010	O	|	|	|	0.12
48.000	0.00	0.05	0.010	O	|	|	|	0.12
48.083	0.00	0.05	0.009	O	|	|	|	0.11
48.167	0.00	0.05	0.009	O	|	|	|	0.11
48.250	0.00	0.05	0.009	O	|	|	|	0.11
48.333	0.00	0.05	0.008	O	|	|	|	0.10
48.417	0.00	0.05	0.008	O	|	|	|	0.10
48.500	0.00	0.04	0.008	O	|	|	|	0.09
48.583	0.00	0.04	0.008	O	|	|	|	0.09
48.667	0.00	0.04	0.007	O	|	|	|	0.09
48.750	0.00	0.04	0.007	O	|	|	|	0.08

48.833	0.00	0.04	0.007	O	|	|	|	0.08
48.917	0.00	0.04	0.006	O	|	|	|	0.08
49.000	0.00	0.03	0.006	O	|	|	|	0.08
49.083	0.00	0.03	0.006	O	|	|	|	0.07
49.167	0.00	0.03	0.006	O	|	|	|	0.07
49.250	0.00	0.03	0.006	O	|	|	|	0.07
49.333	0.00	0.03	0.005	O	|	|	|	0.06
49.417	0.00	0.03	0.005	O	|	|	|	0.06
49.500	0.00	0.03	0.005	O	|	|	|	0.06
49.583	0.00	0.03	0.005	O	|	|	|	0.06
49.667	0.00	0.03	0.005	O	|	|	|	0.06
49.750	0.00	0.02	0.004	O	|	|	|	0.05
49.833	0.00	0.02	0.004	O	|	|	|	0.05
49.917	0.00	0.02	0.004	O	|	|	|	0.05
50.000	0.00	0.02	0.004	O	|	|	|	0.05
50.083	0.00	0.02	0.004	O	|	|	|	0.05
50.167	0.00	0.02	0.004	O	|	|	|	0.04
50.250	0.00	0.02	0.004	O	|	|	|	0.04
50.333	0.00	0.02	0.003	O	|	|	|	0.04
50.417	0.00	0.02	0.003	O	|	|	|	0.04
50.500	0.00	0.02	0.003	O	|	|	|	0.04
50.583	0.00	0.02	0.003	O	|	|	|	0.04
50.667	0.00	0.02	0.003	O	|	|	|	0.04
50.750	0.00	0.02	0.003	O	|	|	|	0.03
50.833	0.00	0.01	0.003	O	|	|	|	0.03
50.917	0.00	0.01	0.003	O	|	|	|	0.03
51.000	0.00	0.01	0.002	O	|	|	|	0.03
51.083	0.00	0.01	0.002	O	|	|	|	0.03
51.167	0.00	0.01	0.002	O	|	|	|	0.03
51.250	0.00	0.01	0.002	O	|	|	|	0.03
51.333	0.00	0.01	0.002	O	|	|	|	0.03
51.417	0.00	0.01	0.002	O	|	|	|	0.02
51.500	0.00	0.01	0.002	O	|	|	|	0.02
51.583	0.00	0.01	0.002	O	|	|	|	0.02
51.667	0.00	0.01	0.002	O	|	|	|	0.02
51.750	0.00	0.01	0.002	O	|	|	|	0.02
51.833	0.00	0.01	0.002	O	|	|	|	0.02
51.917	0.00	0.01	0.002	O	|	|	|	0.02
52.000	0.00	0.01	0.002	O	|	|	|	0.02
52.083	0.00	0.01	0.002	O	|	|	|	0.02
52.167	0.00	0.01	0.001	O	|	|	|	0.02
52.250	0.00	0.01	0.001	O	|	|	|	0.02
52.333	0.00	0.01	0.001	O	|	|	|	0.02
52.417	0.00	0.01	0.001	O	|	|	|	0.02
52.500	0.00	0.01	0.001	O	|	|	|	0.02
52.583	0.00	0.01	0.001	O	|	|	|	0.01
52.667	0.00	0.01	0.001	O	|	|	|	0.01
52.750	0.00	0.01	0.001	O	|	|	|	0.01
52.833	0.00	0.01	0.001	O	|	|	|	0.01
52.917	0.00	0.01	0.001	O	|	|	|	0.01
53.000	0.00	0.01	0.001	O	|	|	|	0.01
53.083	0.00	0.01	0.001	O	|	|	|	0.01
53.167	0.00	0.01	0.001	O	|	|	|	0.01
53.250	0.00	0.00	0.001	O	|	|	|	0.01
53.333	0.00	0.00	0.001	O	|	|	|	0.01
53.417	0.00	0.00	0.001	O	|	|	|	0.01
53.500	0.00	0.00	0.001	O	|	|	|	0.01
53.583	0.00	0.00	0.001	O	|	|	|	0.01
53.667	0.00	0.00	0.001	O	|	|	|	0.01
53.750	0.00	0.00	0.001	O	|	|	|	0.01

53.833	0.00	0.00	0.001	O	|	|	|	|	0.01
53.917	0.00	0.00	0.001	O	|	|	|	|	0.01
54.000	0.00	0.00	0.001	O	|	|	|	|	0.01
54.083	0.00	0.00	0.001	O	|	|	|	|	0.01
54.167	0.00	0.00	0.001	O	|	|	|	|	0.01
54.250	0.00	0.00	0.001	O	|	|	|	|	0.01
54.333	0.00	0.00	0.001	O	|	|	|	|	0.01
54.417	0.00	0.00	0.001	O	|	|	|	|	0.01
54.500	0.00	0.00	0.001	O	|	|	|	|	0.01
54.583	0.00	0.00	0.000	O	|	|	|	|	0.01
54.667	0.00	0.00	0.000	O	|	|	|	|	0.01
54.750	0.00	0.00	0.000	O	|	|	|	|	0.01
54.833	0.00	0.00	0.000	O	|	|	|	|	0.01
54.917	0.00	0.00	0.000	O	|	|	|	|	0.00
55.000	0.00	0.00	0.000	O	|	|	|	|	0.00
55.083	0.00	0.00	0.000	O	|	|	|	|	0.00
55.167	0.00	0.00	0.000	O	|	|	|	|	0.00
55.250	0.00	0.00	0.000	O	|	|	|	|	0.00
55.333	0.00	0.00	0.000	O	|	|	|	|	0.00
55.417	0.00	0.00	0.000	O	|	|	|	|	0.00
55.500	0.00	0.00	0.000	O	|	|	|	|	0.00
55.583	0.00	0.00	0.000	O	|	|	|	|	0.00
55.667	0.00	0.00	0.000	O	|	|	|	|	0.00
55.750	0.00	0.00	0.000	O	|	|	|	|	0.00
55.833	0.00	0.00	0.000	O	|	|	|	|	0.00
55.917	0.00	0.00	0.000	O	|	|	|	|	0.00
56.000	0.00	0.00	0.000	O	|	|	|	|	0.00
56.083	0.00	0.00	0.000	O	|	|	|	|	0.00
56.167	0.00	0.00	0.000	O	|	|	|	|	0.00
56.250	0.00	0.00	0.000	O	|	|	|	|	0.00
56.333	0.00	0.00	0.000	O	|	|	|	|	0.00
56.417	0.00	0.00	0.000	O	|	|	|	|	0.00
56.500	0.00	0.00	0.000	O	|	|	|	|	0.00
56.583	0.00	0.00	0.000	O	|	|	|	|	0.00
56.667	0.00	0.00	0.000	O	|	|	|	|	0.00
56.750	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 681
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.668 (CFS)
Total volume = 1.632 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
10-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte

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

Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 19.713 (CFS)
Total volume = 0.618 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.9 9.86 14.78 19.71	Depth (Ft.)
0.083	1.72	0.02	0.006	O I | | | |	0.11
0.167	3.03	0.09	0.022	O I | | | |	0.40
0.250	3.76	0.19	0.044	O I | | | |	0.81
0.333	4.09	0.30	0.070	O I | | | |	1.27
0.417	4.33	0.35	0.096	O I| | | |	1.68
0.500	4.88	0.35	0.126	O I| | | |	2.04
0.583	6.10	0.35	0.161	O |I | | |	2.48
0.667	7.53	0.35	0.206	O | I | | |	3.02
0.750	10.39	0.35	0.265	O | | I | |	3.76
0.833	19.71	0.35	0.366	O | | | | I	5.00
0.917	15.12	0.35	0.484	O | | | I |	6.45
1.000	6.76	0.35	0.557	O | I | | |	7.35
1.083	1.97	0.35	0.584	O I | | | |	7.70
1.167	0.29	0.35	0.590	O | | | |	7.76
1.250	0.00	0.35	0.588	O | | | |	7.74
1.333	0.00	0.35	0.586	O | | | |	7.71
1.417	0.00	0.35	0.583	O | | | |	7.68
1.500	0.00	0.35	0.581	O | | | |	7.65
1.583	0.00	0.35	0.579	O | | | |	7.63
1.667	0.00	0.35	0.576	O | | | |	7.60
1.750	0.00	0.35	0.574	O | | | |	7.57
1.833	0.00	0.35	0.571	O | | | |	7.54
1.917	0.00	0.35	0.569	O | | | |	7.51
2.000	0.00	0.35	0.567	O | | | |	7.48
2.083	0.00	0.35	0.564	O | | | |	7.45
2.167	0.00	0.35	0.562	O | | | |	7.42
2.250	0.00	0.35	0.559	O | | | |	7.39
2.333	0.00	0.35	0.557	O | | | |	7.36
2.417	0.00	0.35	0.554	O | | | |	7.33
2.500	0.00	0.35	0.552	O | | | |	7.30
2.583	0.00	0.35	0.550	O | | | |	7.27
2.667	0.00	0.35	0.547	O | | | |	7.24
2.750	0.00	0.35	0.545	O | | | |	7.21
2.833	0.00	0.35	0.542	O | | | |	7.18
2.917	0.00	0.35	0.540	O | | | |	7.15
3.000	0.00	0.35	0.538	O | | | |	7.12
3.083	0.00	0.35	0.535	O | | | |	7.09
3.167	0.00	0.35	0.533	O | | | |	7.06
3.250	0.00	0.35	0.530	O | | | |	7.03
3.333	0.00	0.35	0.528	O | | | |	7.00
3.417	0.00	0.35	0.526	O | | | |	6.97
3.500	0.00	0.35	0.523	O | | | |	6.94
3.583	0.00	0.35	0.521	O | | | |	6.91
3.667	0.00	0.35	0.518	O | | | |	6.88
3.750	0.00	0.35	0.516	O | | | |	6.85
3.833	0.00	0.35	0.514	O | | | |	6.82

3.917	0.00	0.35	0.511	O				6.79
4.000	0.00	0.35	0.509	O				6.76
4.083	0.00	0.35	0.506	O				6.73
4.167	0.00	0.35	0.504	O				6.70
4.250	0.00	0.35	0.501	O				6.67
4.333	0.00	0.35	0.499	O				6.64
4.417	0.00	0.35	0.497	O				6.61
4.500	0.00	0.35	0.494	O				6.58
4.583	0.00	0.35	0.492	O				6.55
4.667	0.00	0.35	0.489	O				6.53
4.750	0.00	0.35	0.487	O				6.50
4.833	0.00	0.35	0.485	O				6.47
4.917	0.00	0.35	0.482	O				6.44
5.000	0.00	0.35	0.480	O				6.41
5.083	0.00	0.35	0.477	O				6.38
5.167	0.00	0.35	0.475	O				6.35
5.250	0.00	0.35	0.473	O				6.32
5.333	0.00	0.35	0.470	O				6.29
5.417	0.00	0.35	0.468	O				6.26
5.500	0.00	0.35	0.465	O				6.23
5.583	0.00	0.35	0.463	O				6.20
5.667	0.00	0.35	0.460	O				6.17
5.750	0.00	0.35	0.458	O				6.14
5.833	0.00	0.35	0.456	O				6.11
5.917	0.00	0.35	0.453	O				6.08
6.000	0.00	0.35	0.451	O				6.05
6.083	0.00	0.35	0.448	O				6.02
6.167	0.00	0.35	0.446	O				5.99
6.250	0.00	0.35	0.444	O				5.96
6.333	0.00	0.35	0.441	O				5.93
6.417	0.00	0.35	0.439	O				5.90
6.500	0.00	0.35	0.436	O				5.87
6.583	0.00	0.35	0.434	O				5.84
6.667	0.00	0.35	0.432	O				5.81
6.750	0.00	0.35	0.429	O				5.78
6.833	0.00	0.35	0.427	O				5.75
6.917	0.00	0.35	0.424	O				5.72
7.000	0.00	0.35	0.422	O				5.69
7.083	0.00	0.35	0.420	O				5.66
7.167	0.00	0.35	0.417	O				5.63
7.250	0.00	0.35	0.415	O				5.60
7.333	0.00	0.35	0.412	O				5.57
7.417	0.00	0.35	0.410	O				5.54
7.500	0.00	0.35	0.407	O				5.51
7.583	0.00	0.35	0.405	O				5.48
7.667	0.00	0.35	0.403	O				5.45
7.750	0.00	0.35	0.400	O				5.42
7.833	0.00	0.35	0.398	O				5.40
7.917	0.00	0.35	0.395	O				5.37
8.000	0.00	0.35	0.393	O				5.34
8.083	0.00	0.35	0.391	O				5.31
8.167	0.00	0.35	0.388	O				5.28
8.250	0.00	0.35	0.386	O				5.25
8.333	0.00	0.35	0.383	O				5.22
8.417	0.00	0.35	0.381	O				5.19
8.500	0.00	0.35	0.379	O				5.16
8.583	0.00	0.35	0.376	O				5.13
8.667	0.00	0.35	0.374	O				5.10
8.750	0.00	0.35	0.371	O				5.07
8.833	0.00	0.35	0.369	O				5.04

8.917	0.00	0.35	0.366	O					5.01
9.000	0.00	0.35	0.364	O					4.98
9.083	0.00	0.35	0.362	O					4.95
9.167	0.00	0.35	0.359	O					4.92
9.250	0.00	0.35	0.357	O					4.89
9.333	0.00	0.35	0.354	O					4.86
9.417	0.00	0.35	0.352	O					4.83
9.500	0.00	0.35	0.350	O					4.80
9.583	0.00	0.35	0.347	O					4.77
9.667	0.00	0.35	0.345	O					4.74
9.750	0.00	0.35	0.342	O					4.71
9.833	0.00	0.35	0.340	O					4.68
9.917	0.00	0.35	0.338	O					4.65
10.000	0.00	0.35	0.335	O					4.62
10.083	0.00	0.35	0.333	O					4.59
10.167	0.00	0.35	0.330	O					4.56
10.250	0.00	0.35	0.328	O					4.53
10.333	0.00	0.35	0.326	O					4.50
10.417	0.00	0.35	0.323	O					4.47
10.500	0.00	0.35	0.321	O					4.44
10.583	0.00	0.35	0.318	O					4.41
10.667	0.00	0.35	0.316	O					4.38
10.750	0.00	0.35	0.313	O					4.35
10.833	0.00	0.35	0.311	O					4.32
10.917	0.00	0.35	0.309	O					4.30
11.000	0.00	0.35	0.306	O					4.27
11.083	0.00	0.35	0.304	O					4.24
11.167	0.00	0.35	0.301	O					4.21
11.250	0.00	0.35	0.299	O					4.18
11.333	0.00	0.35	0.297	O					4.15
11.417	0.00	0.35	0.294	O					4.12
11.500	0.00	0.35	0.292	O					4.09
11.583	0.00	0.35	0.289	O					4.06
11.667	0.00	0.35	0.287	O					4.03
11.750	0.00	0.35	0.285	O					4.00
11.833	0.00	0.35	0.282	O					3.97
11.917	0.00	0.35	0.280	O					3.94
12.000	0.00	0.35	0.277	O					3.91
12.083	0.00	0.35	0.275	O					3.88
12.167	0.00	0.35	0.272	O					3.85
12.250	0.00	0.35	0.270	O					3.82
12.333	0.00	0.35	0.268	O					3.79
12.417	0.00	0.35	0.265	O					3.76
12.500	0.00	0.35	0.263	O					3.73
12.583	0.00	0.35	0.260	O					3.70
12.667	0.00	0.35	0.258	O					3.67
12.750	0.00	0.35	0.256	O					3.64
12.833	0.00	0.35	0.253	O					3.61
12.917	0.00	0.35	0.251	O					3.58
13.000	0.00	0.35	0.248	O					3.55
13.083	0.00	0.35	0.246	O					3.52
13.167	0.00	0.35	0.244	O					3.49
13.250	0.00	0.35	0.241	O					3.46
13.333	0.00	0.35	0.239	O					3.43
13.417	0.00	0.35	0.236	O					3.40
13.500	0.00	0.35	0.234	O					3.37
13.583	0.00	0.35	0.231	O					3.34
13.667	0.00	0.35	0.229	O					3.31
13.750	0.00	0.35	0.227	O					3.28
13.833	0.00	0.35	0.224	O					3.25

13.917	0.00	0.35	0.222	O					3.22
14.000	0.00	0.35	0.219	O					3.20
14.083	0.00	0.35	0.217	O					3.17
14.167	0.00	0.35	0.215	O					3.14
14.250	0.00	0.35	0.212	O					3.11
14.333	0.00	0.35	0.210	O					3.08
14.417	0.00	0.35	0.207	O					3.05
14.500	0.00	0.35	0.205	O					3.02
14.583	0.00	0.35	0.203	O					2.99
14.667	0.00	0.35	0.200	O					2.96
14.750	0.00	0.35	0.198	O					2.93
14.833	0.00	0.35	0.195	O					2.90
14.917	0.00	0.35	0.193	O					2.87
15.000	0.00	0.35	0.191	O					2.84
15.083	0.00	0.35	0.188	O					2.81
15.167	0.00	0.35	0.186	O					2.78
15.250	0.00	0.35	0.183	O					2.75
15.333	0.00	0.35	0.181	O					2.72
15.417	0.00	0.35	0.178	O					2.69
15.500	0.00	0.35	0.176	O					2.66
15.583	0.00	0.35	0.174	O					2.63
15.667	0.00	0.35	0.171	O					2.60
15.750	0.00	0.35	0.169	O					2.57
15.833	0.00	0.35	0.166	O					2.54
15.917	0.00	0.35	0.164	O					2.51
16.000	0.00	0.35	0.162	O					2.48
16.083	0.00	0.35	0.159	O					2.45
16.167	0.00	0.35	0.157	O					2.42
16.250	0.00	0.35	0.154	O					2.39
16.333	0.00	0.35	0.152	O					2.36
16.417	0.00	0.35	0.150	O					2.33
16.500	0.00	0.35	0.147	O					2.30
16.583	0.00	0.35	0.145	O					2.27
16.667	0.00	0.35	0.142	O					2.24
16.750	0.00	0.35	0.140	O					2.21
16.833	0.00	0.35	0.137	O					2.18
16.917	0.00	0.35	0.135	O					2.15
17.000	0.00	0.35	0.133	O					2.12
17.083	0.00	0.35	0.130	O					2.10
17.167	0.00	0.35	0.128	O					2.07
17.250	0.00	0.35	0.125	O					2.04
17.333	0.00	0.35	0.123	O					2.01
17.417	0.00	0.35	0.121	O					1.98
17.500	0.00	0.35	0.118	O					1.95
17.583	0.00	0.35	0.116	O					1.92
17.667	0.00	0.35	0.113	O					1.89
17.750	0.00	0.35	0.111	O					1.86
17.833	0.00	0.35	0.109	O					1.83
17.917	0.00	0.35	0.106	O					1.80
18.000	0.00	0.35	0.104	O					1.77
18.083	0.00	0.35	0.101	O					1.74
18.167	0.00	0.35	0.099	O					1.71
18.250	0.00	0.35	0.097	O					1.68
18.333	0.00	0.35	0.094	O					1.65
18.417	0.00	0.35	0.092	O					1.62
18.500	0.00	0.35	0.089	O					1.59
18.583	0.00	0.35	0.087	O					1.56
18.667	0.00	0.35	0.084	O					1.53
18.750	0.00	0.35	0.082	O					1.50
18.833	0.00	0.34	0.080	O					1.46

18.917	0.00	0.33	0.077	O	|	|	|	1.42
19.000	0.00	0.32	0.075	O	|	|	|	1.37
19.083	0.00	0.31	0.073	O	|	|	|	1.33
19.167	0.00	0.30	0.071	O	|	|	|	1.30
19.250	0.00	0.29	0.069	O	|	|	|	1.26
19.333	0.00	0.29	0.067	O	|	|	|	1.22
19.417	0.00	0.28	0.065	O	|	|	|	1.19
19.500	0.00	0.27	0.063	O	|	|	|	1.15
19.583	0.00	0.26	0.061	O	|	|	|	1.12
19.667	0.00	0.25	0.059	O	|	|	|	1.09
19.750	0.00	0.25	0.058	O	|	|	|	1.05
19.833	0.00	0.24	0.056	O	|	|	|	1.02
19.917	0.00	0.23	0.054	O	|	|	|	0.99
20.000	0.00	0.23	0.053	O	|	|	|	0.97
20.083	0.00	0.22	0.051	O	|	|	|	0.94
20.167	0.00	0.21	0.050	O	|	|	|	0.91
20.250	0.00	0.21	0.048	O	|	|	|	0.88
20.333	0.00	0.20	0.047	O	|	|	|	0.86
20.417	0.00	0.19	0.046	O	|	|	|	0.83
20.500	0.00	0.19	0.044	O	|	|	|	0.81
20.583	0.00	0.18	0.043	O	|	|	|	0.79
20.667	0.00	0.18	0.042	O	|	|	|	0.76
20.750	0.00	0.17	0.041	O	|	|	|	0.74
20.833	0.00	0.17	0.039	O	|	|	|	0.72
20.917	0.00	0.16	0.038	O	|	|	|	0.70
21.000	0.00	0.16	0.037	O	|	|	|	0.68
21.083	0.00	0.15	0.036	O	|	|	|	0.66
21.167	0.00	0.15	0.035	O	|	|	|	0.64
21.250	0.00	0.14	0.034	O	|	|	|	0.62
21.333	0.00	0.14	0.033	O	|	|	|	0.60
21.417	0.00	0.14	0.032	O	|	|	|	0.59
21.500	0.00	0.13	0.031	O	|	|	|	0.57
21.583	0.00	0.13	0.030	O	|	|	|	0.55
21.667	0.00	0.13	0.029	O	|	|	|	0.54
21.750	0.00	0.12	0.028	O	|	|	|	0.52
21.833	0.00	0.12	0.028	O	|	|	|	0.51
21.917	0.00	0.11	0.027	O	|	|	|	0.49
22.000	0.00	0.11	0.026	O	|	|	|	0.48
22.083	0.00	0.11	0.025	O	|	|	|	0.46
22.167	0.00	0.10	0.025	O	|	|	|	0.45
22.250	0.00	0.10	0.024	O	|	|	|	0.44
22.333	0.00	0.10	0.023	O	|	|	|	0.42
22.417	0.00	0.10	0.023	O	|	|	|	0.41
22.500	0.00	0.09	0.022	O	|	|	|	0.40
22.583	0.00	0.09	0.021	O	|	|	|	0.39
22.667	0.00	0.09	0.021	O	|	|	|	0.38
22.750	0.00	0.09	0.020	O	|	|	|	0.37
22.833	0.00	0.08	0.019	O	|	|	|	0.36
22.917	0.00	0.08	0.019	O	|	|	|	0.35
23.000	0.00	0.08	0.018	O	|	|	|	0.34
23.083	0.00	0.08	0.018	O	|	|	|	0.33
23.167	0.00	0.07	0.017	O	|	|	|	0.32
23.250	0.00	0.07	0.017	O	|	|	|	0.31
23.333	0.00	0.07	0.016	O	|	|	|	0.30
23.417	0.00	0.07	0.016	O	|	|	|	0.29
23.500	0.00	0.07	0.015	O	|	|	|	0.28
23.583	0.00	0.06	0.015	O	|	|	|	0.27
23.667	0.00	0.06	0.014	O	|	|	|	0.26
23.750	0.00	0.06	0.014	O	|	|	|	0.26
23.833	0.00	0.06	0.014	O	|	|	|	0.25

23.917	0.00	0.06	0.013	O	|	|	|	0.24
24.000	0.00	0.05	0.013	O	|	|	|	0.24
24.083	0.00	0.05	0.013	O	|	|	|	0.23
24.167	0.00	0.05	0.012	O	|	|	|	0.22
24.250	0.00	0.05	0.012	O	|	|	|	0.22
24.333	0.00	0.05	0.011	O	|	|	|	0.21
24.417	0.00	0.05	0.011	O	|	|	|	0.20
24.500	0.00	0.05	0.011	O	|	|	|	0.20
24.583	0.00	0.04	0.010	O	|	|	|	0.19
24.667	0.00	0.04	0.010	O	|	|	|	0.19
24.750	0.00	0.04	0.010	O	|	|	|	0.18
24.833	0.00	0.04	0.010	O	|	|	|	0.18
24.917	0.00	0.04	0.009	O	|	|	|	0.17
25.000	0.00	0.04	0.009	O	|	|	|	0.17
25.083	0.00	0.04	0.009	O	|	|	|	0.16
25.167	0.00	0.04	0.009	O	|	|	|	0.16
25.250	0.00	0.04	0.008	O	|	|	|	0.15
25.333	0.00	0.03	0.008	O	|	|	|	0.15
25.417	0.00	0.03	0.008	O	|	|	|	0.14
25.500	0.00	0.03	0.008	O	|	|	|	0.14
25.583	0.00	0.03	0.007	O	|	|	|	0.13
25.667	0.00	0.03	0.007	O	|	|	|	0.13
25.750	0.00	0.03	0.007	O	|	|	|	0.13
25.833	0.00	0.03	0.007	O	|	|	|	0.12
25.917	0.00	0.03	0.007	O	|	|	|	0.12
26.000	0.00	0.03	0.006	O	|	|	|	0.12
26.083	0.00	0.03	0.006	O	|	|	|	0.11
26.167	0.00	0.03	0.006	O	|	|	|	0.11
26.250	0.00	0.02	0.006	O	|	|	|	0.11
26.333	0.00	0.02	0.006	O	|	|	|	0.10
26.417	0.00	0.02	0.005	O	|	|	|	0.10
26.500	0.00	0.02	0.005	O	|	|	|	0.10
26.583	0.00	0.02	0.005	O	|	|	|	0.09
26.667	0.00	0.02	0.005	O	|	|	|	0.09
26.750	0.00	0.02	0.005	O	|	|	|	0.09
26.833	0.00	0.02	0.005	O	|	|	|	0.09
26.917	0.00	0.02	0.005	O	|	|	|	0.08
27.000	0.00	0.02	0.004	O	|	|	|	0.08
27.083	0.00	0.02	0.004	O	|	|	|	0.08
27.167	0.00	0.02	0.004	O	|	|	|	0.08
27.250	0.00	0.02	0.004	O	|	|	|	0.07
27.333	0.00	0.02	0.004	O	|	|	|	0.07
27.417	0.00	0.02	0.004	O	|	|	|	0.07
27.500	0.00	0.02	0.004	O	|	|	|	0.07
27.583	0.00	0.02	0.004	O	|	|	|	0.07
27.667	0.00	0.02	0.004	O	|	|	|	0.06
27.750	0.00	0.01	0.003	O	|	|	|	0.06
27.833	0.00	0.01	0.003	O	|	|	|	0.06
27.917	0.00	0.01	0.003	O	|	|	|	0.06
28.000	0.00	0.01	0.003	O	|	|	|	0.06
28.083	0.00	0.01	0.003	O	|	|	|	0.06
28.167	0.00	0.01	0.003	O	|	|	|	0.05
28.250	0.00	0.01	0.003	O	|	|	|	0.05
28.333	0.00	0.01	0.003	O	|	|	|	0.05
28.417	0.00	0.01	0.003	O	|	|	|	0.05
28.500	0.00	0.01	0.003	O	|	|	|	0.05
28.583	0.00	0.01	0.003	O	|	|	|	0.05
28.667	0.00	0.01	0.002	O	|	|	|	0.05
28.750	0.00	0.01	0.002	O	|	|	|	0.04
28.833	0.00	0.01	0.002	O	|	|	|	0.04

28.917	0.00	0.01	0.002	O	|	|	|	0.04
29.000	0.00	0.01	0.002	O	|	|	|	0.04
29.083	0.00	0.01	0.002	O	|	|	|	0.04
29.167	0.00	0.01	0.002	O	|	|	|	0.04
29.250	0.00	0.01	0.002	O	|	|	|	0.04
29.333	0.00	0.01	0.002	O	|	|	|	0.04
29.417	0.00	0.01	0.002	O	|	|	|	0.03
29.500	0.00	0.01	0.002	O	|	|	|	0.03
29.583	0.00	0.01	0.002	O	|	|	|	0.03
29.667	0.00	0.01	0.002	O	|	|	|	0.03
29.750	0.00	0.01	0.002	O	|	|	|	0.03
29.833	0.00	0.01	0.002	O	|	|	|	0.03
29.917	0.00	0.01	0.002	O	|	|	|	0.03
30.000	0.00	0.01	0.002	O	|	|	|	0.03
30.083	0.00	0.01	0.002	O	|	|	|	0.03
30.167	0.00	0.01	0.001	O	|	|	|	0.03
30.250	0.00	0.01	0.001	O	|	|	|	0.03
30.333	0.00	0.01	0.001	O	|	|	|	0.03
30.417	0.00	0.01	0.001	O	|	|	|	0.02
30.500	0.00	0.01	0.001	O	|	|	|	0.02
30.583	0.00	0.01	0.001	O	|	|	|	0.02
30.667	0.00	0.01	0.001	O	|	|	|	0.02
30.750	0.00	0.01	0.001	O	|	|	|	0.02
30.833	0.00	0.00	0.001	O	|	|	|	0.02
30.917	0.00	0.00	0.001	O	|	|	|	0.02
31.000	0.00	0.00	0.001	O	|	|	|	0.02
31.083	0.00	0.00	0.001	O	|	|	|	0.02
31.167	0.00	0.00	0.001	O	|	|	|	0.02
31.250	0.00	0.00	0.001	O	|	|	|	0.02
31.333	0.00	0.00	0.001	O	|	|	|	0.02
31.417	0.00	0.00	0.001	O	|	|	|	0.02
31.500	0.00	0.00	0.001	O	|	|	|	0.02
31.583	0.00	0.00	0.001	O	|	|	|	0.02
31.667	0.00	0.00	0.001	O	|	|	|	0.02
31.750	0.00	0.00	0.001	O	|	|	|	0.02
31.833	0.00	0.00	0.001	O	|	|	|	0.01
31.917	0.00	0.00	0.001	O	|	|	|	0.01
32.000	0.00	0.00	0.001	O	|	|	|	0.01
32.083	0.00	0.00	0.001	O	|	|	|	0.01
32.167	0.00	0.00	0.001	O	|	|	|	0.01
32.250	0.00	0.00	0.001	O	|	|	|	0.01
32.333	0.00	0.00	0.001	O	|	|	|	0.01
32.417	0.00	0.00	0.001	O	|	|	|	0.01
32.500	0.00	0.00	0.001	O	|	|	|	0.01
32.583	0.00	0.00	0.001	O	|	|	|	0.01
32.667	0.00	0.00	0.001	O	|	|	|	0.01
32.750	0.00	0.00	0.001	O	|	|	|	0.01
32.833	0.00	0.00	0.001	O	|	|	|	0.01
32.917	0.00	0.00	0.001	O	|	|	|	0.01
33.000	0.00	0.00	0.001	O	|	|	|	0.01
33.083	0.00	0.00	0.001	O	|	|	|	0.01
33.167	0.00	0.00	0.001	O	|	|	|	0.01
33.250	0.00	0.00	0.000	O	|	|	|	0.01
33.333	0.00	0.00	0.000	O	|	|	|	0.01
33.417	0.00	0.00	0.000	O	|	|	|	0.01
33.500	0.00	0.00	0.000	O	|	|	|	0.01
33.583	0.00	0.00	0.000	O	|	|	|	0.01
33.667	0.00	0.00	0.000	O	|	|	|	0.01
33.750	0.00	0.00	0.000	O	|	|	|	0.01
33.833	0.00	0.00	0.000	O	|	|	|	0.01

33.917	0.00	0.00	0.000	O	|	|	|	|	0.01
34.000	0.00	0.00	0.000	O	|	|	|	|	0.01
34.083	0.00	0.00	0.000	O	|	|	|	|	0.01
34.167	0.00	0.00	0.000	O	|	|	|	|	0.01
34.250	0.00	0.00	0.000	O	|	|	|	|	0.01
34.333	0.00	0.00	0.000	O	|	|	|	|	0.01
34.417	0.00	0.00	0.000	O	|	|	|	|	0.01
34.500	0.00	0.00	0.000	O	|	|	|	|	0.01
34.583	0.00	0.00	0.000	O	|	|	|	|	0.01
34.667	0.00	0.00	0.000	O	|	|	|	|	0.01
34.750	0.00	0.00	0.000	O	|	|	|	|	0.01
34.833	0.00	0.00	0.000	O	|	|	|	|	0.01
34.917	0.00	0.00	0.000	O	|	|	|	|	0.01
35.000	0.00	0.00	0.000	O	|	|	|	|	0.00
35.083	0.00	0.00	0.000	O	|	|	|	|	0.00
35.167	0.00	0.00	0.000	O	|	|	|	|	0.00
35.250	0.00	0.00	0.000	O	|	|	|	|	0.00
35.333	0.00	0.00	0.000	O	|	|	|	|	0.00
35.417	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 425
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.350 (CFS)
Total volume = 0.617 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
10-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.141 (CFS)
Total volume = 0.983 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.3 6.57 9.86 13.14	Depth (Ft.)
0.083	0.88	0.01	0.003	O I	0.05
0.167	1.53	0.05	0.011	O I	0.20
0.250	1.53	0.09	0.021	O I	0.39
0.333	1.70	0.13	0.032	O I	0.58
0.417	1.88	0.18	0.043	O I	0.78
0.500	2.13	0.24	0.055	O I	1.01
0.583	2.07	0.29	0.068	O I	1.24
0.667	2.16	0.34	0.080	O I	1.47
0.750	2.28	0.35	0.093	O I	1.64
0.833	2.10	0.35	0.106	O I	1.79
0.917	2.02	0.35	0.118	O I	1.94
1.000	2.18	0.35	0.130	O I	2.09
1.083	2.56	0.35	0.144	O I	2.26
1.167	2.78	0.35	0.160	O I	2.46
1.250	2.82	0.35	0.176	O I	2.66
1.333	2.69	0.35	0.193	O I	2.87
1.417	2.99	0.35	0.210	O I	3.08
1.500	3.34	0.35	0.230	O I	3.32
1.583	3.25	0.35	0.250	O I	3.57
1.667	3.31	0.35	0.270	O I	3.82
1.750	3.99	0.35	0.293	O I	4.10
1.833	4.23	0.35	0.319	O I	4.42
1.917	3.96	0.35	0.344	O I	4.74
2.000	3.88	0.35	0.369	O I	5.04
2.083	4.02	0.35	0.394	O I	5.34
2.167	5.25	0.35	0.423	O I	5.71
2.250	6.92	0.35	0.463	O I	6.20
2.333	6.15	0.35	0.505	O I	6.72
2.417	8.54	0.35	0.554	O I	7.32
2.500	11.32	0.38	0.619	O I	8.20
2.583	13.14	0.95	0.699	O I	9.54
2.667	11.53	2.98	0.771	O I	10.43
2.750	6.21	4.44	0.806	O I	10.82
2.833	2.99	4.48	0.807	O I	10.84
2.917	2.33	4.03	0.796	O I	10.71
3.000	1.49	3.50	0.783	O I	10.57
3.083	0.48	2.88	0.768	O I	10.41
3.167	0.06	2.23	0.752	O I	10.23
3.250	0.00	1.68	0.739	O I	10.09
3.333	0.00	1.32	0.729	O I	9.97
3.417	0.00	1.21	0.720	O I	9.84
3.500	0.00	1.11	0.712	O I	9.73
3.583	0.00	1.02	0.705	O I	9.62
3.667	0.00	0.94	0.698	O I	9.53
3.750	0.00	0.86	0.692	O I	9.44
3.833	0.00	0.79	0.686	O I	9.36

3.917	0.00	0.73	0.681	IO				9.28
4.000	0.00	0.67	0.676	IO				9.21
4.083	0.00	0.61	0.672	IO				9.15
4.167	0.00	0.56	0.668	IO				9.09
4.250	0.00	0.52	0.664	IO				9.04
4.333	0.00	0.48	0.660	IO				8.99
4.417	0.00	0.47	0.657	IO				8.93
4.500	0.00	0.46	0.654	IO				8.86
4.583	0.00	0.45	0.651	IO				8.80
4.667	0.00	0.45	0.648	IO				8.74
4.750	0.00	0.44	0.645	IO				8.69
4.833	0.00	0.43	0.642	IO				8.63
4.917	0.00	0.42	0.639	IO				8.57
5.000	0.00	0.42	0.636	IO				8.52
5.083	0.00	0.41	0.633	O				8.46
5.167	0.00	0.40	0.630	O				8.41
5.250	0.00	0.40	0.627	O				8.35
5.333	0.00	0.39	0.625	O				8.30
5.417	0.00	0.38	0.622	O				8.25
5.500	0.00	0.38	0.619	O				8.20
5.583	0.00	0.37	0.617	O				8.15
5.667	0.00	0.36	0.614	O				8.10
5.750	0.00	0.36	0.612	O				8.05
5.833	0.00	0.35	0.609	O				8.01
5.917	0.00	0.35	0.607	O				7.98
6.000	0.00	0.35	0.605	O				7.95
6.083	0.00	0.35	0.602	O				7.92
6.167	0.00	0.35	0.600	O				7.89
6.250	0.00	0.35	0.597	O				7.86
6.333	0.00	0.35	0.595	O				7.83
6.417	0.00	0.35	0.593	O				7.80
6.500	0.00	0.35	0.590	O				7.77
6.583	0.00	0.35	0.588	O				7.74
6.667	0.00	0.35	0.585	O				7.71
6.750	0.00	0.35	0.583	O				7.68
6.833	0.00	0.35	0.580	O				7.65
6.917	0.00	0.35	0.578	O				7.62
7.000	0.00	0.35	0.576	O				7.59
7.083	0.00	0.35	0.573	O				7.56
7.167	0.00	0.35	0.571	O				7.53
7.250	0.00	0.35	0.568	O				7.50
7.333	0.00	0.35	0.566	O				7.47
7.417	0.00	0.35	0.564	O				7.44
7.500	0.00	0.35	0.561	O				7.41
7.583	0.00	0.35	0.559	O				7.38
7.667	0.00	0.35	0.556	O				7.35
7.750	0.00	0.35	0.554	O				7.32
7.833	0.00	0.35	0.552	O				7.29
7.917	0.00	0.35	0.549	O				7.26
8.000	0.00	0.35	0.547	O				7.23
8.083	0.00	0.35	0.544	O				7.20
8.167	0.00	0.35	0.542	O				7.17
8.250	0.00	0.35	0.539	O				7.14
8.333	0.00	0.35	0.537	O				7.11
8.417	0.00	0.35	0.535	O				7.08
8.500	0.00	0.35	0.532	O				7.05
8.583	0.00	0.35	0.530	O				7.02
8.667	0.00	0.35	0.527	O				6.99
8.750	0.00	0.35	0.525	O				6.96
8.833	0.00	0.35	0.523	O				6.93

8.917	0.00	0.35	0.520	O					6.90
9.000	0.00	0.35	0.518	O					6.88
9.083	0.00	0.35	0.515	O					6.85
9.167	0.00	0.35	0.513	O					6.82
9.250	0.00	0.35	0.511	O					6.79
9.333	0.00	0.35	0.508	O					6.76
9.417	0.00	0.35	0.506	O					6.73
9.500	0.00	0.35	0.503	O					6.70
9.583	0.00	0.35	0.501	O					6.67
9.667	0.00	0.35	0.499	O					6.64
9.750	0.00	0.35	0.496	O					6.61
9.833	0.00	0.35	0.494	O					6.58
9.917	0.00	0.35	0.491	O					6.55
10.000	0.00	0.35	0.489	O					6.52
10.083	0.00	0.35	0.486	O					6.49
10.167	0.00	0.35	0.484	O					6.46
10.250	0.00	0.35	0.482	O					6.43
10.333	0.00	0.35	0.479	O					6.40
10.417	0.00	0.35	0.477	O					6.37
10.500	0.00	0.35	0.474	O					6.34
10.583	0.00	0.35	0.472	O					6.31
10.667	0.00	0.35	0.470	O					6.28
10.750	0.00	0.35	0.467	O					6.25
10.833	0.00	0.35	0.465	O					6.22
10.917	0.00	0.35	0.462	O					6.19
11.000	0.00	0.35	0.460	O					6.16
11.083	0.00	0.35	0.458	O					6.13
11.167	0.00	0.35	0.455	O					6.10
11.250	0.00	0.35	0.453	O					6.07
11.333	0.00	0.35	0.450	O					6.04
11.417	0.00	0.35	0.448	O					6.01
11.500	0.00	0.35	0.445	O					5.98
11.583	0.00	0.35	0.443	O					5.95
11.667	0.00	0.35	0.441	O					5.92
11.750	0.00	0.35	0.438	O					5.89
11.833	0.00	0.35	0.436	O					5.86
11.917	0.00	0.35	0.433	O					5.83
12.000	0.00	0.35	0.431	O					5.80
12.083	0.00	0.35	0.429	O					5.78
12.167	0.00	0.35	0.426	O					5.75
12.250	0.00	0.35	0.424	O					5.72
12.333	0.00	0.35	0.421	O					5.69
12.417	0.00	0.35	0.419	O					5.66
12.500	0.00	0.35	0.417	O					5.63
12.583	0.00	0.35	0.414	O					5.60
12.667	0.00	0.35	0.412	O					5.57
12.750	0.00	0.35	0.409	O					5.54
12.833	0.00	0.35	0.407	O					5.51
12.917	0.00	0.35	0.405	O					5.48
13.000	0.00	0.35	0.402	O					5.45
13.083	0.00	0.35	0.400	O					5.42
13.167	0.00	0.35	0.397	O					5.39
13.250	0.00	0.35	0.395	O					5.36
13.333	0.00	0.35	0.392	O					5.33
13.417	0.00	0.35	0.390	O					5.30
13.500	0.00	0.35	0.388	O					5.27
13.583	0.00	0.35	0.385	O					5.24
13.667	0.00	0.35	0.383	O					5.21
13.750	0.00	0.35	0.380	O					5.18
13.833	0.00	0.35	0.378	O					5.15

13.917	0.00	0.35	0.376	O					5.12
14.000	0.00	0.35	0.373	O					5.09
14.083	0.00	0.35	0.371	O					5.06
14.167	0.00	0.35	0.368	O					5.03
14.250	0.00	0.35	0.366	O					5.00
14.333	0.00	0.35	0.364	O					4.97
14.417	0.00	0.35	0.361	O					4.94
14.500	0.00	0.35	0.359	O					4.91
14.583	0.00	0.35	0.356	O					4.88
14.667	0.00	0.35	0.354	O					4.85
14.750	0.00	0.35	0.351	O					4.82
14.833	0.00	0.35	0.349	O					4.79
14.917	0.00	0.35	0.347	O					4.76
15.000	0.00	0.35	0.344	O					4.73
15.083	0.00	0.35	0.342	O					4.70
15.167	0.00	0.35	0.339	O					4.68
15.250	0.00	0.35	0.337	O					4.65
15.333	0.00	0.35	0.335	O					4.62
15.417	0.00	0.35	0.332	O					4.59
15.500	0.00	0.35	0.330	O					4.56
15.583	0.00	0.35	0.327	O					4.53
15.667	0.00	0.35	0.325	O					4.50
15.750	0.00	0.35	0.323	O					4.47
15.833	0.00	0.35	0.320	O					4.44
15.917	0.00	0.35	0.318	O					4.41
16.000	0.00	0.35	0.315	O					4.38
16.083	0.00	0.35	0.313	O					4.35
16.167	0.00	0.35	0.311	O					4.32
16.250	0.00	0.35	0.308	O					4.29
16.333	0.00	0.35	0.306	O					4.26
16.417	0.00	0.35	0.303	O					4.23
16.500	0.00	0.35	0.301	O					4.20
16.583	0.00	0.35	0.298	O					4.17
16.667	0.00	0.35	0.296	O					4.14
16.750	0.00	0.35	0.294	O					4.11
16.833	0.00	0.35	0.291	O					4.08
16.917	0.00	0.35	0.289	O					4.05
17.000	0.00	0.35	0.286	O					4.02
17.083	0.00	0.35	0.284	O					3.99
17.167	0.00	0.35	0.282	O					3.96
17.250	0.00	0.35	0.279	O					3.93
17.333	0.00	0.35	0.277	O					3.90
17.417	0.00	0.35	0.274	O					3.87
17.500	0.00	0.35	0.272	O					3.84
17.583	0.00	0.35	0.270	O					3.81
17.667	0.00	0.35	0.267	O					3.78
17.750	0.00	0.35	0.265	O					3.75
17.833	0.00	0.35	0.262	O					3.72
17.917	0.00	0.35	0.260	O					3.69
18.000	0.00	0.35	0.257	O					3.66
18.083	0.00	0.35	0.255	O					3.63
18.167	0.00	0.35	0.253	O					3.60
18.250	0.00	0.35	0.250	O					3.58
18.333	0.00	0.35	0.248	O					3.55
18.417	0.00	0.35	0.245	O					3.52
18.500	0.00	0.35	0.243	O					3.49
18.583	0.00	0.35	0.241	O					3.46
18.667	0.00	0.35	0.238	O					3.43
18.750	0.00	0.35	0.236	O					3.40
18.833	0.00	0.35	0.233	O					3.37

18.917	0.00	0.35	0.231	O					3.34
19.000	0.00	0.35	0.229	O					3.31
19.083	0.00	0.35	0.226	O					3.28
19.167	0.00	0.35	0.224	O					3.25
19.250	0.00	0.35	0.221	O					3.22
19.333	0.00	0.35	0.219	O					3.19
19.417	0.00	0.35	0.216	O					3.16
19.500	0.00	0.35	0.214	O					3.13
19.583	0.00	0.35	0.212	O					3.10
19.667	0.00	0.35	0.209	O					3.07
19.750	0.00	0.35	0.207	O					3.04
19.833	0.00	0.35	0.204	O					3.01
19.917	0.00	0.35	0.202	O					2.98
20.000	0.00	0.35	0.200	O					2.95
20.083	0.00	0.35	0.197	O					2.92
20.167	0.00	0.35	0.195	O					2.89
20.250	0.00	0.35	0.192	O					2.86
20.333	0.00	0.35	0.190	O					2.83
20.417	0.00	0.35	0.188	O					2.80
20.500	0.00	0.35	0.185	O					2.77
20.583	0.00	0.35	0.183	O					2.74
20.667	0.00	0.35	0.180	O					2.71
20.750	0.00	0.35	0.178	O					2.68
20.833	0.00	0.35	0.176	O					2.65
20.917	0.00	0.35	0.173	O					2.62
21.000	0.00	0.35	0.171	O					2.59
21.083	0.00	0.35	0.168	O					2.56
21.167	0.00	0.35	0.166	O					2.53
21.250	0.00	0.35	0.163	O					2.50
21.333	0.00	0.35	0.161	O					2.48
21.417	0.00	0.35	0.159	O					2.45
21.500	0.00	0.35	0.156	O					2.42
21.583	0.00	0.35	0.154	O					2.39
21.667	0.00	0.35	0.151	O					2.36
21.750	0.00	0.35	0.149	O					2.33
21.833	0.00	0.35	0.147	O					2.30
21.917	0.00	0.35	0.144	O					2.27
22.000	0.00	0.35	0.142	O					2.24
22.083	0.00	0.35	0.139	O					2.21
22.167	0.00	0.35	0.137	O					2.18
22.250	0.00	0.35	0.135	O					2.15
22.333	0.00	0.35	0.132	O					2.12
22.417	0.00	0.35	0.130	O					2.09
22.500	0.00	0.35	0.127	O					2.06
22.583	0.00	0.35	0.125	O					2.03
22.667	0.00	0.35	0.122	O					2.00
22.750	0.00	0.35	0.120	O					1.97
22.833	0.00	0.35	0.118	O					1.94
22.917	0.00	0.35	0.115	O					1.91
23.000	0.00	0.35	0.113	O					1.88
23.083	0.00	0.35	0.110	O					1.85
23.167	0.00	0.35	0.108	O					1.82
23.250	0.00	0.35	0.106	O					1.79
23.333	0.00	0.35	0.103	O					1.76
23.417	0.00	0.35	0.101	O					1.73
23.500	0.00	0.35	0.098	O					1.70
23.583	0.00	0.35	0.096	O					1.67
23.667	0.00	0.35	0.094	O					1.64
23.750	0.00	0.35	0.091	O					1.61
23.833	0.00	0.35	0.089	O					1.58

23.917	0.00	0.35	0.086	O					1.55
24.000	0.00	0.35	0.084	O					1.52
24.083	0.00	0.35	0.082	O					1.49
24.167	0.00	0.34	0.079	O					1.45
24.250	0.00	0.33	0.077	O					1.41
24.333	0.00	0.32	0.075	O					1.37
24.417	0.00	0.31	0.072	O					1.33
24.500	0.00	0.30	0.070	O					1.29
24.583	0.00	0.29	0.068	O					1.25
24.667	0.00	0.28	0.066	O					1.21
24.750	0.00	0.28	0.064	O					1.18
24.833	0.00	0.27	0.063	O					1.14
24.917	0.00	0.26	0.061	O					1.11
25.000	0.00	0.25	0.059	O					1.08
25.083	0.00	0.24	0.057	O					1.05
25.167	0.00	0.24	0.056	O					1.02
25.250	0.00	0.23	0.054	O					0.99
25.333	0.00	0.22	0.052	O					0.96
25.417	0.00	0.22	0.051	O					0.93
25.500	0.00	0.21	0.049	O					0.90
25.583	0.00	0.20	0.048	O					0.88
25.667	0.00	0.20	0.047	O					0.85
25.750	0.00	0.19	0.045	O					0.83
25.833	0.00	0.19	0.044	O					0.80
25.917	0.00	0.18	0.043	O					0.78
26.000	0.00	0.18	0.041	O					0.76
26.083	0.00	0.17	0.040	O					0.74
26.167	0.00	0.17	0.039	O					0.72
26.250	0.00	0.16	0.038	O					0.69
26.333	0.00	0.16	0.037	O					0.67
26.417	0.00	0.15	0.036	O					0.65
26.500	0.00	0.15	0.035	O					0.64
26.583	0.00	0.14	0.034	O					0.62
26.667	0.00	0.14	0.033	O					0.60
26.750	0.00	0.14	0.032	O					0.58
26.833	0.00	0.13	0.031	O					0.57
26.917	0.00	0.13	0.030	O					0.55
27.000	0.00	0.12	0.029	O					0.53
27.083	0.00	0.12	0.028	O					0.52
27.167	0.00	0.12	0.027	O					0.50
27.250	0.00	0.11	0.027	O					0.49
27.333	0.00	0.11	0.026	O					0.47
27.417	0.00	0.11	0.025	O					0.46
27.500	0.00	0.10	0.024	O					0.45
27.583	0.00	0.10	0.024	O					0.43
27.667	0.00	0.10	0.023	O					0.42
27.750	0.00	0.10	0.022	O					0.41
27.833	0.00	0.09	0.022	O					0.40
27.917	0.00	0.09	0.021	O					0.39
28.000	0.00	0.09	0.020	O					0.37
28.083	0.00	0.08	0.020	O					0.36
28.167	0.00	0.08	0.019	O					0.35
28.250	0.00	0.08	0.019	O					0.34
28.333	0.00	0.08	0.018	O					0.33
28.417	0.00	0.08	0.018	O					0.32
28.500	0.00	0.07	0.017	O					0.31
28.583	0.00	0.07	0.017	O					0.30
28.667	0.00	0.07	0.016	O					0.30
28.750	0.00	0.07	0.016	O					0.29
28.833	0.00	0.07	0.015	O					0.28

28.917	0.00	0.06	0.015	O				0.27
29.000	0.00	0.06	0.014	O				0.26
29.083	0.00	0.06	0.014	O				0.26
29.167	0.00	0.06	0.014	O				0.25
29.250	0.00	0.06	0.013	O				0.24
29.333	0.00	0.05	0.013	O				0.23
29.417	0.00	0.05	0.012	O				0.23
29.500	0.00	0.05	0.012	O				0.22
29.583	0.00	0.05	0.012	O				0.21
29.667	0.00	0.05	0.011	O				0.21
29.750	0.00	0.05	0.011	O				0.20
29.833	0.00	0.05	0.011	O				0.20
29.917	0.00	0.04	0.010	O				0.19
30.000	0.00	0.04	0.010	O				0.18
30.083	0.00	0.04	0.010	O				0.18
30.167	0.00	0.04	0.010	O				0.17
30.250	0.00	0.04	0.009	O				0.17
30.333	0.00	0.04	0.009	O				0.16
30.417	0.00	0.04	0.009	O				0.16
30.500	0.00	0.04	0.008	O				0.16
30.583	0.00	0.04	0.008	O				0.15
30.667	0.00	0.03	0.008	O				0.15
30.750	0.00	0.03	0.008	O				0.14
30.833	0.00	0.03	0.008	O				0.14
30.917	0.00	0.03	0.007	O				0.13
31.000	0.00	0.03	0.007	O				0.13
31.083	0.00	0.03	0.007	O				0.13
31.167	0.00	0.03	0.007	O				0.12
31.250	0.00	0.03	0.007	O				0.12
31.333	0.00	0.03	0.006	O				0.12
31.417	0.00	0.03	0.006	O				0.11
31.500	0.00	0.03	0.006	O				0.11
31.583	0.00	0.02	0.006	O				0.11
31.667	0.00	0.02	0.006	O				0.10
31.750	0.00	0.02	0.005	O				0.10
31.833	0.00	0.02	0.005	O				0.10
31.917	0.00	0.02	0.005	O				0.09
32.000	0.00	0.02	0.005	O				0.09
32.083	0.00	0.02	0.005	O				0.09
32.167	0.00	0.02	0.005	O				0.09
32.250	0.00	0.02	0.005	O				0.08
32.333	0.00	0.02	0.004	O				0.08
32.417	0.00	0.02	0.004	O				0.08
32.500	0.00	0.02	0.004	O				0.08
32.583	0.00	0.02	0.004	O				0.07
32.667	0.00	0.02	0.004	O				0.07
32.750	0.00	0.02	0.004	O				0.07
32.833	0.00	0.02	0.004	O				0.07
32.917	0.00	0.02	0.004	O				0.07
33.000	0.00	0.01	0.004	O				0.06
33.083	0.00	0.01	0.003	O				0.06
33.167	0.00	0.01	0.003	O				0.06
33.250	0.00	0.01	0.003	O				0.06
33.333	0.00	0.01	0.003	O				0.06
33.417	0.00	0.01	0.003	O				0.06
33.500	0.00	0.01	0.003	O				0.05
33.583	0.00	0.01	0.003	O				0.05
33.667	0.00	0.01	0.003	O				0.05
33.750	0.00	0.01	0.003	O				0.05
33.833	0.00	0.01	0.003	O				0.05

33.917	0.00	0.01	0.003	O				0.05
34.000	0.00	0.01	0.002	O				0.05
34.083	0.00	0.01	0.002	O				0.04
34.167	0.00	0.01	0.002	O				0.04
34.250	0.00	0.01	0.002	O				0.04
34.333	0.00	0.01	0.002	O				0.04
34.417	0.00	0.01	0.002	O				0.04
34.500	0.00	0.01	0.002	O				0.04
34.583	0.00	0.01	0.002	O				0.04
34.667	0.00	0.01	0.002	O				0.04
34.750	0.00	0.01	0.002	O				0.03
34.833	0.00	0.01	0.002	O				0.03
34.917	0.00	0.01	0.002	O				0.03
35.000	0.00	0.01	0.002	O				0.03
35.083	0.00	0.01	0.002	O				0.03
35.167	0.00	0.01	0.002	O				0.03
35.250	0.00	0.01	0.002	O				0.03
35.333	0.00	0.01	0.002	O				0.03
35.417	0.00	0.01	0.001	O				0.03
35.500	0.00	0.01	0.001	O				0.03
35.583	0.00	0.01	0.001	O				0.03
35.667	0.00	0.01	0.001	O				0.03
35.750	0.00	0.01	0.001	O				0.02
35.833	0.00	0.01	0.001	O				0.02
35.917	0.00	0.01	0.001	O				0.02
36.000	0.00	0.01	0.001	O				0.02
36.083	0.00	0.01	0.001	O				0.02
36.167	0.00	0.00	0.001	O				0.02
36.250	0.00	0.00	0.001	O				0.02
36.333	0.00	0.00	0.001	O				0.02
36.417	0.00	0.00	0.001	O				0.02
36.500	0.00	0.00	0.001	O				0.02
36.583	0.00	0.00	0.001	O				0.02
36.667	0.00	0.00	0.001	O				0.02
36.750	0.00	0.00	0.001	O				0.02
36.833	0.00	0.00	0.001	O				0.02
36.917	0.00	0.00	0.001	O				0.02
37.000	0.00	0.00	0.001	O				0.02
37.083	0.00	0.00	0.001	O				0.02
37.167	0.00	0.00	0.001	O				0.01
37.250	0.00	0.00	0.001	O				0.01
37.333	0.00	0.00	0.001	O				0.01
37.417	0.00	0.00	0.001	O				0.01
37.500	0.00	0.00	0.001	O				0.01
37.583	0.00	0.00	0.001	O				0.01
37.667	0.00	0.00	0.001	O				0.01
37.750	0.00	0.00	0.001	O				0.01
37.833	0.00	0.00	0.001	O				0.01
37.917	0.00	0.00	0.001	O				0.01
38.000	0.00	0.00	0.001	O				0.01
38.083	0.00	0.00	0.001	O				0.01
38.167	0.00	0.00	0.001	O				0.01
38.250	0.00	0.00	0.001	O				0.01
38.333	0.00	0.00	0.001	O				0.01
38.417	0.00	0.00	0.001	O				0.01
38.500	0.00	0.00	0.001	O				0.01
38.583	0.00	0.00	0.000	O				0.01
38.667	0.00	0.00	0.000	O				0.01
38.750	0.00	0.00	0.000	O				0.01
38.833	0.00	0.00	0.000	O				0.01

38.917	0.00	0.00	0.000	O	|	|	|	|	0.01
39.000	0.00	0.00	0.000	O	|	|	|	|	0.01
39.083	0.00	0.00	0.000	O	|	|	|	|	0.01
39.167	0.00	0.00	0.000	O	|	|	|	|	0.01
39.250	0.00	0.00	0.000	O	|	|	|	|	0.01
39.333	0.00	0.00	0.000	O	|	|	|	|	0.01
39.417	0.00	0.00	0.000	O	|	|	|	|	0.01
39.500	0.00	0.00	0.000	O	|	|	|	|	0.01
39.583	0.00	0.00	0.000	O	|	|	|	|	0.01
39.667	0.00	0.00	0.000	O	|	|	|	|	0.01
39.750	0.00	0.00	0.000	O	|	|	|	|	0.01
39.833	0.00	0.00	0.000	O	|	|	|	|	0.01
39.917	0.00	0.00	0.000	O	|	|	|	|	0.01
40.000	0.00	0.00	0.000	O	|	|	|	|	0.01
40.083	0.00	0.00	0.000	O	|	|	|	|	0.01
40.167	0.00	0.00	0.000	O	|	|	|	|	0.01
40.250	0.00	0.00	0.000	O	|	|	|	|	0.00
40.333	0.00	0.00	0.000	O	|	|	|	|	0.00
40.417	0.00	0.00	0.000	O	|	|	|	|	0.00
40.500	0.00	0.00	0.000	O	|	|	|	|	0.00
40.583	0.00	0.00	0.000	O	|	|	|	|	0.00
40.667	0.00	0.00	0.000	O	|	|	|	|	0.00
40.750	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 489
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.482 (CFS)
Total volume = 0.983 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
10-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.082 (CFS)
Total volume = 1.332 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	3.0	6.04	9.06	12.08	Depth (Ft.)
0.083	0.48	0.01	0.002	OI	|	|	|	|	0.03
0.167	0.92	0.03	0.006	O I	|	|	|	|	0.12
0.250	1.06	0.05	0.013	O I	|	|	|	|	0.24
0.333	1.08	0.08	0.020	O I	|	|	|	|	0.36
0.417	1.08	0.11	0.026	O I	|	|	|	|	0.48
0.500	1.17	0.14	0.033	O I	|	|	|	|	0.61
0.583	1.24	0.17	0.041	O I	|	|	|	|	0.74
0.667	1.26	0.20	0.048	O I	|	|	|	|	0.88
0.750	1.26	0.23	0.055	O I	|	|	|	|	1.01
0.833	1.26	0.26	0.062	O I	|	|	|	|	1.13
0.917	1.26	0.29	0.069	O I	|	|	|	|	1.26
1.000	1.35	0.32	0.076	O I	|	|	|	|	1.38
1.083	1.42	0.35	0.083	O I	|	|	|	|	1.51
1.167	1.44	0.35	0.090	O I	|	|	|	|	1.60
1.250	1.44	0.35	0.098	O I	|	|	|	|	1.69
1.333	1.44	0.35	0.105	O I	|	|	|	|	1.79
1.417	1.44	0.35	0.113	O I	|	|	|	|	1.88
1.500	1.44	0.35	0.120	O I	|	|	|	|	1.97
1.583	1.44	0.35	0.128	O I	|	|	|	|	2.06
1.667	1.44	0.35	0.135	O I	|	|	|	|	2.16
1.750	1.44	0.35	0.143	O I	|	|	|	|	2.25
1.833	1.44	0.35	0.150	O I	|	|	|	|	2.34
1.917	1.44	0.35	0.158	O I	|	|	|	|	2.43
2.000	1.53	0.35	0.165	O I	|	|	|	|	2.53
2.083	1.51	0.35	0.173	O I	|	|	|	|	2.63
2.167	1.55	0.35	0.182	O I	|	|	|	|	2.73
2.250	1.60	0.35	0.190	O I	|	|	|	|	2.83
2.333	1.62	0.35	0.199	O I	|	|	|	|	2.94
2.417	1.62	0.35	0.207	O I	|	|	|	|	3.05
2.500	1.62	0.35	0.216	O I	|	|	|	|	3.15
2.583	1.62	0.35	0.225	O I	|	|	|	|	3.26
2.667	1.62	0.35	0.233	O I	|	|	|	|	3.37
2.750	1.71	0.35	0.243	O I	|	|	|	|	3.48
2.833	1.78	0.35	0.252	O I	|	|	|	|	3.60
2.917	1.80	0.35	0.262	O I	|	|	|	|	3.72
3.000	1.80	0.35	0.272	O I	|	|	|	|	3.84
3.083	1.80	0.35	0.282	O I	|	|	|	|	3.97
3.167	1.89	0.35	0.292	O I	|	|	|	|	4.09
3.250	1.96	0.35	0.303	O I	|	|	|	|	4.23
3.333	1.97	0.35	0.314	O I	|	|	|	|	4.36
3.417	2.07	0.35	0.326	O I	|	|	|	|	4.51
3.500	2.24	0.35	0.338	O I	|	|	|	|	4.66
3.583	2.41	0.35	0.352	O I	|	|	|	|	4.83
3.667	2.50	0.35	0.366	O I	|	|	|	|	5.01
3.750	2.61	0.35	0.381	O I	|	|	|	|	5.19
3.833	2.68	0.35	0.397	O I	|	|	|	|	5.39

3.917	2.79	0.35	0.414	O	I|	|	|	|	5.59
4.000	2.86	0.35	0.431	O	I|	|	|	|	5.80
4.083	2.97	0.35	0.448	O	I|	|	|	|	6.02
4.167	3.13	0.35	0.467	O	I	|	|	|	6.25
4.250	3.31	0.35	0.487	O	I	|	|	|	6.49
4.333	3.49	0.35	0.508	O	|I	|	|	|	6.75
4.417	3.70	0.35	0.530	O	|I	|	|	|	7.03
4.500	3.80	0.35	0.554	O	| I	|	|	|	7.32
4.583	3.96	0.35	0.578	O	| I	|	|	|	7.62
4.667	4.21	0.35	0.604	O	| I	|	|	|	7.93
4.750	4.49	0.40	0.631	|O	| I	|	|	|	8.42
4.833	4.61	0.48	0.659	|O	| I	|	|	|	8.97
4.917	4.78	0.81	0.687	| O	| I	|	|	|	9.37
5.000	5.03	1.14	0.714	| O	| I	|	|	|	9.76
5.083	5.88	1.79	0.742	| O	| I	|	|	|	10.12
5.167	7.15	2.97	0.770	| O	|	| I	|	|	10.43
5.250	8.22	4.14	0.799	|	| O	| I	|	|	10.74
5.333	9.08	5.28	0.826	|	| O	|	I	|	11.03
5.417	10.19	6.51	0.852	|	|	|O	| I	|	11.26
5.500	12.08	7.81	0.879	|	|	| O	|	I	11.50
5.583	7.88	8.42	0.892	|	|	| I O	|	|	11.62
5.667	3.25	7.62	0.875	|	I	| O	|	|	11.47
5.750	1.47	6.14	0.844	| I	|	O	|	|	11.19
5.833	1.02	4.80	0.815	| I	| O	|	|	|	10.92
5.917	0.72	3.83	0.791	|I	| O	|	|	|	10.66
6.000	0.47	3.02	0.772	|I	O	|	|	|	10.45
6.083	0.18	2.35	0.755	I	O |	|	|	|	10.27
6.167	0.03	1.80	0.742	I	O |	|	|	|	10.12
6.250	0.00	1.35	0.731	I	O |	|	|	|	10.00
6.333	0.00	1.24	0.722	I	O |	|	|	|	9.87
6.417	0.00	1.14	0.714	I	O |	|	|	|	9.76
6.500	0.00	1.04	0.706	I	O |	|	|	|	9.65
6.583	0.00	0.96	0.700	I	O |	|	|	|	9.55
6.667	0.00	0.88	0.693	I	O |	|	|	|	9.46
6.750	0.00	0.81	0.687	I	O |	|	|	|	9.38
6.833	0.00	0.74	0.682	I	O |	|	|	|	9.30
6.917	0.00	0.68	0.677	I	O |	|	|	|	9.23
7.000	0.00	0.62	0.673	I	O |	|	|	|	9.17
7.083	0.00	0.57	0.669	I	O |	|	|	|	9.11
7.167	0.00	0.53	0.665	I	O |	|	|	|	9.05
7.250	0.00	0.48	0.661	I	O |	|	|	|	9.00
7.333	0.00	0.47	0.658	I	O |	|	|	|	8.94
7.417	0.00	0.46	0.655	I	O |	|	|	|	8.88
7.500	0.00	0.46	0.652	I	O |	|	|	|	8.82
7.583	0.00	0.45	0.648	I	O |	|	|	|	8.76
7.667	0.00	0.44	0.645	I	O |	|	|	|	8.70
7.750	0.00	0.43	0.642	I	O |	|	|	|	8.64
7.833	0.00	0.43	0.639	I	O |	|	|	|	8.59
7.917	0.00	0.42	0.637	I	O |	|	|	|	8.53
8.000	0.00	0.41	0.634	I	O |	|	|	|	8.47
8.083	0.00	0.40	0.631	I	O |	|	|	|	8.42
8.167	0.00	0.40	0.628	I	O |	|	|	|	8.37
8.250	0.00	0.39	0.625	I	O |	|	|	|	8.31
8.333	0.00	0.38	0.623	I	O |	|	|	|	8.26
8.417	0.00	0.38	0.620	I	O |	|	|	|	8.21
8.500	0.00	0.37	0.617	O	|	|	|	|	8.16
8.583	0.00	0.36	0.615	O	|	|	|	|	8.11
8.667	0.00	0.36	0.612	O	|	|	|	|	8.07
8.750	0.00	0.35	0.610	O	|	|	|	|	8.02
8.833	0.00	0.35	0.608	O	|	|	|	|	7.98

8.917	0.00	0.35	0.605	O					7.95
9.000	0.00	0.35	0.603	O					7.92
9.083	0.00	0.35	0.600	O					7.89
9.167	0.00	0.35	0.598	O					7.86
9.250	0.00	0.35	0.596	O					7.83
9.333	0.00	0.35	0.593	O					7.80
9.417	0.00	0.35	0.591	O					7.77
9.500	0.00	0.35	0.588	O					7.74
9.583	0.00	0.35	0.586	O					7.72
9.667	0.00	0.35	0.583	O					7.69
9.750	0.00	0.35	0.581	O					7.66
9.833	0.00	0.35	0.579	O					7.63
9.917	0.00	0.35	0.576	O					7.60
10.000	0.00	0.35	0.574	O					7.57
10.083	0.00	0.35	0.571	O					7.54
10.167	0.00	0.35	0.569	O					7.51
10.250	0.00	0.35	0.567	O					7.48
10.333	0.00	0.35	0.564	O					7.45
10.417	0.00	0.35	0.562	O					7.42
10.500	0.00	0.35	0.559	O					7.39
10.583	0.00	0.35	0.557	O					7.36
10.667	0.00	0.35	0.555	O					7.33
10.750	0.00	0.35	0.552	O					7.30
10.833	0.00	0.35	0.550	O					7.27
10.917	0.00	0.35	0.547	O					7.24
11.000	0.00	0.35	0.545	O					7.21
11.083	0.00	0.35	0.543	O					7.18
11.167	0.00	0.35	0.540	O					7.15
11.250	0.00	0.35	0.538	O					7.12
11.333	0.00	0.35	0.535	O					7.09
11.417	0.00	0.35	0.533	O					7.06
11.500	0.00	0.35	0.530	O					7.03
11.583	0.00	0.35	0.528	O					7.00
11.667	0.00	0.35	0.526	O					6.97
11.750	0.00	0.35	0.523	O					6.94
11.833	0.00	0.35	0.521	O					6.91
11.917	0.00	0.35	0.518	O					6.88
12.000	0.00	0.35	0.516	O					6.85
12.083	0.00	0.35	0.514	O					6.82
12.167	0.00	0.35	0.511	O					6.79
12.250	0.00	0.35	0.509	O					6.76
12.333	0.00	0.35	0.506	O					6.73
12.417	0.00	0.35	0.504	O					6.70
12.500	0.00	0.35	0.502	O					6.67
12.583	0.00	0.35	0.499	O					6.64
12.667	0.00	0.35	0.497	O					6.62
12.750	0.00	0.35	0.494	O					6.59
12.833	0.00	0.35	0.492	O					6.56
12.917	0.00	0.35	0.489	O					6.53
13.000	0.00	0.35	0.487	O					6.50
13.083	0.00	0.35	0.485	O					6.47
13.167	0.00	0.35	0.482	O					6.44
13.250	0.00	0.35	0.480	O					6.41
13.333	0.00	0.35	0.477	O					6.38
13.417	0.00	0.35	0.475	O					6.35
13.500	0.00	0.35	0.473	O					6.32
13.583	0.00	0.35	0.470	O					6.29
13.667	0.00	0.35	0.468	O					6.26
13.750	0.00	0.35	0.465	O					6.23
13.833	0.00	0.35	0.463	O					6.20

13.917	0.00	0.35	0.461	O					6.17
14.000	0.00	0.35	0.458	O					6.14
14.083	0.00	0.35	0.456	O					6.11
14.167	0.00	0.35	0.453	O					6.08
14.250	0.00	0.35	0.451	O					6.05
14.333	0.00	0.35	0.449	O					6.02
14.417	0.00	0.35	0.446	O					5.99
14.500	0.00	0.35	0.444	O					5.96
14.583	0.00	0.35	0.441	O					5.93
14.667	0.00	0.35	0.439	O					5.90
14.750	0.00	0.35	0.436	O					5.87
14.833	0.00	0.35	0.434	O					5.84
14.917	0.00	0.35	0.432	O					5.81
15.000	0.00	0.35	0.429	O					5.78
15.083	0.00	0.35	0.427	O					5.75
15.167	0.00	0.35	0.424	O					5.72
15.250	0.00	0.35	0.422	O					5.69
15.333	0.00	0.35	0.420	O					5.66
15.417	0.00	0.35	0.417	O					5.63
15.500	0.00	0.35	0.415	O					5.60
15.583	0.00	0.35	0.412	O					5.57
15.667	0.00	0.35	0.410	O					5.54
15.750	0.00	0.35	0.408	O					5.52
15.833	0.00	0.35	0.405	O					5.49
15.917	0.00	0.35	0.403	O					5.46
16.000	0.00	0.35	0.400	O					5.43
16.083	0.00	0.35	0.398	O					5.40
16.167	0.00	0.35	0.395	O					5.37
16.250	0.00	0.35	0.393	O					5.34
16.333	0.00	0.35	0.391	O					5.31
16.417	0.00	0.35	0.388	O					5.28
16.500	0.00	0.35	0.386	O					5.25
16.583	0.00	0.35	0.383	O					5.22
16.667	0.00	0.35	0.381	O					5.19
16.750	0.00	0.35	0.379	O					5.16
16.833	0.00	0.35	0.376	O					5.13
16.917	0.00	0.35	0.374	O					5.10
17.000	0.00	0.35	0.371	O					5.07
17.083	0.00	0.35	0.369	O					5.04
17.167	0.00	0.35	0.367	O					5.01
17.250	0.00	0.35	0.364	O					4.98
17.333	0.00	0.35	0.362	O					4.95
17.417	0.00	0.35	0.359	O					4.92
17.500	0.00	0.35	0.357	O					4.89
17.583	0.00	0.35	0.355	O					4.86
17.667	0.00	0.35	0.352	O					4.83
17.750	0.00	0.35	0.350	O					4.80
17.833	0.00	0.35	0.347	O					4.77
17.917	0.00	0.35	0.345	O					4.74
18.000	0.00	0.35	0.342	O					4.71
18.083	0.00	0.35	0.340	O					4.68
18.167	0.00	0.35	0.338	O					4.65
18.250	0.00	0.35	0.335	O					4.62
18.333	0.00	0.35	0.333	O					4.59
18.417	0.00	0.35	0.330	O					4.56
18.500	0.00	0.35	0.328	O					4.53
18.583	0.00	0.35	0.326	O					4.50
18.667	0.00	0.35	0.323	O					4.47
18.750	0.00	0.35	0.321	O					4.44
18.833	0.00	0.35	0.318	O					4.42

18.917	0.00	0.35	0.316	O					4.39
19.000	0.00	0.35	0.314	O					4.36
19.083	0.00	0.35	0.311	O					4.33
19.167	0.00	0.35	0.309	O					4.30
19.250	0.00	0.35	0.306	O					4.27
19.333	0.00	0.35	0.304	O					4.24
19.417	0.00	0.35	0.301	O					4.21
19.500	0.00	0.35	0.299	O					4.18
19.583	0.00	0.35	0.297	O					4.15
19.667	0.00	0.35	0.294	O					4.12
19.750	0.00	0.35	0.292	O					4.09
19.833	0.00	0.35	0.289	O					4.06
19.917	0.00	0.35	0.287	O					4.03
20.000	0.00	0.35	0.285	O					4.00
20.083	0.00	0.35	0.282	O					3.97
20.167	0.00	0.35	0.280	O					3.94
20.250	0.00	0.35	0.277	O					3.91
20.333	0.00	0.35	0.275	O					3.88
20.417	0.00	0.35	0.273	O					3.85
20.500	0.00	0.35	0.270	O					3.82
20.583	0.00	0.35	0.268	O					3.79
20.667	0.00	0.35	0.265	O					3.76
20.750	0.00	0.35	0.263	O					3.73
20.833	0.00	0.35	0.260	O					3.70
20.917	0.00	0.35	0.258	O					3.67
21.000	0.00	0.35	0.256	O					3.64
21.083	0.00	0.35	0.253	O					3.61
21.167	0.00	0.35	0.251	O					3.58
21.250	0.00	0.35	0.248	O					3.55
21.333	0.00	0.35	0.246	O					3.52
21.417	0.00	0.35	0.244	O					3.49
21.500	0.00	0.35	0.241	O					3.46
21.583	0.00	0.35	0.239	O					3.43
21.667	0.00	0.35	0.236	O					3.40
21.750	0.00	0.35	0.234	O					3.37
21.833	0.00	0.35	0.232	O					3.34
21.917	0.00	0.35	0.229	O					3.32
22.000	0.00	0.35	0.227	O					3.29
22.083	0.00	0.35	0.224	O					3.26
22.167	0.00	0.35	0.222	O					3.23
22.250	0.00	0.35	0.220	O					3.20
22.333	0.00	0.35	0.217	O					3.17
22.417	0.00	0.35	0.215	O					3.14
22.500	0.00	0.35	0.212	O					3.11
22.583	0.00	0.35	0.210	O					3.08
22.667	0.00	0.35	0.207	O					3.05
22.750	0.00	0.35	0.205	O					3.02
22.833	0.00	0.35	0.203	O					2.99
22.917	0.00	0.35	0.200	O					2.96
23.000	0.00	0.35	0.198	O					2.93
23.083	0.00	0.35	0.195	O					2.90
23.167	0.00	0.35	0.193	O					2.87
23.250	0.00	0.35	0.191	O					2.84
23.333	0.00	0.35	0.188	O					2.81
23.417	0.00	0.35	0.186	O					2.78
23.500	0.00	0.35	0.183	O					2.75
23.583	0.00	0.35	0.181	O					2.72
23.667	0.00	0.35	0.179	O					2.69
23.750	0.00	0.35	0.176	O					2.66
23.833	0.00	0.35	0.174	O					2.63

23.917	0.00	0.35	0.171	O				2.60
24.000	0.00	0.35	0.169	O				2.57
24.083	0.00	0.35	0.166	O				2.54
24.167	0.00	0.35	0.164	O				2.51
24.250	0.00	0.35	0.162	O				2.48
24.333	0.00	0.35	0.159	O				2.45
24.417	0.00	0.35	0.157	O				2.42
24.500	0.00	0.35	0.154	O				2.39
24.583	0.00	0.35	0.152	O				2.36
24.667	0.00	0.35	0.150	O				2.33
24.750	0.00	0.35	0.147	O				2.30
24.833	0.00	0.35	0.145	O				2.27
24.917	0.00	0.35	0.142	O				2.24
25.000	0.00	0.35	0.140	O				2.21
25.083	0.00	0.35	0.138	O				2.19
25.167	0.00	0.35	0.135	O				2.16
25.250	0.00	0.35	0.133	O				2.13
25.333	0.00	0.35	0.130	O				2.10
25.417	0.00	0.35	0.128	O				2.07
25.500	0.00	0.35	0.126	O				2.04
25.583	0.00	0.35	0.123	O				2.01
25.667	0.00	0.35	0.121	O				1.98
25.750	0.00	0.35	0.118	O				1.95
25.833	0.00	0.35	0.116	O				1.92
25.917	0.00	0.35	0.113	O				1.89
26.000	0.00	0.35	0.111	O				1.86
26.083	0.00	0.35	0.109	O				1.83
26.167	0.00	0.35	0.106	O				1.80
26.250	0.00	0.35	0.104	O				1.77
26.333	0.00	0.35	0.101	O				1.74
26.417	0.00	0.35	0.099	O				1.71
26.500	0.00	0.35	0.097	O				1.68
26.583	0.00	0.35	0.094	O				1.65
26.667	0.00	0.35	0.092	O				1.62
26.750	0.00	0.35	0.089	O				1.59
26.833	0.00	0.35	0.087	O				1.56
26.917	0.00	0.35	0.085	O				1.53
27.000	0.00	0.35	0.082	O				1.50
27.083	0.00	0.34	0.080	O				1.46
27.167	0.00	0.33	0.077	O				1.42
27.250	0.00	0.32	0.075	O				1.38
27.333	0.00	0.31	0.073	O				1.34
27.417	0.00	0.30	0.071	O				1.30
27.500	0.00	0.29	0.069	O				1.26
27.583	0.00	0.29	0.067	O				1.22
27.667	0.00	0.28	0.065	O				1.19
27.750	0.00	0.27	0.063	O				1.15
27.833	0.00	0.26	0.061	O				1.12
27.917	0.00	0.25	0.059	O				1.09
28.000	0.00	0.25	0.058	O				1.06
28.083	0.00	0.24	0.056	O				1.03
28.167	0.00	0.23	0.054	O				1.00
28.250	0.00	0.23	0.053	O				0.97
28.333	0.00	0.22	0.051	O				0.94
28.417	0.00	0.21	0.050	O				0.91
28.500	0.00	0.21	0.048	O				0.88
28.583	0.00	0.20	0.047	O				0.86
28.667	0.00	0.19	0.046	O				0.83
28.750	0.00	0.19	0.044	O				0.81
28.833	0.00	0.18	0.043	O				0.79

28.917	0.00	0.18	0.042	O	|	|	|	0.76
29.000	0.00	0.17	0.041	O	|	|	|	0.74
29.083	0.00	0.17	0.039	O	|	|	|	0.72
29.167	0.00	0.16	0.038	O	|	|	|	0.70
29.250	0.00	0.16	0.037	O	|	|	|	0.68
29.333	0.00	0.15	0.036	O	|	|	|	0.66
29.417	0.00	0.15	0.035	O	|	|	|	0.64
29.500	0.00	0.15	0.034	O	|	|	|	0.62
29.583	0.00	0.14	0.033	O	|	|	|	0.60
29.667	0.00	0.14	0.032	O	|	|	|	0.59
29.750	0.00	0.13	0.031	O	|	|	|	0.57
29.833	0.00	0.13	0.030	O	|	|	|	0.55
29.917	0.00	0.13	0.029	O	|	|	|	0.54
30.000	0.00	0.12	0.028	O	|	|	|	0.52
30.083	0.00	0.12	0.028	O	|	|	|	0.51
30.167	0.00	0.11	0.027	O	|	|	|	0.49
30.250	0.00	0.11	0.026	O	|	|	|	0.48
30.333	0.00	0.11	0.025	O	|	|	|	0.46
30.417	0.00	0.11	0.025	O	|	|	|	0.45
30.500	0.00	0.10	0.024	O	|	|	|	0.44
30.583	0.00	0.10	0.023	O	|	|	|	0.42
30.667	0.00	0.10	0.023	O	|	|	|	0.41
30.750	0.00	0.09	0.022	O	|	|	|	0.40
30.833	0.00	0.09	0.021	O	|	|	|	0.39
30.917	0.00	0.09	0.021	O	|	|	|	0.38
31.000	0.00	0.09	0.020	O	|	|	|	0.37
31.083	0.00	0.08	0.019	O	|	|	|	0.36
31.167	0.00	0.08	0.019	O	|	|	|	0.35
31.250	0.00	0.08	0.018	O	|	|	|	0.34
31.333	0.00	0.08	0.018	O	|	|	|	0.33
31.417	0.00	0.07	0.017	O	|	|	|	0.32
31.500	0.00	0.07	0.017	O	|	|	|	0.31
31.583	0.00	0.07	0.016	O	|	|	|	0.30
31.667	0.00	0.07	0.016	O	|	|	|	0.29
31.750	0.00	0.07	0.015	O	|	|	|	0.28
31.833	0.00	0.06	0.015	O	|	|	|	0.27
31.917	0.00	0.06	0.014	O	|	|	|	0.27
32.000	0.00	0.06	0.014	O	|	|	|	0.26
32.083	0.00	0.06	0.014	O	|	|	|	0.25
32.167	0.00	0.06	0.013	O	|	|	|	0.24
32.250	0.00	0.05	0.013	O	|	|	|	0.24
32.333	0.00	0.05	0.013	O	|	|	|	0.23
32.417	0.00	0.05	0.012	O	|	|	|	0.22
32.500	0.00	0.05	0.012	O	|	|	|	0.22
32.583	0.00	0.05	0.011	O	|	|	|	0.21
32.667	0.00	0.05	0.011	O	|	|	|	0.20
32.750	0.00	0.05	0.011	O	|	|	|	0.20
32.833	0.00	0.04	0.010	O	|	|	|	0.19
32.917	0.00	0.04	0.010	O	|	|	|	0.19
33.000	0.00	0.04	0.010	O	|	|	|	0.18
33.083	0.00	0.04	0.010	O	|	|	|	0.18
33.167	0.00	0.04	0.009	O	|	|	|	0.17
33.250	0.00	0.04	0.009	O	|	|	|	0.17
33.333	0.00	0.04	0.009	O	|	|	|	0.16
33.417	0.00	0.04	0.009	O	|	|	|	0.16
33.500	0.00	0.04	0.008	O	|	|	|	0.15
33.583	0.00	0.03	0.008	O	|	|	|	0.15
33.667	0.00	0.03	0.008	O	|	|	|	0.14
33.750	0.00	0.03	0.008	O	|	|	|	0.14
33.833	0.00	0.03	0.007	O	|	|	|	0.13

33.917	0.00	0.03	0.007	O				0.13
34.000	0.00	0.03	0.007	O				0.13
34.083	0.00	0.03	0.007	O				0.12
34.167	0.00	0.03	0.007	O				0.12
34.250	0.00	0.03	0.006	O				0.12
34.333	0.00	0.03	0.006	O				0.11
34.417	0.00	0.03	0.006	O				0.11
34.500	0.00	0.02	0.006	O				0.11
34.583	0.00	0.02	0.006	O				0.10
34.667	0.00	0.02	0.005	O				0.10
34.750	0.00	0.02	0.005	O				0.10
34.833	0.00	0.02	0.005	O				0.09
34.917	0.00	0.02	0.005	O				0.09
35.000	0.00	0.02	0.005	O				0.09
35.083	0.00	0.02	0.005	O				0.09
35.167	0.00	0.02	0.005	O				0.08
35.250	0.00	0.02	0.004	O				0.08
35.333	0.00	0.02	0.004	O				0.08
35.417	0.00	0.02	0.004	O				0.08
35.500	0.00	0.02	0.004	O				0.07
35.583	0.00	0.02	0.004	O				0.07
35.667	0.00	0.02	0.004	O				0.07
35.750	0.00	0.02	0.004	O				0.07
35.833	0.00	0.02	0.004	O				0.07
35.917	0.00	0.02	0.004	O				0.06
36.000	0.00	0.01	0.003	O				0.06
36.083	0.00	0.01	0.003	O				0.06
36.167	0.00	0.01	0.003	O				0.06
36.250	0.00	0.01	0.003	O				0.06
36.333	0.00	0.01	0.003	O				0.06
36.417	0.00	0.01	0.003	O				0.05
36.500	0.00	0.01	0.003	O				0.05
36.583	0.00	0.01	0.003	O				0.05
36.667	0.00	0.01	0.003	O				0.05
36.750	0.00	0.01	0.003	O				0.05
36.833	0.00	0.01	0.003	O				0.05
36.917	0.00	0.01	0.002	O				0.05
37.000	0.00	0.01	0.002	O				0.04
37.083	0.00	0.01	0.002	O				0.04
37.167	0.00	0.01	0.002	O				0.04
37.250	0.00	0.01	0.002	O				0.04
37.333	0.00	0.01	0.002	O				0.04
37.417	0.00	0.01	0.002	O				0.04
37.500	0.00	0.01	0.002	O				0.04
37.583	0.00	0.01	0.002	O				0.04
37.667	0.00	0.01	0.002	O				0.03
37.750	0.00	0.01	0.002	O				0.03
37.833	0.00	0.01	0.002	O				0.03
37.917	0.00	0.01	0.002	O				0.03
38.000	0.00	0.01	0.002	O				0.03
38.083	0.00	0.01	0.002	O				0.03
38.167	0.00	0.01	0.002	O				0.03
38.250	0.00	0.01	0.002	O				0.03
38.333	0.00	0.01	0.002	O				0.03
38.417	0.00	0.01	0.001	O				0.03
38.500	0.00	0.01	0.001	O				0.03
38.583	0.00	0.01	0.001	O				0.03
38.667	0.00	0.01	0.001	O				0.02
38.750	0.00	0.01	0.001	O				0.02
38.833	0.00	0.01	0.001	O				0.02

38.917	0.00	0.01	0.001	O	|	|	|	|	0.02
39.000	0.00	0.01	0.001	O	|	|	|	|	0.02
39.083	0.00	0.00	0.001	O	|	|	|	|	0.02
39.167	0.00	0.00	0.001	O	|	|	|	|	0.02
39.250	0.00	0.00	0.001	O	|	|	|	|	0.02
39.333	0.00	0.00	0.001	O	|	|	|	|	0.02
39.417	0.00	0.00	0.001	O	|	|	|	|	0.02
39.500	0.00	0.00	0.001	O	|	|	|	|	0.02
39.583	0.00	0.00	0.001	O	|	|	|	|	0.02
39.667	0.00	0.00	0.001	O	|	|	|	|	0.02
39.750	0.00	0.00	0.001	O	|	|	|	|	0.02
39.833	0.00	0.00	0.001	O	|	|	|	|	0.02
39.917	0.00	0.00	0.001	O	|	|	|	|	0.02
40.000	0.00	0.00	0.001	O	|	|	|	|	0.02
40.083	0.00	0.00	0.001	O	|	|	|	|	0.01
40.167	0.00	0.00	0.001	O	|	|	|	|	0.01
40.250	0.00	0.00	0.001	O	|	|	|	|	0.01
40.333	0.00	0.00	0.001	O	|	|	|	|	0.01
40.417	0.00	0.00	0.001	O	|	|	|	|	0.01
40.500	0.00	0.00	0.001	O	|	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	|	0.01
40.667	0.00	0.00	0.001	O	|	|	|	|	0.01
40.750	0.00	0.00	0.001	O	|	|	|	|	0.01
40.833	0.00	0.00	0.001	O	|	|	|	|	0.01
40.917	0.00	0.00	0.001	O	|	|	|	|	0.01
41.000	0.00	0.00	0.001	O	|	|	|	|	0.01
41.083	0.00	0.00	0.001	O	|	|	|	|	0.01
41.167	0.00	0.00	0.001	O	|	|	|	|	0.01
41.250	0.00	0.00	0.001	O	|	|	|	|	0.01
41.333	0.00	0.00	0.001	O	|	|	|	|	0.01
41.417	0.00	0.00	0.001	O	|	|	|	|	0.01
41.500	0.00	0.00	0.000	O	|	|	|	|	0.01
41.583	0.00	0.00	0.000	O	|	|	|	|	0.01
41.667	0.00	0.00	0.000	O	|	|	|	|	0.01
41.750	0.00	0.00	0.000	O	|	|	|	|	0.01
41.833	0.00	0.00	0.000	O	|	|	|	|	0.01
41.917	0.00	0.00	0.000	O	|	|	|	|	0.01
42.000	0.00	0.00	0.000	O	|	|	|	|	0.01
42.083	0.00	0.00	0.000	O	|	|	|	|	0.01
42.167	0.00	0.00	0.000	O	|	|	|	|	0.01
42.250	0.00	0.00	0.000	O	|	|	|	|	0.01
42.333	0.00	0.00	0.000	O	|	|	|	|	0.01
42.417	0.00	0.00	0.000	O	|	|	|	|	0.01
42.500	0.00	0.00	0.000	O	|	|	|	|	0.01
42.583	0.00	0.00	0.000	O	|	|	|	|	0.01
42.667	0.00	0.00	0.000	O	|	|	|	|	0.01
42.750	0.00	0.00	0.000	O	|	|	|	|	0.01
42.833	0.00	0.00	0.000	O	|	|	|	|	0.01
42.917	0.00	0.00	0.000	O	|	|	|	|	0.01
43.000	0.00	0.00	0.000	O	|	|	|	|	0.01
43.083	0.00	0.00	0.000	O	|	|	|	|	0.01
43.167	0.00	0.00	0.000	O	|	|	|	|	0.01
43.250	0.00	0.00	0.000	O	|	|	|	|	0.00
43.333	0.00	0.00	0.000	O	|	|	|	|	0.00
43.417	0.00	0.00	0.000	O	|	|	|	|	0.00
43.500	0.00	0.00	0.000	O	|	|	|	|	0.00
43.583	0.00	0.00	0.000	O	|	|	|	|	0.00
43.667	0.00	0.00	0.000	O	|	|	|	|	0.00

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

```
            Number of intervals =   524
            Time interval =    5.0 (Min.)
            Maximum/Peak flow rate =        8.417 (CFS)
            Total volume =       1.332 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
10-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.740 (CFS)
Total volume = 2.159 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

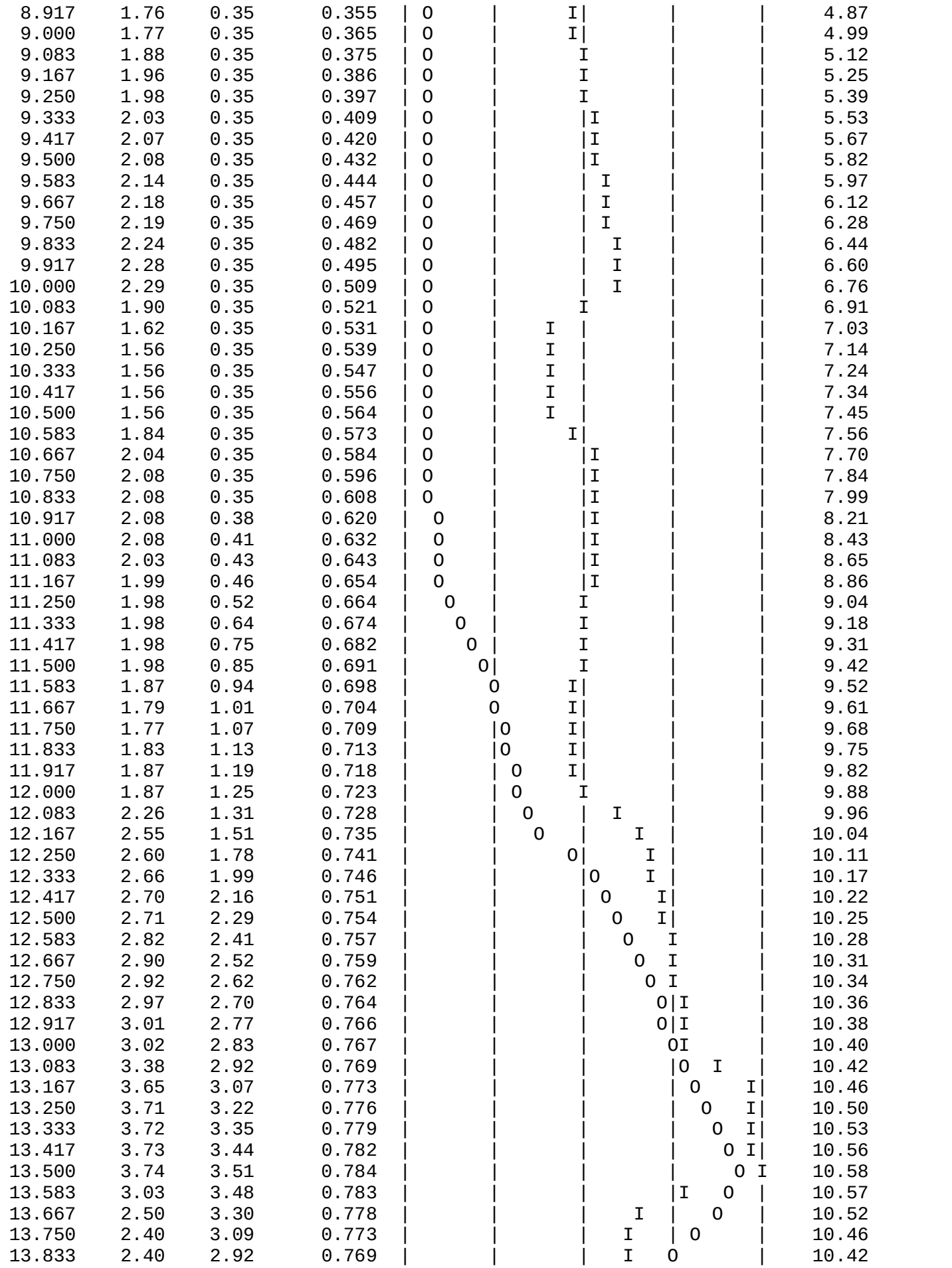
10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 0.9 1.87 2.80 3.74	Depth (Ft.)
0.083	0.11	0.00	0.000	O | | | |	0.01
0.167	0.19	0.01	0.001	OI | | | |	0.03
0.250	0.21	0.01	0.003	OI | | | |	0.05
0.333	0.26	0.02	0.004	O I | | | |	0.08
0.417	0.30	0.03	0.006	O I | | | |	0.11
0.500	0.31	0.03	0.008	O I | | | |	0.15
0.583	0.31	0.04	0.010	O I | | | |	0.18
0.667	0.31	0.05	0.012	O I | | | |	0.21
0.750	0.31	0.06	0.013	O I | | | |	0.25
0.833	0.37	0.07	0.015	O I | | | |	0.28
0.917	0.41	0.07	0.018	O I | | | |	0.32
1.000	0.42	0.08	0.020	O I | | | |	0.36
1.083	0.36	0.09	0.022	O I | | | |	0.40
1.167	0.32	0.10	0.024	O I | | | |	0.43
1.250	0.31	0.11	0.025	O I | | | |	0.46
1.333	0.31	0.11	0.026	O I | | | |	0.48
1.417	0.31	0.12	0.028	|OI | | | |	0.51
1.500	0.31	0.12	0.029	|OI | | | |	0.53
1.583	0.31	0.13	0.030	|OI | | | |	0.56
1.667	0.31	0.14	0.032	|OI | | | |	0.58
1.750	0.31	0.14	0.033	|OI | | | |	0.60
1.833	0.37	0.15	0.034	|O I | | | |	0.63
1.917	0.41	0.15	0.036	|O I | | | |	0.66
2.000	0.42	0.16	0.038	|O I | | | |	0.69
2.083	0.42	0.17	0.039	|O I | | | |	0.72
2.167	0.42	0.18	0.041	|O I | | | |	0.75
2.250	0.42	0.18	0.043	|O I | | | |	0.78
2.333	0.42	0.19	0.044	|O I | | | |	0.81
2.417	0.42	0.20	0.046	|O I | | | |	0.84
2.500	0.42	0.20	0.047	|O I | | | |	0.87
2.583	0.47	0.21	0.049	|O I | | | |	0.90
2.667	0.51	0.22	0.051	|O I | | | |	0.93
2.750	0.52	0.23	0.053	|O I | | | |	0.97
2.833	0.52	0.23	0.055	| O I | | | |	1.00
2.917	0.52	0.24	0.057	| O I | | | |	1.04
3.000	0.52	0.25	0.059	| O I | | | |	1.07
3.083	0.52	0.26	0.061	| O I | | | |	1.11
3.167	0.52	0.27	0.062	| O I | | | |	1.14
3.250	0.52	0.27	0.064	| O I | | | |	1.17
3.333	0.52	0.28	0.066	| O I | | | |	1.20
3.417	0.52	0.29	0.067	| O I | | | |	1.23
3.500	0.52	0.29	0.069	| O I | | | |	1.26
3.583	0.52	0.30	0.071	| O I | | | |	1.29
3.667	0.52	0.31	0.072	| O I | | | |	1.32
3.750	0.52	0.31	0.073	| O I | | | |	1.34
3.833	0.58	0.32	0.075	| O I | | | |	1.37

3.917	0.62	0.33	0.077	O	I				1.41
4.000	0.62	0.34	0.079	O	I				1.44
4.083	0.62	0.35	0.081	O	I				1.48
4.167	0.62	0.35	0.083	O	I				1.51
4.250	0.62	0.35	0.085	O	I				1.53
4.333	0.68	0.35	0.087	O	I				1.56
4.417	0.72	0.35	0.089	O	I				1.59
4.500	0.73	0.35	0.092	O	I				1.62
4.583	0.73	0.35	0.094	O	I				1.65
4.667	0.73	0.35	0.097	O	I				1.68
4.750	0.73	0.35	0.100	O	I				1.72
4.833	0.78	0.35	0.102	O	I				1.75
4.917	0.82	0.35	0.105	O	I				1.79
5.000	0.83	0.35	0.109	O	I				1.83
5.083	0.72	0.35	0.112	O	I				1.87
5.167	0.64	0.35	0.114	O	I				1.90
5.250	0.62	0.35	0.116	O	I				1.92
5.333	0.68	0.35	0.118	O	I				1.94
5.417	0.72	0.35	0.120	O	I				1.97
5.500	0.73	0.35	0.123	O	I				2.01
5.583	0.78	0.35	0.126	O	I				2.04
5.667	0.82	0.35	0.129	O	I				2.08
5.750	0.83	0.35	0.132	O	I				2.12
5.833	0.83	0.35	0.136	O	I				2.16
5.917	0.83	0.35	0.139	O	I				2.20
6.000	0.83	0.35	0.142	O	I				2.24
6.083	0.89	0.35	0.146	O	I				2.29
6.167	0.93	0.35	0.150	O	I				2.33
6.250	0.94	0.35	0.154	O	I				2.38
6.333	0.94	0.35	0.158	O	I				2.43
6.417	0.94	0.35	0.162	O	I				2.48
6.500	0.94	0.35	0.166	O	I				2.53
6.583	0.99	0.35	0.170	O	I				2.59
6.667	1.03	0.35	0.175	O	I				2.64
6.750	1.04	0.35	0.179	O	I				2.70
6.833	1.04	0.35	0.184	O	I				2.76
6.917	1.04	0.35	0.189	O	I				2.82
7.000	1.04	0.35	0.194	O	I				2.88
7.083	1.04	0.35	0.198	O	I				2.94
7.167	1.04	0.35	0.203	O	I				2.99
7.250	1.04	0.35	0.208	O	I				3.05
7.333	1.10	0.35	0.213	O	I				3.11
7.417	1.14	0.35	0.218	O	I				3.18
7.500	1.15	0.35	0.224	O	I				3.25
7.583	1.20	0.35	0.229	O	I				3.32
7.667	1.24	0.35	0.235	O	I				3.39
7.750	1.25	0.35	0.241	O	I				3.47
7.833	1.30	0.35	0.248	O	I				3.54
7.917	1.35	0.35	0.255	O	I				3.63
8.000	1.35	0.35	0.261	O	I				3.71
8.083	1.46	0.35	0.269	O	I				3.80
8.167	1.55	0.35	0.277	O	I				3.90
8.250	1.56	0.35	0.285	O	I				4.00
8.333	1.56	0.35	0.293	O	I				4.11
8.417	1.56	0.35	0.302	O	I				4.21
8.500	1.56	0.35	0.310	O	I				4.31
8.583	1.62	0.35	0.319	O	I				4.42
8.667	1.66	0.35	0.327	O	I				4.53
8.750	1.67	0.35	0.336	O	I				4.64
8.833	1.72	0.35	0.346	O	I				4.75



13.917	2.40	2.79	0.766	|	|	| I O|	|	10.38
14.000	2.40	2.69	0.764	|	|	| I O|	|	10.36
14.083	2.62	2.64	0.762	|	|	| O |	|	10.35
14.167	2.78	2.66	0.763	|	|	| OI|	|	10.35
14.250	2.81	2.69	0.764	|	|	| OI	|	10.36
14.333	2.76	2.71	0.764	|	|	| O|	|	10.36
14.417	2.72	2.72	0.764	|	|	| O|	|	10.37
14.500	2.71	2.72	0.764	|	|	| O|	|	10.36
14.583	2.71	2.72	0.764	|	|	| O|	|	10.36
14.667	2.71	2.71	0.764	|	|	| O|	|	10.36
14.750	2.71	2.71	0.764	|	|	| O|	|	10.36
14.833	2.65	2.70	0.764	|	|	| IO|	|	10.36
14.917	2.61	2.69	0.763	|	|	| O |	|	10.36
15.000	2.60	2.67	0.763	|	|	| O |	|	10.35
15.083	2.55	2.64	0.762	|	|	| IO |	|	10.35
15.167	2.51	2.62	0.762	|	|	| IO |	|	10.34
15.250	2.50	2.59	0.761	|	|	| IO |	|	10.33
15.333	2.44	2.56	0.760	|	|	| IO |	|	10.32
15.417	2.40	2.53	0.760	|	|	| IO |	|	10.31
15.500	2.40	2.49	0.759	|	|	| IO |	|	10.31
15.583	2.17	2.44	0.758	|	|	| I O |	|	10.29
15.667	2.01	2.36	0.755	|	|	|I O |	|	10.27
15.750	1.98	2.27	0.753	|	|	I O |	|	10.24
15.833	1.98	2.19	0.751	|	|	I O |	|	10.23
15.917	1.98	2.14	0.750	|	|	I O |	|	10.21
16.000	1.98	2.10	0.749	|	|	IO |	|	10.20
16.083	1.15	1.97	0.746	|	|I	O |	|	10.16
16.167	0.54	1.69	0.739	| I |	| O |	|	|	10.09
16.250	0.42	1.39	0.732	| I |	| O |	|	|	10.01
16.333	0.42	1.28	0.726	| I |	| O |	|	|	9.92
16.417	0.42	1.21	0.720	| I |	| O |	|	|	9.84
16.500	0.42	1.15	0.715	| I |	|O |	|	|	9.77
16.583	0.36	1.08	0.710	| I |	|O |	|	|	9.69
16.667	0.32	1.02	0.705	| I | O |	|	|	|	9.62
16.750	0.31	0.97	0.700	| I | O |	|	|	|	9.56
16.833	0.31	0.91	0.696	| I | O|	|	|	|	9.50
16.917	0.31	0.86	0.692	| I | O|	|	|	|	9.44
17.000	0.31	0.82	0.688	| I | O |	|	|	|	9.39
17.083	0.42	0.78	0.685	| I | O |	|	|	|	9.35
17.167	0.50	0.75	0.683	| I O |	|	|	|	9.32
17.250	0.52	0.73	0.681	| I O |	|	|	|	9.29
17.333	0.52	0.72	0.680	| I O |	|	|	|	9.27
17.417	0.52	0.70	0.679	| IO |	|	|	|	9.25
17.500	0.52	0.69	0.678	| IO |	|	|	|	9.24
17.583	0.52	0.67	0.676	| IO |	|	|	|	9.22
17.667	0.52	0.66	0.675	| IO |	|	|	|	9.21
17.750	0.52	0.65	0.675	| IO |	|	|	|	9.19
17.833	0.47	0.64	0.674	| I O |	|	|	|	9.18
17.917	0.42	0.62	0.672	| I O |	|	|	|	9.16
18.000	0.42	0.60	0.671	| I O |	|	|	|	9.14
18.083	0.42	0.59	0.670	| I O |	|	|	|	9.12
18.167	0.42	0.57	0.669	| IO |	|	|	|	9.11
18.250	0.42	0.56	0.668	| IO |	|	|	|	9.09
18.333	0.42	0.55	0.667	| IO |	|	|	|	9.08
18.417	0.42	0.54	0.666	| IO |	|	|	|	9.07
18.500	0.42	0.53	0.665	| IO |	|	|	|	9.06
18.583	0.36	0.52	0.664	| IO |	|	|	|	9.04
18.667	0.32	0.50	0.663	| I O |	|	|	|	9.03
18.750	0.31	0.49	0.662	| I O |	|	|	|	9.01
18.833	0.26	0.48	0.660	| I O |	|	|	|	8.99

18.917	0.22	0.47	0.659	I O				8.95
19.000	0.21	0.47	0.657	I O				8.92
19.083	0.26	0.47	0.655	IO				8.89
19.167	0.30	0.46	0.654	IO				8.86
19.250	0.31	0.46	0.653	IO				8.84
19.333	0.37	0.46	0.652	O				8.83
19.417	0.41	0.46	0.652	O				8.82
19.500	0.42	0.46	0.651	O				8.81
19.583	0.36	0.45	0.651	O				8.80
19.667	0.32	0.45	0.650	IO				8.79
19.750	0.31	0.45	0.649	IO				8.77
19.833	0.26	0.45	0.648	IO				8.75
19.917	0.22	0.44	0.647	I O				8.72
20.000	0.21	0.44	0.645	I O				8.69
20.083	0.26	0.44	0.644	IO				8.67
20.167	0.30	0.43	0.643	IO				8.65
20.250	0.31	0.43	0.642	IO				8.63
20.333	0.31	0.43	0.641	IO				8.61
20.417	0.31	0.43	0.640	IO				8.60
20.500	0.31	0.43	0.639	IO				8.58
20.583	0.31	0.42	0.639	IO				8.57
20.667	0.31	0.42	0.638	IO				8.55
20.750	0.31	0.42	0.637	IO				8.54
20.833	0.26	0.42	0.636	IO				8.52
20.917	0.22	0.41	0.635	I O				8.50
21.000	0.21	0.41	0.633	I O				8.47
21.083	0.26	0.41	0.632	IO				8.45
21.167	0.30	0.41	0.631	IO				8.43
21.250	0.31	0.40	0.631	IO				8.42
21.333	0.26	0.40	0.630	IO				8.40
21.417	0.22	0.40	0.629	I O				8.38
21.500	0.21	0.40	0.628	I O				8.36
21.583	0.26	0.39	0.626	IO				8.34
21.667	0.30	0.39	0.626	IO				8.32
21.750	0.31	0.39	0.625	IO				8.31
21.833	0.26	0.39	0.624	IO				8.30
21.917	0.22	0.39	0.623	I O				8.28
22.000	0.21	0.38	0.622	I O				8.25
22.083	0.26	0.38	0.621	IO				8.23
22.167	0.30	0.38	0.621	IO				8.22
22.250	0.31	0.38	0.620	IO				8.21
22.333	0.26	0.38	0.619	IO				8.20
22.417	0.22	0.37	0.618	I O				8.18
22.500	0.21	0.37	0.617	I O				8.16
22.583	0.21	0.37	0.616	I O				8.14
22.667	0.21	0.37	0.615	I O				8.12
22.750	0.21	0.36	0.614	I O				8.10
22.833	0.21	0.36	0.613	I O				8.08
22.917	0.21	0.36	0.612	I O				8.06
23.000	0.21	0.35	0.611	I O				8.04
23.083	0.21	0.35	0.610	I O				8.02
23.167	0.21	0.35	0.609	IO				8.00
23.250	0.21	0.35	0.608	IO				7.99
23.333	0.21	0.35	0.607	IO				7.98
23.417	0.21	0.35	0.606	IO				7.96
23.500	0.21	0.35	0.605	IO				7.95
23.583	0.21	0.35	0.604	IO				7.94
23.667	0.21	0.35	0.603	IO				7.93
23.750	0.21	0.35	0.602	IO				7.92
23.833	0.21	0.35	0.601	IO				7.90

23.917	0.21	0.35	0.600	|IO	|	|	|	7.89
24.000	0.21	0.35	0.599	|IO	|	|	|	7.88
24.083	0.10	0.35	0.598	I O	|	|	|	7.86
24.167	0.02	0.35	0.596	I O	|	|	|	7.84
24.250	0.00	0.35	0.594	I O	|	|	|	7.81
24.333	0.00	0.35	0.591	I O	|	|	|	7.78
24.417	0.00	0.35	0.589	I O	|	|	|	7.75
24.500	0.00	0.35	0.586	I O	|	|	|	7.72
24.583	0.00	0.35	0.584	I O	|	|	|	7.69
24.667	0.00	0.35	0.581	I O	|	|	|	7.66
24.750	0.00	0.35	0.579	I O	|	|	|	7.63
24.833	0.00	0.35	0.577	I O	|	|	|	7.60
24.917	0.00	0.35	0.574	I O	|	|	|	7.57
25.000	0.00	0.35	0.572	I O	|	|	|	7.54
25.083	0.00	0.35	0.569	I O	|	|	|	7.51
25.167	0.00	0.35	0.567	I O	|	|	|	7.48
25.250	0.00	0.35	0.565	I O	|	|	|	7.45
25.333	0.00	0.35	0.562	I O	|	|	|	7.42
25.417	0.00	0.35	0.560	I O	|	|	|	7.39
25.500	0.00	0.35	0.557	I O	|	|	|	7.36
25.583	0.00	0.35	0.555	I O	|	|	|	7.33
25.667	0.00	0.35	0.553	I O	|	|	|	7.30
25.750	0.00	0.35	0.550	I O	|	|	|	7.27
25.833	0.00	0.35	0.548	I O	|	|	|	7.24
25.917	0.00	0.35	0.545	I O	|	|	|	7.21
26.000	0.00	0.35	0.543	I O	|	|	|	7.18
26.083	0.00	0.35	0.540	I O	|	|	|	7.15
26.167	0.00	0.35	0.538	I O	|	|	|	7.13
26.250	0.00	0.35	0.536	I O	|	|	|	7.10
26.333	0.00	0.35	0.533	I O	|	|	|	7.07
26.417	0.00	0.35	0.531	I O	|	|	|	7.04
26.500	0.00	0.35	0.528	I O	|	|	|	7.01
26.583	0.00	0.35	0.526	I O	|	|	|	6.98
26.667	0.00	0.35	0.524	I O	|	|	|	6.95
26.750	0.00	0.35	0.521	I O	|	|	|	6.92
26.833	0.00	0.35	0.519	I O	|	|	|	6.89
26.917	0.00	0.35	0.516	I O	|	|	|	6.86
27.000	0.00	0.35	0.514	I O	|	|	|	6.83
27.083	0.00	0.35	0.512	I O	|	|	|	6.80
27.167	0.00	0.35	0.509	I O	|	|	|	6.77
27.250	0.00	0.35	0.507	I O	|	|	|	6.74
27.333	0.00	0.35	0.504	I O	|	|	|	6.71
27.417	0.00	0.35	0.502	I O	|	|	|	6.68
27.500	0.00	0.35	0.499	I O	|	|	|	6.65
27.583	0.00	0.35	0.497	I O	|	|	|	6.62
27.667	0.00	0.35	0.495	I O	|	|	|	6.59
27.750	0.00	0.35	0.492	I O	|	|	|	6.56
27.833	0.00	0.35	0.490	I O	|	|	|	6.53
27.917	0.00	0.35	0.487	I O	|	|	|	6.50
28.000	0.00	0.35	0.485	I O	|	|	|	6.47
28.083	0.00	0.35	0.483	I O	|	|	|	6.44
28.167	0.00	0.35	0.480	I O	|	|	|	6.41
28.250	0.00	0.35	0.478	I O	|	|	|	6.38
28.333	0.00	0.35	0.475	I O	|	|	|	6.35
28.417	0.00	0.35	0.473	I O	|	|	|	6.32
28.500	0.00	0.35	0.471	I O	|	|	|	6.29
28.583	0.00	0.35	0.468	I O	|	|	|	6.26
28.667	0.00	0.35	0.466	I O	|	|	|	6.23
28.750	0.00	0.35	0.463	I O	|	|	|	6.20
28.833	0.00	0.35	0.461	I O	|	|	|	6.17

28.917	0.00	0.35	0.459	I	O	|	|	|	| 6.14
29.000	0.00	0.35	0.456	I	O	|	|	|	| 6.11
29.083	0.00	0.35	0.454	I	O	|	|	|	| 6.08
29.167	0.00	0.35	0.451	I	O	|	|	|	| 6.05
29.250	0.00	0.35	0.449	I	O	|	|	|	| 6.03
29.333	0.00	0.35	0.446	I	O	|	|	|	| 6.00
29.417	0.00	0.35	0.444	I	O	|	|	|	| 5.97
29.500	0.00	0.35	0.442	I	O	|	|	|	| 5.94
29.583	0.00	0.35	0.439	I	O	|	|	|	| 5.91
29.667	0.00	0.35	0.437	I	O	|	|	|	| 5.88
29.750	0.00	0.35	0.434	I	O	|	|	|	| 5.85
29.833	0.00	0.35	0.432	I	O	|	|	|	| 5.82
29.917	0.00	0.35	0.430	I	O	|	|	|	| 5.79
30.000	0.00	0.35	0.427	I	O	|	|	|	| 5.76
30.083	0.00	0.35	0.425	I	O	|	|	|	| 5.73
30.167	0.00	0.35	0.422	I	O	|	|	|	| 5.70
30.250	0.00	0.35	0.420	I	O	|	|	|	| 5.67
30.333	0.00	0.35	0.418	I	O	|	|	|	| 5.64
30.417	0.00	0.35	0.415	I	O	|	|	|	| 5.61
30.500	0.00	0.35	0.413	I	O	|	|	|	| 5.58
30.583	0.00	0.35	0.410	I	O	|	|	|	| 5.55
30.667	0.00	0.35	0.408	I	O	|	|	|	| 5.52
30.750	0.00	0.35	0.405	I	O	|	|	|	| 5.49
30.833	0.00	0.35	0.403	I	O	|	|	|	| 5.46
30.917	0.00	0.35	0.401	I	O	|	|	|	| 5.43
31.000	0.00	0.35	0.398	I	O	|	|	|	| 5.40
31.083	0.00	0.35	0.396	I	O	|	|	|	| 5.37
31.167	0.00	0.35	0.393	I	O	|	|	|	| 5.34
31.250	0.00	0.35	0.391	I	O	|	|	|	| 5.31
31.333	0.00	0.35	0.389	I	O	|	|	|	| 5.28
31.417	0.00	0.35	0.386	I	O	|	|	|	| 5.25
31.500	0.00	0.35	0.384	I	O	|	|	|	| 5.22
31.583	0.00	0.35	0.381	I	O	|	|	|	| 5.19
31.667	0.00	0.35	0.379	I	O	|	|	|	| 5.16
31.750	0.00	0.35	0.377	I	O	|	|	|	| 5.13
31.833	0.00	0.35	0.374	I	O	|	|	|	| 5.10
31.917	0.00	0.35	0.372	I	O	|	|	|	| 5.07
32.000	0.00	0.35	0.369	I	O	|	|	|	| 5.04
32.083	0.00	0.35	0.367	I	O	|	|	|	| 5.01
32.167	0.00	0.35	0.365	I	O	|	|	|	| 4.98
32.250	0.00	0.35	0.362	I	O	|	|	|	| 4.95
32.333	0.00	0.35	0.360	I	O	|	|	|	| 4.93
32.417	0.00	0.35	0.357	I	O	|	|	|	| 4.90
32.500	0.00	0.35	0.355	I	O	|	|	|	| 4.87
32.583	0.00	0.35	0.352	I	O	|	|	|	| 4.84
32.667	0.00	0.35	0.350	I	O	|	|	|	| 4.81
32.750	0.00	0.35	0.348	I	O	|	|	|	| 4.78
32.833	0.00	0.35	0.345	I	O	|	|	|	| 4.75
32.917	0.00	0.35	0.343	I	O	|	|	|	| 4.72
33.000	0.00	0.35	0.340	I	O	|	|	|	| 4.69
33.083	0.00	0.35	0.338	I	O	|	|	|	| 4.66
33.167	0.00	0.35	0.336	I	O	|	|	|	| 4.63
33.250	0.00	0.35	0.333	I	O	|	|	|	| 4.60
33.333	0.00	0.35	0.331	I	O	|	|	|	| 4.57
33.417	0.00	0.35	0.328	I	O	|	|	|	| 4.54
33.500	0.00	0.35	0.326	I	O	|	|	|	| 4.51
33.583	0.00	0.35	0.324	I	O	|	|	|	| 4.48
33.667	0.00	0.35	0.321	I	O	|	|	|	| 4.45
33.750	0.00	0.35	0.319	I	O	|	|	|	| 4.42
33.833	0.00	0.35	0.316	I	O	|	|	|	| 4.39

33.917	0.00	0.35	0.314	I	O	|	|	|	| 4.36
34.000	0.00	0.35	0.311	I	O	|	|	|	| 4.33
34.083	0.00	0.35	0.309	I	O	|	|	|	| 4.30
34.167	0.00	0.35	0.307	I	O	|	|	|	| 4.27
34.250	0.00	0.35	0.304	I	O	|	|	|	| 4.24
34.333	0.00	0.35	0.302	I	O	|	|	|	| 4.21
34.417	0.00	0.35	0.299	I	O	|	|	|	| 4.18
34.500	0.00	0.35	0.297	I	O	|	|	|	| 4.15
34.583	0.00	0.35	0.295	I	O	|	|	|	| 4.12
34.667	0.00	0.35	0.292	I	O	|	|	|	| 4.09
34.750	0.00	0.35	0.290	I	O	|	|	|	| 4.06
34.833	0.00	0.35	0.287	I	O	|	|	|	| 4.03
34.917	0.00	0.35	0.285	I	O	|	|	|	| 4.00
35.000	0.00	0.35	0.283	I	O	|	|	|	| 3.97
35.083	0.00	0.35	0.280	I	O	|	|	|	| 3.94
35.167	0.00	0.35	0.278	I	O	|	|	|	| 3.91
35.250	0.00	0.35	0.275	I	O	|	|	|	| 3.88
35.333	0.00	0.35	0.273	I	O	|	|	|	| 3.85
35.417	0.00	0.35	0.271	I	O	|	|	|	| 3.82
35.500	0.00	0.35	0.268	I	O	|	|	|	| 3.80
35.583	0.00	0.35	0.266	I	O	|	|	|	| 3.77
35.667	0.00	0.35	0.263	I	O	|	|	|	| 3.74
35.750	0.00	0.35	0.261	I	O	|	|	|	| 3.71
35.833	0.00	0.35	0.258	I	O	|	|	|	| 3.68
35.917	0.00	0.35	0.256	I	O	|	|	|	| 3.65
36.000	0.00	0.35	0.254	I	O	|	|	|	| 3.62
36.083	0.00	0.35	0.251	I	O	|	|	|	| 3.59
36.167	0.00	0.35	0.249	I	O	|	|	|	| 3.56
36.250	0.00	0.35	0.246	I	O	|	|	|	| 3.53
36.333	0.00	0.35	0.244	I	O	|	|	|	| 3.50
36.417	0.00	0.35	0.242	I	O	|	|	|	| 3.47
36.500	0.00	0.35	0.239	I	O	|	|	|	| 3.44
36.583	0.00	0.35	0.237	I	O	|	|	|	| 3.41
36.667	0.00	0.35	0.234	I	O	|	|	|	| 3.38
36.750	0.00	0.35	0.232	I	O	|	|	|	| 3.35
36.833	0.00	0.35	0.230	I	O	|	|	|	| 3.32
36.917	0.00	0.35	0.227	I	O	|	|	|	| 3.29
37.000	0.00	0.35	0.225	I	O	|	|	|	| 3.26
37.083	0.00	0.35	0.222	I	O	|	|	|	| 3.23
37.167	0.00	0.35	0.220	I	O	|	|	|	| 3.20
37.250	0.00	0.35	0.217	I	O	|	|	|	| 3.17
37.333	0.00	0.35	0.215	I	O	|	|	|	| 3.14
37.417	0.00	0.35	0.213	I	O	|	|	|	| 3.11
37.500	0.00	0.35	0.210	I	O	|	|	|	| 3.08
37.583	0.00	0.35	0.208	I	O	|	|	|	| 3.05
37.667	0.00	0.35	0.205	I	O	|	|	|	| 3.02
37.750	0.00	0.35	0.203	I	O	|	|	|	| 2.99
37.833	0.00	0.35	0.201	I	O	|	|	|	| 2.96
37.917	0.00	0.35	0.198	I	O	|	|	|	| 2.93
38.000	0.00	0.35	0.196	I	O	|	|	|	| 2.90
38.083	0.00	0.35	0.193	I	O	|	|	|	| 2.87
38.167	0.00	0.35	0.191	I	O	|	|	|	| 2.84
38.250	0.00	0.35	0.189	I	O	|	|	|	| 2.81
38.333	0.00	0.35	0.186	I	O	|	|	|	| 2.78
38.417	0.00	0.35	0.184	I	O	|	|	|	| 2.75
38.500	0.00	0.35	0.181	I	O	|	|	|	| 2.72
38.583	0.00	0.35	0.179	I	O	|	|	|	| 2.70
38.667	0.00	0.35	0.176	I	O	|	|	|	| 2.67
38.750	0.00	0.35	0.174	I	O	|	|	|	| 2.64
38.833	0.00	0.35	0.172	I	O	|	|	|	| 2.61

38.917	0.00	0.35	0.169	I O	|	|	|	2.58
39.000	0.00	0.35	0.167	I O	|	|	|	2.55
39.083	0.00	0.35	0.164	I O	|	|	|	2.52
39.167	0.00	0.35	0.162	I O	|	|	|	2.49
39.250	0.00	0.35	0.160	I O	|	|	|	2.46
39.333	0.00	0.35	0.157	I O	|	|	|	2.43
39.417	0.00	0.35	0.155	I O	|	|	|	2.40
39.500	0.00	0.35	0.152	I O	|	|	|	2.37
39.583	0.00	0.35	0.150	I O	|	|	|	2.34
39.667	0.00	0.35	0.148	I O	|	|	|	2.31
39.750	0.00	0.35	0.145	I O	|	|	|	2.28
39.833	0.00	0.35	0.143	I O	|	|	|	2.25
39.917	0.00	0.35	0.140	I O	|	|	|	2.22
40.000	0.00	0.35	0.138	I O	|	|	|	2.19
40.083	0.00	0.35	0.136	I O	|	|	|	2.16
40.167	0.00	0.35	0.133	I O	|	|	|	2.13
40.250	0.00	0.35	0.131	I O	|	|	|	2.10
40.333	0.00	0.35	0.128	I O	|	|	|	2.07
40.417	0.00	0.35	0.126	I O	|	|	|	2.04
40.500	0.00	0.35	0.123	I O	|	|	|	2.01
40.583	0.00	0.35	0.121	I O	|	|	|	1.98
40.667	0.00	0.35	0.119	I O	|	|	|	1.95
40.750	0.00	0.35	0.116	I O	|	|	|	1.92
40.833	0.00	0.35	0.114	I O	|	|	|	1.89
40.917	0.00	0.35	0.111	I O	|	|	|	1.86
41.000	0.00	0.35	0.109	I O	|	|	|	1.83
41.083	0.00	0.35	0.107	I O	|	|	|	1.80
41.167	0.00	0.35	0.104	I O	|	|	|	1.77
41.250	0.00	0.35	0.102	I O	|	|	|	1.74
41.333	0.00	0.35	0.099	I O	|	|	|	1.71
41.417	0.00	0.35	0.097	I O	|	|	|	1.68
41.500	0.00	0.35	0.095	I O	|	|	|	1.65
41.583	0.00	0.35	0.092	I O	|	|	|	1.62
41.667	0.00	0.35	0.090	I O	|	|	|	1.60
41.750	0.00	0.35	0.087	I O	|	|	|	1.57
41.833	0.00	0.35	0.085	I O	|	|	|	1.54
41.917	0.00	0.35	0.082	I O	|	|	|	1.51
42.000	0.00	0.34	0.080	I O	|	|	|	1.47
42.083	0.00	0.33	0.078	I O	|	|	|	1.42
42.167	0.00	0.32	0.076	I O	|	|	|	1.38
42.250	0.00	0.31	0.073	I O	|	|	|	1.34
42.333	0.00	0.30	0.071	I O	|	|	|	1.30
42.417	0.00	0.30	0.069	I O	|	|	|	1.26
42.500	0.00	0.29	0.067	I O	|	|	|	1.23
42.583	0.00	0.28	0.065	I O	|	|	|	1.19
42.667	0.00	0.27	0.063	I O	|	|	|	1.16
42.750	0.00	0.26	0.061	I O	|	|	|	1.12
42.833	0.00	0.25	0.060	I O	|	|	|	1.09
42.917	0.00	0.25	0.058	I O	|	|	|	1.06
43.000	0.00	0.24	0.056	I O	|	|	|	1.03
43.083	0.00	0.23	0.055	IO	|	|	|	1.00
43.167	0.00	0.23	0.053	IO	|	|	|	0.97
43.250	0.00	0.22	0.052	IO	|	|	|	0.94
43.333	0.00	0.21	0.050	IO	|	|	|	0.92
43.417	0.00	0.21	0.049	IO	|	|	|	0.89
43.500	0.00	0.20	0.047	IO	|	|	|	0.86
43.583	0.00	0.20	0.046	IO	|	|	|	0.84
43.667	0.00	0.19	0.044	IO	|	|	|	0.81
43.750	0.00	0.18	0.043	IO	|	|	|	0.79
43.833	0.00	0.18	0.042	IO	|	|	|	0.77

43.917	0.00	0.17	0.041	IO				0.75
44.000	0.00	0.17	0.040	IO				0.72
44.083	0.00	0.16	0.038	IO				0.70
44.167	0.00	0.16	0.037	IO				0.68
44.250	0.00	0.15	0.036	IO				0.66
44.333	0.00	0.15	0.035	IO				0.64
44.417	0.00	0.15	0.034	IO				0.62
44.500	0.00	0.14	0.033	IO				0.61
44.583	0.00	0.14	0.032	IO				0.59
44.667	0.00	0.13	0.031	IO				0.57
44.750	0.00	0.13	0.030	IO				0.56
44.833	0.00	0.13	0.029	IO				0.54
44.917	0.00	0.12	0.029	IO				0.52
45.000	0.00	0.12	0.028	IO				0.51
45.083	0.00	0.12	0.027	O				0.49
45.167	0.00	0.11	0.026	O				0.48
45.250	0.00	0.11	0.025	O				0.47
45.333	0.00	0.11	0.025	O				0.45
45.417	0.00	0.10	0.024	O				0.44
45.500	0.00	0.10	0.023	O				0.43
45.583	0.00	0.10	0.023	O				0.41
45.667	0.00	0.09	0.022	O				0.40
45.750	0.00	0.09	0.021	O				0.39
45.833	0.00	0.09	0.021	O				0.38
45.917	0.00	0.09	0.020	O				0.37
46.000	0.00	0.08	0.020	O				0.36
46.083	0.00	0.08	0.019	O				0.35
46.167	0.00	0.08	0.018	O				0.34
46.250	0.00	0.08	0.018	O				0.33
46.333	0.00	0.07	0.017	O				0.32
46.417	0.00	0.07	0.017	O				0.31
46.500	0.00	0.07	0.016	O				0.30
46.583	0.00	0.07	0.016	O				0.29
46.667	0.00	0.07	0.015	O				0.28
46.750	0.00	0.06	0.015	O				0.27
46.833	0.00	0.06	0.015	O				0.27
46.917	0.00	0.06	0.014	O				0.26
47.000	0.00	0.06	0.014	O				0.25
47.083	0.00	0.06	0.013	O				0.24
47.167	0.00	0.06	0.013	O				0.24
47.250	0.00	0.05	0.013	O				0.23
47.333	0.00	0.05	0.012	O				0.22
47.417	0.00	0.05	0.012	O				0.22
47.500	0.00	0.05	0.012	O				0.21
47.583	0.00	0.05	0.011	O				0.20
47.667	0.00	0.05	0.011	O				0.20
47.750	0.00	0.04	0.011	O				0.19
47.833	0.00	0.04	0.010	O				0.19
47.917	0.00	0.04	0.010	O				0.18
48.000	0.00	0.04	0.010	O				0.18
48.083	0.00	0.04	0.009	O				0.17
48.167	0.00	0.04	0.009	O				0.17
48.250	0.00	0.04	0.009	O				0.16
48.333	0.00	0.04	0.009	O				0.16
48.417	0.00	0.04	0.008	O				0.15
48.500	0.00	0.03	0.008	O				0.15
48.583	0.00	0.03	0.008	O				0.14
48.667	0.00	0.03	0.008	O				0.14
48.750	0.00	0.03	0.007	O				0.14
48.833	0.00	0.03	0.007	O				0.13

48.917	0.00	0.03	0.007	O				0.13
49.000	0.00	0.03	0.007	O				0.12
49.083	0.00	0.03	0.007	O				0.12
49.167	0.00	0.03	0.006	O				0.12
49.250	0.00	0.03	0.006	O				0.11
49.333	0.00	0.03	0.006	O				0.11
49.417	0.00	0.02	0.006	O				0.11
49.500	0.00	0.02	0.006	O				0.10
49.583	0.00	0.02	0.006	O				0.10
49.667	0.00	0.02	0.005	O				0.10
49.750	0.00	0.02	0.005	O				0.10
49.833	0.00	0.02	0.005	O				0.09
49.917	0.00	0.02	0.005	O				0.09
50.000	0.00	0.02	0.005	O				0.09
50.083	0.00	0.02	0.005	O				0.08
50.167	0.00	0.02	0.004	O				0.08
50.250	0.00	0.02	0.004	O				0.08
50.333	0.00	0.02	0.004	O				0.08
50.417	0.00	0.02	0.004	O				0.08
50.500	0.00	0.02	0.004	O				0.07
50.583	0.00	0.02	0.004	O				0.07
50.667	0.00	0.02	0.004	O				0.07
50.750	0.00	0.02	0.004	O				0.07
50.833	0.00	0.02	0.004	O				0.06
50.917	0.00	0.01	0.003	O				0.06
51.000	0.00	0.01	0.003	O				0.06
51.083	0.00	0.01	0.003	O				0.06
51.167	0.00	0.01	0.003	O				0.06
51.250	0.00	0.01	0.003	O				0.06
51.333	0.00	0.01	0.003	O				0.05
51.417	0.00	0.01	0.003	O				0.05
51.500	0.00	0.01	0.003	O				0.05
51.583	0.00	0.01	0.003	O				0.05
51.667	0.00	0.01	0.003	O				0.05
51.750	0.00	0.01	0.003	O				0.05
51.833	0.00	0.01	0.002	O				0.05
51.917	0.00	0.01	0.002	O				0.04
52.000	0.00	0.01	0.002	O				0.04
52.083	0.00	0.01	0.002	O				0.04
52.167	0.00	0.01	0.002	O				0.04
52.250	0.00	0.01	0.002	O				0.04
52.333	0.00	0.01	0.002	O				0.04
52.417	0.00	0.01	0.002	O				0.04
52.500	0.00	0.01	0.002	O				0.04
52.583	0.00	0.01	0.002	O				0.04
52.667	0.00	0.01	0.002	O				0.03
52.750	0.00	0.01	0.002	O				0.03
52.833	0.00	0.01	0.002	O				0.03
52.917	0.00	0.01	0.002	O				0.03
53.000	0.00	0.01	0.002	O				0.03
53.083	0.00	0.01	0.002	O				0.03
53.167	0.00	0.01	0.002	O				0.03
53.250	0.00	0.01	0.002	O				0.03
53.333	0.00	0.01	0.001	O				0.03
53.417	0.00	0.01	0.001	O				0.03
53.500	0.00	0.01	0.001	O				0.03
53.583	0.00	0.01	0.001	O				0.02
53.667	0.00	0.01	0.001	O				0.02
53.750	0.00	0.01	0.001	O				0.02
53.833	0.00	0.01	0.001	O				0.02

53.917	0.00	0.01	0.001	O	|	|	|	|	0.02
54.000	0.00	0.00	0.001	O	|	|	|	|	0.02
54.083	0.00	0.00	0.001	O	|	|	|	|	0.02
54.167	0.00	0.00	0.001	O	|	|	|	|	0.02
54.250	0.00	0.00	0.001	O	|	|	|	|	0.02
54.333	0.00	0.00	0.001	O	|	|	|	|	0.02
54.417	0.00	0.00	0.001	O	|	|	|	|	0.02
54.500	0.00	0.00	0.001	O	|	|	|	|	0.02
54.583	0.00	0.00	0.001	O	|	|	|	|	0.02
54.667	0.00	0.00	0.001	O	|	|	|	|	0.02
54.750	0.00	0.00	0.001	O	|	|	|	|	0.02
54.833	0.00	0.00	0.001	O	|	|	|	|	0.02
54.917	0.00	0.00	0.001	O	|	|	|	|	0.02
55.000	0.00	0.00	0.001	O	|	|	|	|	0.01
55.083	0.00	0.00	0.001	O	|	|	|	|	0.01
55.167	0.00	0.00	0.001	O	|	|	|	|	0.01
55.250	0.00	0.00	0.001	O	|	|	|	|	0.01
55.333	0.00	0.00	0.001	O	|	|	|	|	0.01
55.417	0.00	0.00	0.001	O	|	|	|	|	0.01
55.500	0.00	0.00	0.001	O	|	|	|	|	0.01
55.583	0.00	0.00	0.001	O	|	|	|	|	0.01
55.667	0.00	0.00	0.001	O	|	|	|	|	0.01
55.750	0.00	0.00	0.001	O	|	|	|	|	0.01
55.833	0.00	0.00	0.001	O	|	|	|	|	0.01
55.917	0.00	0.00	0.001	O	|	|	|	|	0.01
56.000	0.00	0.00	0.001	O	|	|	|	|	0.01
56.083	0.00	0.00	0.001	O	|	|	|	|	0.01
56.167	0.00	0.00	0.001	O	|	|	|	|	0.01
56.250	0.00	0.00	0.001	O	|	|	|	|	0.01
56.333	0.00	0.00	0.001	O	|	|	|	|	0.01
56.417	0.00	0.00	0.000	O	|	|	|	|	0.01
56.500	0.00	0.00	0.000	O	|	|	|	|	0.01
56.583	0.00	0.00	0.000	O	|	|	|	|	0.01
56.667	0.00	0.00	0.000	O	|	|	|	|	0.01
56.750	0.00	0.00	0.000	O	|	|	|	|	0.01
56.833	0.00	0.00	0.000	O	|	|	|	|	0.01
56.917	0.00	0.00	0.000	O	|	|	|	|	0.01
57.000	0.00	0.00	0.000	O	|	|	|	|	0.01
57.083	0.00	0.00	0.000	O	|	|	|	|	0.01
57.167	0.00	0.00	0.000	O	|	|	|	|	0.01
57.250	0.00	0.00	0.000	O	|	|	|	|	0.01
57.333	0.00	0.00	0.000	O	|	|	|	|	0.01
57.417	0.00	0.00	0.000	O	|	|	|	|	0.01
57.500	0.00	0.00	0.000	O	|	|	|	|	0.01
57.583	0.00	0.00	0.000	O	|	|	|	|	0.01
57.667	0.00	0.00	0.000	O	|	|	|	|	0.01
57.750	0.00	0.00	0.000	O	|	|	|	|	0.01
57.833	0.00	0.00	0.000	O	|	|	|	|	0.01
57.917	0.00	0.00	0.000	O	|	|	|	|	0.01
58.000	0.00	0.00	0.000	O	|	|	|	|	0.01
58.083	0.00	0.00	0.000	O	|	|	|	|	0.01
58.167	0.00	0.00	0.000	O	|	|	|	|	0.00
58.250	0.00	0.00	0.000	O	|	|	|	|	0.00
58.333	0.00	0.00	0.000	O	|	|	|	|	0.00
58.417	0.00	0.00	0.000	O	|	|	|	|	0.00
58.500	0.00	0.00	0.000	O	|	|	|	|	0.00
58.583	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 703

```
            Time interval =    5.0 (Min.)
            Maximum/Peak flow rate =        3.514 (CFS)
            Total volume =       2.159 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
10-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 14.910 (CFS)
Total volume = 0.441 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.7 7.45 11.18 14.91	Depth (Ft.)
0.083	1.32	0.03	0.004	O I | | | |	0.07
0.167	2.16	0.10	0.016	O I | | | |	0.24
0.250	2.68	0.20	0.032	O I | | | |	0.47
0.333	2.91	0.31	0.049	O I | | | |	0.72
0.417	3.09	0.42	0.067	O I | | | |	0.99
0.500	3.51	0.54	0.087	|O I| | | |	1.27
0.583	4.44	0.64	0.110	|O |I | | |	1.58
0.667	5.48	0.64	0.140	|O | I | | |	1.89
0.750	7.66	0.64	0.181	|O | | I | |	2.32
0.833	14.91	0.64	0.254	|O | | | | I	3.09
0.917	10.34	0.64	0.336	|O | | | I |	3.95
1.000	4.29	0.64	0.382	|O |I | | |	4.43
1.083	1.17	0.64	0.397	|OI | | | |	4.58
1.167	0.13	0.64	0.397	IO | | | |	4.58
1.250	0.00	0.64	0.393	IO | | | |	4.54
1.333	0.00	0.64	0.389	IO | | | |	4.50
1.417	0.00	0.64	0.384	IO | | | |	4.45
1.500	0.00	0.64	0.380	IO | | | |	4.40
1.583	0.00	0.64	0.375	IO | | | |	4.36
1.667	0.00	0.64	0.371	IO | | | |	4.31
1.750	0.00	0.64	0.366	IO | | | |	4.27
1.833	0.00	0.64	0.362	IO | | | |	4.22
1.917	0.00	0.64	0.358	IO | | | |	4.17
2.000	0.00	0.64	0.353	IO | | | |	4.13
2.083	0.00	0.64	0.349	IO | | | |	4.08
2.167	0.00	0.64	0.344	IO | | | |	4.04
2.250	0.00	0.64	0.340	IO | | | |	3.99
2.333	0.00	0.64	0.336	IO | | | |	3.94
2.417	0.00	0.64	0.331	IO | | | |	3.90
2.500	0.00	0.64	0.327	IO | | | |	3.85
2.583	0.00	0.64	0.322	IO | | | |	3.81
2.667	0.00	0.64	0.318	IO | | | |	3.76
2.750	0.00	0.64	0.314	IO | | | |	3.71
2.833	0.00	0.64	0.309	IO | | | |	3.67
2.917	0.00	0.64	0.305	IO | | | |	3.62
3.000	0.00	0.64	0.300	IO | | | |	3.58
3.083	0.00	0.64	0.296	IO | | | |	3.53
3.167	0.00	0.64	0.292	IO | | | |	3.48
3.250	0.00	0.64	0.287	IO | | | |	3.44
3.333	0.00	0.64	0.283	IO | | | |	3.39
3.417	0.00	0.64	0.278	IO | | | |	3.34
3.500	0.00	0.64	0.274	IO | | | |	3.30
3.583	0.00	0.64	0.270	IO | | | |	3.25
3.667	0.00	0.64	0.265	IO | | | |	3.21
3.750	0.00	0.64	0.261	IO | | | |	3.16
3.833	0.00	0.64	0.256	IO | | | |	3.11

3.917	0.00	0.64	0.252	IO				3.07
4.000	0.00	0.64	0.247	IO				3.02
4.083	0.00	0.64	0.243	IO				2.98
4.167	0.00	0.64	0.239	IO				2.93
4.250	0.00	0.64	0.234	IO				2.88
4.333	0.00	0.64	0.230	IO				2.84
4.417	0.00	0.64	0.225	IO				2.79
4.500	0.00	0.64	0.221	IO				2.75
4.583	0.00	0.64	0.217	IO				2.70
4.667	0.00	0.64	0.212	IO				2.65
4.750	0.00	0.64	0.208	IO				2.61
4.833	0.00	0.64	0.203	IO				2.56
4.917	0.00	0.64	0.199	IO				2.51
5.000	0.00	0.64	0.195	IO				2.47
5.083	0.00	0.64	0.190	IO				2.42
5.167	0.00	0.64	0.186	IO				2.38
5.250	0.00	0.64	0.181	IO				2.33
5.333	0.00	0.64	0.177	IO				2.28
5.417	0.00	0.64	0.173	IO				2.24
5.500	0.00	0.64	0.168	IO				2.19
5.583	0.00	0.64	0.164	IO				2.15
5.667	0.00	0.64	0.159	IO				2.10
5.750	0.00	0.64	0.155	IO				2.05
5.833	0.00	0.64	0.151	IO				2.01
5.917	0.00	0.64	0.146	IO				1.96
6.000	0.00	0.64	0.142	IO				1.92
6.083	0.00	0.64	0.137	IO				1.87
6.167	0.00	0.64	0.133	IO				1.82
6.250	0.00	0.64	0.128	IO				1.78
6.333	0.00	0.64	0.124	IO				1.73
6.417	0.00	0.64	0.120	IO				1.68
6.500	0.00	0.64	0.115	IO				1.64
6.583	0.00	0.64	0.111	IO				1.59
6.667	0.00	0.64	0.106	IO				1.55
6.750	0.00	0.64	0.102	IO				1.50
6.833	0.00	0.61	0.098	IO				1.44
6.917	0.00	0.59	0.094	IO				1.38
7.000	0.00	0.56	0.090	IO				1.32
7.083	0.00	0.54	0.086	IO				1.26
7.167	0.00	0.52	0.082	IO				1.21
7.250	0.00	0.49	0.079	IO				1.16
7.333	0.00	0.47	0.075	IO				1.11
7.417	0.00	0.45	0.072	O				1.06
7.500	0.00	0.43	0.069	O				1.02
7.583	0.00	0.42	0.066	O				0.97
7.667	0.00	0.40	0.063	O				0.93
7.750	0.00	0.38	0.061	O				0.89
7.833	0.00	0.36	0.058	O				0.86
7.917	0.00	0.35	0.056	O				0.82
8.000	0.00	0.33	0.053	O				0.78
8.083	0.00	0.32	0.051	O				0.75
8.167	0.00	0.31	0.049	O				0.72
8.250	0.00	0.29	0.047	O				0.69
8.333	0.00	0.28	0.045	O				0.66
8.417	0.00	0.27	0.043	O				0.63
8.500	0.00	0.26	0.041	O				0.61
8.583	0.00	0.25	0.039	O				0.58
8.667	0.00	0.24	0.038	O				0.56
8.750	0.00	0.23	0.036	O				0.53
8.833	0.00	0.22	0.035	O				0.51

8.917	0.00	0.21	0.033	O	|	|	|	|	0.49
9.000	0.00	0.20	0.032	O	|	|	|	|	0.47
9.083	0.00	0.19	0.030	O	|	|	|	|	0.45
9.167	0.00	0.18	0.029	O	|	|	|	|	0.43
9.250	0.00	0.18	0.028	O	|	|	|	|	0.41
9.333	0.00	0.17	0.027	O	|	|	|	|	0.39
9.417	0.00	0.16	0.026	O	|	|	|	|	0.38
9.500	0.00	0.15	0.025	O	|	|	|	|	0.36
9.583	0.00	0.15	0.023	O	|	|	|	|	0.35
9.667	0.00	0.14	0.022	O	|	|	|	|	0.33
9.750	0.00	0.14	0.022	O	|	|	|	|	0.32
9.833	0.00	0.13	0.021	O	|	|	|	|	0.30
9.917	0.00	0.12	0.020	O	|	|	|	|	0.29
10.000	0.00	0.12	0.019	O	|	|	|	|	0.28
10.083	0.00	0.11	0.018	O	|	|	|	|	0.27
10.167	0.00	0.11	0.017	O	|	|	|	|	0.26
10.250	0.00	0.10	0.017	O	|	|	|	|	0.24
10.333	0.00	0.10	0.016	O	|	|	|	|	0.23
10.417	0.00	0.10	0.015	O	|	|	|	|	0.22
10.500	0.00	0.09	0.015	O	|	|	|	|	0.21
10.583	0.00	0.09	0.014	O	|	|	|	|	0.21
10.667	0.00	0.08	0.013	O	|	|	|	|	0.20
10.750	0.00	0.08	0.013	O	|	|	|	|	0.19
10.833	0.00	0.08	0.012	O	|	|	|	|	0.18
10.917	0.00	0.07	0.012	O	|	|	|	|	0.17
11.000	0.00	0.07	0.011	O	|	|	|	|	0.17
11.083	0.00	0.07	0.011	O	|	|	|	|	0.16
11.167	0.00	0.06	0.010	O	|	|	|	|	0.15
11.250	0.00	0.06	0.010	O	|	|	|	|	0.15
11.333	0.00	0.06	0.009	O	|	|	|	|	0.14
11.417	0.00	0.06	0.009	O	|	|	|	|	0.13
11.500	0.00	0.05	0.009	O	|	|	|	|	0.13
11.583	0.00	0.05	0.008	O	|	|	|	|	0.12
11.667	0.00	0.05	0.008	O	|	|	|	|	0.12
11.750	0.00	0.05	0.008	O	|	|	|	|	0.11
11.833	0.00	0.05	0.007	O	|	|	|	|	0.11
11.917	0.00	0.04	0.007	O	|	|	|	|	0.10
12.000	0.00	0.04	0.007	O	|	|	|	|	0.10
12.083	0.00	0.04	0.006	O	|	|	|	|	0.09
12.167	0.00	0.04	0.006	O	|	|	|	|	0.09
12.250	0.00	0.04	0.006	O	|	|	|	|	0.09
12.333	0.00	0.04	0.006	O	|	|	|	|	0.08
12.417	0.00	0.03	0.005	O	|	|	|	|	0.08
12.500	0.00	0.03	0.005	O	|	|	|	|	0.08
12.583	0.00	0.03	0.005	O	|	|	|	|	0.07
12.667	0.00	0.03	0.005	O	|	|	|	|	0.07
12.750	0.00	0.03	0.005	O	|	|	|	|	0.07
12.833	0.00	0.03	0.004	O	|	|	|	|	0.06
12.917	0.00	0.03	0.004	O	|	|	|	|	0.06
13.000	0.00	0.03	0.004	O	|	|	|	|	0.06
13.083	0.00	0.02	0.004	O	|	|	|	|	0.06
13.167	0.00	0.02	0.004	O	|	|	|	|	0.05
13.250	0.00	0.02	0.004	O	|	|	|	|	0.05
13.333	0.00	0.02	0.003	O	|	|	|	|	0.05
13.417	0.00	0.02	0.003	O	|	|	|	|	0.05
13.500	0.00	0.02	0.003	O	|	|	|	|	0.05
13.583	0.00	0.02	0.003	O	|	|	|	|	0.04
13.667	0.00	0.02	0.003	O	|	|	|	|	0.04
13.750	0.00	0.02	0.003	O	|	|	|	|	0.04
13.833	0.00	0.02	0.003	O	|	|	|	|	0.04

13.917	0.00	0.02	0.002	O					0.04
14.000	0.00	0.01	0.002	O					0.03
14.083	0.00	0.01	0.002	O					0.03
14.167	0.00	0.01	0.002	O					0.03
14.250	0.00	0.01	0.002	O					0.03
14.333	0.00	0.01	0.002	O					0.03
14.417	0.00	0.01	0.002	O					0.03
14.500	0.00	0.01	0.002	O					0.03
14.583	0.00	0.01	0.002	O					0.03
14.667	0.00	0.01	0.002	O					0.02
14.750	0.00	0.01	0.002	O					0.02
14.833	0.00	0.01	0.002	O					0.02
14.917	0.00	0.01	0.001	O					0.02
15.000	0.00	0.01	0.001	O					0.02
15.083	0.00	0.01	0.001	O					0.02
15.167	0.00	0.01	0.001	O					0.02
15.250	0.00	0.01	0.001	O					0.02
15.333	0.00	0.01	0.001	O					0.02
15.417	0.00	0.01	0.001	O					0.02
15.500	0.00	0.01	0.001	O					0.02
15.583	0.00	0.01	0.001	O					0.02
15.667	0.00	0.01	0.001	O					0.01
15.750	0.00	0.01	0.001	O					0.01
15.833	0.00	0.01	0.001	O					0.01
15.917	0.00	0.01	0.001	O					0.01
16.000	0.00	0.01	0.001	O					0.01
16.083	0.00	0.01	0.001	O					0.01
16.167	0.00	0.00	0.001	O					0.01
16.250	0.00	0.00	0.001	O					0.01
16.333	0.00	0.00	0.001	O					0.01
16.417	0.00	0.00	0.001	O					0.01
16.500	0.00	0.00	0.001	O					0.01
16.583	0.00	0.00	0.001	O					0.01
16.667	0.00	0.00	0.001	O					0.01
16.750	0.00	0.00	0.001	O					0.01
16.833	0.00	0.00	0.001	O					0.01
16.917	0.00	0.00	0.001	O					0.01
17.000	0.00	0.00	0.001	O					0.01
17.083	0.00	0.00	0.000	O					0.01
17.167	0.00	0.00	0.000	O					0.01
17.250	0.00	0.00	0.000	O					0.01
17.333	0.00	0.00	0.000	O					0.01
17.417	0.00	0.00	0.000	O					0.01
17.500	0.00	0.00	0.000	O					0.01
17.583	0.00	0.00	0.000	O					0.01
17.667	0.00	0.00	0.000	O					0.01
17.750	0.00	0.00	0.000	O					0.00
17.833	0.00	0.00	0.000	O					0.00
17.917	0.00	0.00	0.000	O					0.00
18.000	0.00	0.00	0.000	O					0.00
18.083	0.00	0.00	0.000	O					0.00
18.167	0.00	0.00	0.000	O					0.00
18.250	0.00	0.00	0.000	O					0.00
18.333	0.00	0.00	0.000	O					0.00
18.417	0.00	0.00	0.000	O					0.00
18.500	0.00	0.00	0.000	O					0.00
18.583	0.00	0.00	0.000	O					0.00
18.667	0.00	0.00	0.000	O					0.00
18.750	0.00	0.00	0.000	O					0.00
18.833	0.00	0.00	0.000	O					0.00

18.917	0.00	0.00	0.000	O	|	|	|	0.00
19.000	0.00	0.00	0.000	O	|	|	|	0.00
19.083	0.00	0.00	0.000	O	|	|	|	0.00
19.167	0.00	0.00	0.000	O	|	|	|	0.00
19.250	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 231
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.441 (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
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Study date: 10/25/24

DEXTER VILLAGE
AREA C
10-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 9.414 (CFS)
Total volume = 0.684 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.4 4.71 7.06 9.41	Depth (Ft.)
0.083	0.67	0.01	0.002	O I	0.03
0.167	1.08	0.05	0.008	O I	0.12
0.250	1.04	0.09	0.015	O I	0.22
0.333	1.18	0.14	0.022	O I	0.32
0.417	1.30	0.18	0.029	O I	0.43
0.500	1.47	0.23	0.037	O I	0.55
0.583	1.41	0.28	0.045	O I	0.67
0.667	1.48	0.33	0.053	O I	0.78
0.750	1.56	0.38	0.061	O I	0.90
0.833	1.42	0.43	0.069	O I	1.01
0.917	1.38	0.47	0.075	O I	1.11
1.000	1.50	0.51	0.082	O I	1.20
1.083	1.77	0.56	0.089	O I	1.31
1.167	1.91	0.61	0.098	O I	1.44
1.250	1.93	0.64	0.107	O I	1.55
1.333	1.83	0.64	0.115	O I	1.64
1.417	2.07	0.64	0.124	O I	1.73
1.500	2.30	0.64	0.135	O I	1.85
1.583	2.21	0.64	0.146	O I	1.96
1.667	2.27	0.64	0.157	O I	2.08
1.750	2.81	0.64	0.170	O I	2.21
1.833	2.94	0.64	0.186	O I	2.38
1.917	2.72	0.64	0.201	O I	2.53
2.000	2.69	0.64	0.215	O I	2.68
2.083	2.81	0.64	0.230	O I	2.83
2.167	3.76	0.64	0.248	O I	3.02
2.250	4.98	0.64	0.273	O I	3.29
2.333	4.23	0.64	0.301	O I	3.58
2.417	6.24	0.64	0.332	O I	3.91
2.500	8.19	0.64	0.378	O I	4.38
2.583	9.41	0.64	0.434	O I	4.97
2.667	8.02	0.64	0.489	O I	5.55
2.750	3.98	0.64	0.526	O I	5.94
2.833	1.91	0.64	0.542	O I	6.11
2.917	1.59	0.64	0.550	O I	6.18
3.000	0.96	0.64	0.554	O I	6.23
3.083	0.27	0.64	0.554	I O	6.23
3.167	0.03	0.64	0.551	I O	6.19
3.250	0.00	0.64	0.546	I O	6.15
3.333	0.00	0.64	0.542	I O	6.10
3.417	0.00	0.64	0.538	I O	6.06
3.500	0.00	0.64	0.533	I O	6.01
3.583	0.00	0.64	0.529	I O	5.96
3.667	0.00	0.64	0.524	I O	5.92
3.750	0.00	0.64	0.520	I O	5.87
3.833	0.00	0.64	0.516	I O	5.83

3.917	0.00	0.64	0.511	I	O	|	|	|	| 5.78
4.000	0.00	0.64	0.507	I	O	|	|	|	| 5.73
4.083	0.00	0.64	0.502	I	O	|	|	|	| 5.69
4.167	0.00	0.64	0.498	I	O	|	|	|	| 5.64
4.250	0.00	0.64	0.493	I	O	|	|	|	| 5.59
4.333	0.00	0.64	0.489	I	O	|	|	|	| 5.55
4.417	0.00	0.64	0.485	I	O	|	|	|	| 5.50
4.500	0.00	0.64	0.480	I	O	|	|	|	| 5.46
4.583	0.00	0.64	0.476	I	O	|	|	|	| 5.41
4.667	0.00	0.64	0.471	I	O	|	|	|	| 5.36
4.750	0.00	0.64	0.467	I	O	|	|	|	| 5.32
4.833	0.00	0.64	0.463	I	O	|	|	|	| 5.27
4.917	0.00	0.64	0.458	I	O	|	|	|	| 5.23
5.000	0.00	0.64	0.454	I	O	|	|	|	| 5.18
5.083	0.00	0.64	0.449	I	O	|	|	|	| 5.13
5.167	0.00	0.64	0.445	I	O	|	|	|	| 5.09
5.250	0.00	0.64	0.441	I	O	|	|	|	| 5.04
5.333	0.00	0.64	0.436	I	O	|	|	|	| 5.00
5.417	0.00	0.64	0.432	I	O	|	|	|	| 4.95
5.500	0.00	0.64	0.427	I	O	|	|	|	| 4.90
5.583	0.00	0.64	0.423	I	O	|	|	|	| 4.86
5.667	0.00	0.64	0.419	I	O	|	|	|	| 4.81
5.750	0.00	0.64	0.414	I	O	|	|	|	| 4.77
5.833	0.00	0.64	0.410	I	O	|	|	|	| 4.72
5.917	0.00	0.64	0.405	I	O	|	|	|	| 4.67
6.000	0.00	0.64	0.401	I	O	|	|	|	| 4.63
6.083	0.00	0.64	0.397	I	O	|	|	|	| 4.58
6.167	0.00	0.64	0.392	I	O	|	|	|	| 4.53
6.250	0.00	0.64	0.388	I	O	|	|	|	| 4.49
6.333	0.00	0.64	0.383	I	O	|	|	|	| 4.44
6.417	0.00	0.64	0.379	I	O	|	|	|	| 4.40
6.500	0.00	0.64	0.374	I	O	|	|	|	| 4.35
6.583	0.00	0.64	0.370	I	O	|	|	|	| 4.30
6.667	0.00	0.64	0.366	I	O	|	|	|	| 4.26
6.750	0.00	0.64	0.361	I	O	|	|	|	| 4.21
6.833	0.00	0.64	0.357	I	O	|	|	|	| 4.17
6.917	0.00	0.64	0.352	I	O	|	|	|	| 4.12
7.000	0.00	0.64	0.348	I	O	|	|	|	| 4.07
7.083	0.00	0.64	0.344	I	O	|	|	|	| 4.03
7.167	0.00	0.64	0.339	I	O	|	|	|	| 3.98
7.250	0.00	0.64	0.335	I	O	|	|	|	| 3.94
7.333	0.00	0.64	0.330	I	O	|	|	|	| 3.89
7.417	0.00	0.64	0.326	I	O	|	|	|	| 3.84
7.500	0.00	0.64	0.322	I	O	|	|	|	| 3.80
7.583	0.00	0.64	0.317	I	O	|	|	|	| 3.75
7.667	0.00	0.64	0.313	I	O	|	|	|	| 3.70
7.750	0.00	0.64	0.308	I	O	|	|	|	| 3.66
7.833	0.00	0.64	0.304	I	O	|	|	|	| 3.61
7.917	0.00	0.64	0.300	I	O	|	|	|	| 3.57
8.000	0.00	0.64	0.295	I	O	|	|	|	| 3.52
8.083	0.00	0.64	0.291	I	O	|	|	|	| 3.47
8.167	0.00	0.64	0.286	I	O	|	|	|	| 3.43
8.250	0.00	0.64	0.282	I	O	|	|	|	| 3.38
8.333	0.00	0.64	0.277	I	O	|	|	|	| 3.34
8.417	0.00	0.64	0.273	I	O	|	|	|	| 3.29
8.500	0.00	0.64	0.269	I	O	|	|	|	| 3.24
8.583	0.00	0.64	0.264	I	O	|	|	|	| 3.20
8.667	0.00	0.64	0.260	I	O	|	|	|	| 3.15
8.750	0.00	0.64	0.255	I	O	|	|	|	| 3.11
8.833	0.00	0.64	0.251	I	O	|	|	|	| 3.06

8.917	0.00	0.64	0.247	I O	|	|	|	3.01
9.000	0.00	0.64	0.242	I O	|	|	|	2.97
9.083	0.00	0.64	0.238	I O	|	|	|	2.92
9.167	0.00	0.64	0.233	I O	|	|	|	2.87
9.250	0.00	0.64	0.229	I O	|	|	|	2.83
9.333	0.00	0.64	0.225	I O	|	|	|	2.78
9.417	0.00	0.64	0.220	I O	|	|	|	2.74
9.500	0.00	0.64	0.216	I O	|	|	|	2.69
9.583	0.00	0.64	0.211	I O	|	|	|	2.64
9.667	0.00	0.64	0.207	I O	|	|	|	2.60
9.750	0.00	0.64	0.203	I O	|	|	|	2.55
9.833	0.00	0.64	0.198	I O	|	|	|	2.51
9.917	0.00	0.64	0.194	I O	|	|	|	2.46
10.000	0.00	0.64	0.189	I O	|	|	|	2.41
10.083	0.00	0.64	0.185	I O	|	|	|	2.37
10.167	0.00	0.64	0.181	I O	|	|	|	2.32
10.250	0.00	0.64	0.176	I O	|	|	|	2.28
10.333	0.00	0.64	0.172	I O	|	|	|	2.23
10.417	0.00	0.64	0.167	I O	|	|	|	2.18
10.500	0.00	0.64	0.163	I O	|	|	|	2.14
10.583	0.00	0.64	0.158	I O	|	|	|	2.09
10.667	0.00	0.64	0.154	I O	|	|	|	2.04
10.750	0.00	0.64	0.150	I O	|	|	|	2.00
10.833	0.00	0.64	0.145	I O	|	|	|	1.95
10.917	0.00	0.64	0.141	I O	|	|	|	1.91
11.000	0.00	0.64	0.136	I O	|	|	|	1.86
11.083	0.00	0.64	0.132	I O	|	|	|	1.81
11.167	0.00	0.64	0.128	I O	|	|	|	1.77
11.250	0.00	0.64	0.123	I O	|	|	|	1.72
11.333	0.00	0.64	0.119	I O	|	|	|	1.68
11.417	0.00	0.64	0.114	I O	|	|	|	1.63
11.500	0.00	0.64	0.110	I O	|	|	|	1.58
11.583	0.00	0.64	0.106	I O	|	|	|	1.54
11.667	0.00	0.64	0.101	I O	|	|	|	1.49
11.750	0.00	0.61	0.097	I O	|	|	|	1.43
11.833	0.00	0.58	0.093	IO	|	|	|	1.37
11.917	0.00	0.56	0.089	IO	|	|	|	1.31
12.000	0.00	0.53	0.085	IO	|	|	|	1.25
12.083	0.00	0.51	0.082	IO	|	|	|	1.20
12.167	0.00	0.49	0.078	IO	|	|	|	1.15
12.250	0.00	0.47	0.075	IO	|	|	|	1.10
12.333	0.00	0.45	0.072	IO	|	|	|	1.05
12.417	0.00	0.43	0.069	IO	|	|	|	1.01
12.500	0.00	0.41	0.066	IO	|	|	|	0.97
12.583	0.00	0.39	0.063	IO	|	|	|	0.93
12.667	0.00	0.38	0.060	IO	|	|	|	0.89
12.750	0.00	0.36	0.058	IO	|	|	|	0.85
12.833	0.00	0.35	0.055	IO	|	|	|	0.81
12.917	0.00	0.33	0.053	IO	|	|	|	0.78
13.000	0.00	0.32	0.051	IO	|	|	|	0.75
13.083	0.00	0.30	0.049	IO	|	|	|	0.71
13.167	0.00	0.29	0.046	O	|	|	|	0.68
13.250	0.00	0.28	0.045	O	|	|	|	0.65
13.333	0.00	0.27	0.043	O	|	|	|	0.63
13.417	0.00	0.26	0.041	O	|	|	|	0.60
13.500	0.00	0.25	0.039	O	|	|	|	0.58
13.583	0.00	0.24	0.037	O	|	|	|	0.55
13.667	0.00	0.23	0.036	O	|	|	|	0.53
13.750	0.00	0.22	0.034	O	|	|	|	0.51
13.833	0.00	0.21	0.033	O	|	|	|	0.48

13.917	0.00	0.20	0.032	O	|	|	|	|	0.46
14.000	0.00	0.19	0.030	O	|	|	|	|	0.44
14.083	0.00	0.18	0.029	O	|	|	|	|	0.42
14.167	0.00	0.17	0.028	O	|	|	|	|	0.41
14.250	0.00	0.17	0.027	O	|	|	|	|	0.39
14.333	0.00	0.16	0.025	O	|	|	|	|	0.37
14.417	0.00	0.15	0.024	O	|	|	|	|	0.36
14.500	0.00	0.15	0.023	O	|	|	|	|	0.34
14.583	0.00	0.14	0.022	O	|	|	|	|	0.33
14.667	0.00	0.13	0.021	O	|	|	|	|	0.31
14.750	0.00	0.13	0.020	O	|	|	|	|	0.30
14.833	0.00	0.12	0.020	O	|	|	|	|	0.29
14.917	0.00	0.12	0.019	O	|	|	|	|	0.28
15.000	0.00	0.11	0.018	O	|	|	|	|	0.26
15.083	0.00	0.11	0.017	O	|	|	|	|	0.25
15.167	0.00	0.10	0.016	O	|	|	|	|	0.24
15.250	0.00	0.10	0.016	O	|	|	|	|	0.23
15.333	0.00	0.09	0.015	O	|	|	|	|	0.22
15.417	0.00	0.09	0.014	O	|	|	|	|	0.21
15.500	0.00	0.09	0.014	O	|	|	|	|	0.20
15.583	0.00	0.08	0.013	O	|	|	|	|	0.20
15.667	0.00	0.08	0.013	O	|	|	|	|	0.19
15.750	0.00	0.08	0.012	O	|	|	|	|	0.18
15.833	0.00	0.07	0.012	O	|	|	|	|	0.17
15.917	0.00	0.07	0.011	O	|	|	|	|	0.16
16.000	0.00	0.07	0.011	O	|	|	|	|	0.16
16.083	0.00	0.06	0.010	O	|	|	|	|	0.15
16.167	0.00	0.06	0.010	O	|	|	|	|	0.14
16.250	0.00	0.06	0.009	O	|	|	|	|	0.14
16.333	0.00	0.06	0.009	O	|	|	|	|	0.13
16.417	0.00	0.05	0.009	O	|	|	|	|	0.13
16.500	0.00	0.05	0.008	O	|	|	|	|	0.12
16.583	0.00	0.05	0.008	O	|	|	|	|	0.12
16.667	0.00	0.05	0.008	O	|	|	|	|	0.11
16.750	0.00	0.05	0.007	O	|	|	|	|	0.11
16.833	0.00	0.04	0.007	O	|	|	|	|	0.10
16.917	0.00	0.04	0.007	O	|	|	|	|	0.10
17.000	0.00	0.04	0.006	O	|	|	|	|	0.09
17.083	0.00	0.04	0.006	O	|	|	|	|	0.09
17.167	0.00	0.04	0.006	O	|	|	|	|	0.09
17.250	0.00	0.04	0.006	O	|	|	|	|	0.08
17.333	0.00	0.03	0.005	O	|	|	|	|	0.08
17.417	0.00	0.03	0.005	O	|	|	|	|	0.08
17.500	0.00	0.03	0.005	O	|	|	|	|	0.07
17.583	0.00	0.03	0.005	O	|	|	|	|	0.07
17.667	0.00	0.03	0.005	O	|	|	|	|	0.07
17.750	0.00	0.03	0.004	O	|	|	|	|	0.06
17.833	0.00	0.03	0.004	O	|	|	|	|	0.06
17.917	0.00	0.02	0.004	O	|	|	|	|	0.06
18.000	0.00	0.02	0.004	O	|	|	|	|	0.06
18.083	0.00	0.02	0.004	O	|	|	|	|	0.05
18.167	0.00	0.02	0.003	O	|	|	|	|	0.05
18.250	0.00	0.02	0.003	O	|	|	|	|	0.05
18.333	0.00	0.02	0.003	O	|	|	|	|	0.05
18.417	0.00	0.02	0.003	O	|	|	|	|	0.04
18.500	0.00	0.02	0.003	O	|	|	|	|	0.04
18.583	0.00	0.02	0.003	O	|	|	|	|	0.04
18.667	0.00	0.02	0.003	O	|	|	|	|	0.04
18.750	0.00	0.02	0.003	O	|	|	|	|	0.04
18.833	0.00	0.02	0.002	O	|	|	|	|	0.04

18.917	0.00	0.01	0.002	O	|	|	|	0.03
19.000	0.00	0.01	0.002	O	|	|	|	0.03
19.083	0.00	0.01	0.002	O	|	|	|	0.03
19.167	0.00	0.01	0.002	O	|	|	|	0.03
19.250	0.00	0.01	0.002	O	|	|	|	0.03
19.333	0.00	0.01	0.002	O	|	|	|	0.03
19.417	0.00	0.01	0.002	O	|	|	|	0.03
19.500	0.00	0.01	0.002	O	|	|	|	0.03
19.583	0.00	0.01	0.002	O	|	|	|	0.02
19.667	0.00	0.01	0.002	O	|	|	|	0.02
19.750	0.00	0.01	0.002	O	|	|	|	0.02
19.833	0.00	0.01	0.001	O	|	|	|	0.02
19.917	0.00	0.01	0.001	O	|	|	|	0.02
20.000	0.00	0.01	0.001	O	|	|	|	0.02
20.083	0.00	0.01	0.001	O	|	|	|	0.02
20.167	0.00	0.01	0.001	O	|	|	|	0.02
20.250	0.00	0.01	0.001	O	|	|	|	0.02
20.333	0.00	0.01	0.001	O	|	|	|	0.02
20.417	0.00	0.01	0.001	O	|	|	|	0.02
20.500	0.00	0.01	0.001	O	|	|	|	0.02
20.583	0.00	0.01	0.001	O	|	|	|	0.01
20.667	0.00	0.01	0.001	O	|	|	|	0.01
20.750	0.00	0.01	0.001	O	|	|	|	0.01
20.833	0.00	0.01	0.001	O	|	|	|	0.01
20.917	0.00	0.01	0.001	O	|	|	|	0.01
21.000	0.00	0.01	0.001	O	|	|	|	0.01
21.083	0.00	0.00	0.001	O	|	|	|	0.01
21.167	0.00	0.00	0.001	O	|	|	|	0.01
21.250	0.00	0.00	0.001	O	|	|	|	0.01
21.333	0.00	0.00	0.001	O	|	|	|	0.01
21.417	0.00	0.00	0.001	O	|	|	|	0.01
21.500	0.00	0.00	0.001	O	|	|	|	0.01
21.583	0.00	0.00	0.001	O	|	|	|	0.01
21.667	0.00	0.00	0.001	O	|	|	|	0.01
21.750	0.00	0.00	0.001	O	|	|	|	0.01
21.833	0.00	0.00	0.001	O	|	|	|	0.01
21.917	0.00	0.00	0.000	O	|	|	|	0.01
22.000	0.00	0.00	0.000	O	|	|	|	0.01
22.083	0.00	0.00	0.000	O	|	|	|	0.01
22.167	0.00	0.00	0.000	O	|	|	|	0.01
22.250	0.00	0.00	0.000	O	|	|	|	0.01
22.333	0.00	0.00	0.000	O	|	|	|	0.01
22.417	0.00	0.00	0.000	O	|	|	|	0.01
22.500	0.00	0.00	0.000	O	|	|	|	0.01
22.583	0.00	0.00	0.000	O	|	|	|	0.01
22.667	0.00	0.00	0.000	O	|	|	|	0.00
22.750	0.00	0.00	0.000	O	|	|	|	0.00
22.833	0.00	0.00	0.000	O	|	|	|	0.00
22.917	0.00	0.00	0.000	O	|	|	|	0.00
23.000	0.00	0.00	0.000	O	|	|	|	0.00
23.083	0.00	0.00	0.000	O	|	|	|	0.00
23.167	0.00	0.00	0.000	O	|	|	|	0.00
23.250	0.00	0.00	0.000	O	|	|	|	0.00
23.333	0.00	0.00	0.000	O	|	|	|	0.00
23.417	0.00	0.00	0.000	O	|	|	|	0.00
23.500	0.00	0.00	0.000	O	|	|	|	0.00
23.583	0.00	0.00	0.000	O	|	|	|	0.00
23.667	0.00	0.00	0.000	O	|	|	|	0.00
23.750	0.00	0.00	0.000	O	|	|	|	0.00
23.833	0.00	0.00	0.000	O	|	|	|	0.00

23.917	0.00	0.00	0.000	O	|	|	|	0.00
24.000	0.00	0.00	0.000	O	|	|	|	0.00
24.083	0.00	0.00	0.000	O	|	|	|	0.00
24.167	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.684 (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
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Study date: 10/25/24

DEXTER VILLAGE
AREA C
10-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte

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

Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.693 (CFS)
Total volume = 0.923 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.2 4.35 6.52 8.69	Depth (Ft.)
0.083	0.36	0.01	0.001	OI | | | |	0.02
0.167	0.65	0.03	0.005	O I | | | |	0.07
0.250	0.73	0.06	0.009	O I | | | |	0.13
0.333	0.74	0.09	0.014	O I | | | |	0.20
0.417	0.74	0.11	0.018	O I | | | |	0.26
0.500	0.81	0.14	0.022	O I | | | |	0.33
0.583	0.85	0.17	0.027	O I | | | |	0.40
0.667	0.86	0.20	0.032	O I | | | |	0.47
0.750	0.86	0.23	0.036	O I | | | |	0.53
0.833	0.86	0.25	0.040	O I | | | |	0.59
0.917	0.86	0.28	0.045	|O I | | | |	0.65
1.000	0.93	0.31	0.049	|O I | | | |	0.72
1.083	0.98	0.33	0.053	|O I | | | |	0.78
1.167	0.98	0.36	0.057	|O I | | | |	0.84
1.250	0.98	0.39	0.062	|O I | | | |	0.91
1.333	0.98	0.41	0.066	|O I | | | |	0.96
1.417	0.98	0.44	0.069	|O I | | | |	1.02
1.500	0.98	0.46	0.073	|O I | | | |	1.08
1.583	0.98	0.48	0.077	|O I | | | |	1.13
1.667	0.98	0.50	0.080	|O I | | | |	1.18
1.750	0.98	0.52	0.083	|O I | | | |	1.22
1.833	0.98	0.54	0.086	|O I | | | |	1.27
1.917	0.98	0.56	0.089	| OI | | | |	1.31
2.000	1.05	0.58	0.092	| OI | | | |	1.36
2.083	1.03	0.60	0.095	| OI | | | |	1.40
2.167	1.06	0.62	0.098	| OI | | | |	1.45
2.250	1.10	0.64	0.102	| O I | | | |	1.49
2.333	1.10	0.64	0.105	| O I | | | |	1.53
2.417	1.10	0.64	0.108	| O I | | | |	1.56
2.500	1.10	0.64	0.111	| O I | | | |	1.60
2.583	1.10	0.64	0.114	| O I | | | |	1.63
2.667	1.10	0.64	0.118	| O I | | | |	1.66
2.750	1.18	0.64	0.121	| O I | | | |	1.70
2.833	1.22	0.64	0.125	| O I | | | |	1.74
2.917	1.23	0.64	0.129	| O I | | | |	1.78
3.000	1.23	0.64	0.133	| O I | | | |	1.82
3.083	1.23	0.64	0.137	| O I | | | |	1.87
3.167	1.30	0.64	0.141	| O I | | | |	1.91
3.250	1.34	0.64	0.146	| O I | | | |	1.96
3.333	1.35	0.64	0.151	| O I | | | |	2.01
3.417	1.42	0.64	0.156	| O I | | | |	2.06
3.500	1.54	0.64	0.162	| O I | | | |	2.12
3.583	1.66	0.64	0.168	| O I | | | |	2.19
3.667	1.71	0.64	0.176	| O I | | | |	2.27
3.750	1.79	0.64	0.183	| O I | | | |	2.35
3.833	1.83	0.64	0.191	| O I | | | |	2.43

3.917	1.91	0.64	0.200	| O	I|	|	|	|	2.52
4.000	1.96	0.64	0.209	| O	I|	|	|	|	2.62
4.083	2.04	0.64	0.218	| O	I|	|	|	|	2.71
4.167	2.15	0.64	0.228	| O	I|	|	|	|	2.82
4.250	2.27	0.64	0.239	| O	I	|	|	|	2.93
4.333	2.40	0.64	0.251	| O	I	|	|	|	3.05
4.417	2.56	0.64	0.263	| O	|I	|	|	|	3.19
4.500	2.64	0.64	0.277	| O	|I	|	|	|	3.33
4.583	2.76	0.64	0.291	| O	| I	|	|	|	3.48
4.667	2.95	0.64	0.306	| O	| I	|	|	|	3.64
4.750	3.14	0.64	0.323	| O	| I	|	|	|	3.81
4.833	3.22	0.64	0.340	| O	| I	|	|	|	3.99
4.917	3.35	0.64	0.358	| O	| I	|	|	|	4.18
5.000	3.53	0.64	0.378	| O	| I	|	|	|	4.38
5.083	4.18	0.64	0.400	| O	| I|	|	|	|	4.62
5.167	5.12	0.64	0.427	| O	| | I	|	|	|	4.90
5.250	5.86	0.64	0.461	| O	| | I	|	|	|	5.25
5.333	6.47	0.64	0.499	| O	| | I|	|	|	|	5.65
5.417	7.28	0.64	0.542	| O	| | | I	|	|	|	6.10
5.500	8.69	0.64	0.592	| O	| | |	|	|	I	6.63
5.583	5.18	0.64	0.636	| O	| | I	|	|	|	7.08
5.667	1.98	0.64	0.656	| O	I|	|	|	|	7.30
5.750	0.95	0.64	0.662	| OI	|	|	|	|	7.36
5.833	0.68	0.64	0.663	| O	|	|	|	|	7.37
5.917	0.48	0.64	0.663	|IO	|	|	|	|	7.36
6.000	0.31	0.64	0.661	|IO	|	|	|	|	7.35
6.083	0.11	0.64	0.658	I O	|	|	|	|	7.31
6.167	0.01	0.64	0.654	I O	|	|	|	|	7.27
6.250	0.00	0.64	0.650	I O	|	|	|	|	7.23
6.333	0.00	0.64	0.645	I O	|	|	|	|	7.18
6.417	0.00	0.64	0.641	I O	|	|	|	|	7.13
6.500	0.00	0.64	0.636	I O	|	|	|	|	7.09
6.583	0.00	0.64	0.632	I O	|	|	|	|	7.04
6.667	0.00	0.64	0.627	I O	|	|	|	|	7.00
6.750	0.00	0.64	0.623	I O	|	|	|	|	6.95
6.833	0.00	0.64	0.619	I O	|	|	|	|	6.90
6.917	0.00	0.64	0.614	I O	|	|	|	|	6.86
7.000	0.00	0.64	0.610	I O	|	|	|	|	6.81
7.083	0.00	0.64	0.605	I O	|	|	|	|	6.77
7.167	0.00	0.64	0.601	I O	|	|	|	|	6.72
7.250	0.00	0.64	0.597	I O	|	|	|	|	6.67
7.333	0.00	0.64	0.592	I O	|	|	|	|	6.63
7.417	0.00	0.64	0.588	I O	|	|	|	|	6.58
7.500	0.00	0.64	0.583	I O	|	|	|	|	6.54
7.583	0.00	0.64	0.579	I O	|	|	|	|	6.49
7.667	0.00	0.64	0.575	I O	|	|	|	|	6.44
7.750	0.00	0.64	0.570	I O	|	|	|	|	6.40
7.833	0.00	0.64	0.566	I O	|	|	|	|	6.35
7.917	0.00	0.64	0.561	I O	|	|	|	|	6.31
8.000	0.00	0.64	0.557	I O	|	|	|	|	6.26
8.083	0.00	0.64	0.553	I O	|	|	|	|	6.21
8.167	0.00	0.64	0.548	I O	|	|	|	|	6.17
8.250	0.00	0.64	0.544	I O	|	|	|	|	6.12
8.333	0.00	0.64	0.539	I O	|	|	|	|	6.07
8.417	0.00	0.64	0.535	I O	|	|	|	|	6.03
8.500	0.00	0.64	0.531	I O	|	|	|	|	5.98
8.583	0.00	0.64	0.526	I O	|	|	|	|	5.94
8.667	0.00	0.64	0.522	I O	|	|	|	|	5.89
8.750	0.00	0.64	0.517	I O	|	|	|	|	5.84
8.833	0.00	0.64	0.513	I O	|	|	|	|	5.80

8.917	0.00	0.64	0.508	I O	|	|	|	|	5.75
9.000	0.00	0.64	0.504	I O	|	|	|	|	5.71
9.083	0.00	0.64	0.500	I O	|	|	|	|	5.66
9.167	0.00	0.64	0.495	I O	|	|	|	|	5.61
9.250	0.00	0.64	0.491	I O	|	|	|	|	5.57
9.333	0.00	0.64	0.486	I O	|	|	|	|	5.52
9.417	0.00	0.64	0.482	I O	|	|	|	|	5.48
9.500	0.00	0.64	0.478	I O	|	|	|	|	5.43
9.583	0.00	0.64	0.473	I O	|	|	|	|	5.38
9.667	0.00	0.64	0.469	I O	|	|	|	|	5.34
9.750	0.00	0.64	0.464	I O	|	|	|	|	5.29
9.833	0.00	0.64	0.460	I O	|	|	|	|	5.24
9.917	0.00	0.64	0.456	I O	|	|	|	|	5.20
10.000	0.00	0.64	0.451	I O	|	|	|	|	5.15
10.083	0.00	0.64	0.447	I O	|	|	|	|	5.11
10.167	0.00	0.64	0.442	I O	|	|	|	|	5.06
10.250	0.00	0.64	0.438	I O	|	|	|	|	5.01
10.333	0.00	0.64	0.434	I O	|	|	|	|	4.97
10.417	0.00	0.64	0.429	I O	|	|	|	|	4.92
10.500	0.00	0.64	0.425	I O	|	|	|	|	4.88
10.583	0.00	0.64	0.420	I O	|	|	|	|	4.83
10.667	0.00	0.64	0.416	I O	|	|	|	|	4.78
10.750	0.00	0.64	0.411	I O	|	|	|	|	4.74
10.833	0.00	0.64	0.407	I O	|	|	|	|	4.69
10.917	0.00	0.64	0.403	I O	|	|	|	|	4.65
11.000	0.00	0.64	0.398	I O	|	|	|	|	4.60
11.083	0.00	0.64	0.394	I O	|	|	|	|	4.55
11.167	0.00	0.64	0.389	I O	|	|	|	|	4.51
11.250	0.00	0.64	0.385	I O	|	|	|	|	4.46
11.333	0.00	0.64	0.381	I O	|	|	|	|	4.41
11.417	0.00	0.64	0.376	I O	|	|	|	|	4.37
11.500	0.00	0.64	0.372	I O	|	|	|	|	4.32
11.583	0.00	0.64	0.367	I O	|	|	|	|	4.28
11.667	0.00	0.64	0.363	I O	|	|	|	|	4.23
11.750	0.00	0.64	0.359	I O	|	|	|	|	4.18
11.833	0.00	0.64	0.354	I O	|	|	|	|	4.14
11.917	0.00	0.64	0.350	I O	|	|	|	|	4.09
12.000	0.00	0.64	0.345	I O	|	|	|	|	4.05
12.083	0.00	0.64	0.341	I O	|	|	|	|	4.00
12.167	0.00	0.64	0.337	I O	|	|	|	|	3.95
12.250	0.00	0.64	0.332	I O	|	|	|	|	3.91
12.333	0.00	0.64	0.328	I O	|	|	|	|	3.86
12.417	0.00	0.64	0.323	I O	|	|	|	|	3.82
12.500	0.00	0.64	0.319	I O	|	|	|	|	3.77
12.583	0.00	0.64	0.315	I O	|	|	|	|	3.72
12.667	0.00	0.64	0.310	I O	|	|	|	|	3.68
12.750	0.00	0.64	0.306	I O	|	|	|	|	3.63
12.833	0.00	0.64	0.301	I O	|	|	|	|	3.58
12.917	0.00	0.64	0.297	I O	|	|	|	|	3.54
13.000	0.00	0.64	0.292	I O	|	|	|	|	3.49
13.083	0.00	0.64	0.288	I O	|	|	|	|	3.45
13.167	0.00	0.64	0.284	I O	|	|	|	|	3.40
13.250	0.00	0.64	0.279	I O	|	|	|	|	3.35
13.333	0.00	0.64	0.275	I O	|	|	|	|	3.31
13.417	0.00	0.64	0.270	I O	|	|	|	|	3.26
13.500	0.00	0.64	0.266	I O	|	|	|	|	3.22
13.583	0.00	0.64	0.262	I O	|	|	|	|	3.17
13.667	0.00	0.64	0.257	I O	|	|	|	|	3.12
13.750	0.00	0.64	0.253	I O	|	|	|	|	3.08
13.833	0.00	0.64	0.248	I O	|	|	|	|	3.03

13.917	0.00	0.64	0.244	I O	|	|	|	2.99
14.000	0.00	0.64	0.240	I O	|	|	|	2.94
14.083	0.00	0.64	0.235	I O	|	|	|	2.89
14.167	0.00	0.64	0.231	I O	|	|	|	2.85
14.250	0.00	0.64	0.226	I O	|	|	|	2.80
14.333	0.00	0.64	0.222	I O	|	|	|	2.75
14.417	0.00	0.64	0.218	I O	|	|	|	2.71
14.500	0.00	0.64	0.213	I O	|	|	|	2.66
14.583	0.00	0.64	0.209	I O	|	|	|	2.62
14.667	0.00	0.64	0.204	I O	|	|	|	2.57
14.750	0.00	0.64	0.200	I O	|	|	|	2.52
14.833	0.00	0.64	0.196	I O	|	|	|	2.48
14.917	0.00	0.64	0.191	I O	|	|	|	2.43
15.000	0.00	0.64	0.187	I O	|	|	|	2.39
15.083	0.00	0.64	0.182	I O	|	|	|	2.34
15.167	0.00	0.64	0.178	I O	|	|	|	2.29
15.250	0.00	0.64	0.173	I O	|	|	|	2.25
15.333	0.00	0.64	0.169	I O	|	|	|	2.20
15.417	0.00	0.64	0.165	I O	|	|	|	2.16
15.500	0.00	0.64	0.160	I O	|	|	|	2.11
15.583	0.00	0.64	0.156	I O	|	|	|	2.06
15.667	0.00	0.64	0.151	I O	|	|	|	2.02
15.750	0.00	0.64	0.147	I O	|	|	|	1.97
15.833	0.00	0.64	0.143	I O	|	|	|	1.92
15.917	0.00	0.64	0.138	I O	|	|	|	1.88
16.000	0.00	0.64	0.134	I O	|	|	|	1.83
16.083	0.00	0.64	0.129	I O	|	|	|	1.79
16.167	0.00	0.64	0.125	I O	|	|	|	1.74
16.250	0.00	0.64	0.121	I O	|	|	|	1.69
16.333	0.00	0.64	0.116	I O	|	|	|	1.65
16.417	0.00	0.64	0.112	I O	|	|	|	1.60
16.500	0.00	0.64	0.107	I O	|	|	|	1.56
16.583	0.00	0.64	0.103	I O	|	|	|	1.51
16.667	0.00	0.62	0.099	I O	|	|	|	1.45
16.750	0.00	0.59	0.094	I O	|	|	|	1.39
16.833	0.00	0.57	0.090	I O	|	|	|	1.33
16.917	0.00	0.54	0.087	I O	|	|	|	1.27
17.000	0.00	0.52	0.083	IO	|	|	|	1.22
17.083	0.00	0.50	0.079	IO	|	|	|	1.17
17.167	0.00	0.48	0.076	IO	|	|	|	1.12
17.250	0.00	0.46	0.073	IO	|	|	|	1.07
17.333	0.00	0.44	0.070	IO	|	|	|	1.03
17.417	0.00	0.42	0.067	IO	|	|	|	0.98
17.500	0.00	0.40	0.064	IO	|	|	|	0.94
17.583	0.00	0.38	0.061	IO	|	|	|	0.90
17.667	0.00	0.37	0.059	IO	|	|	|	0.86
17.750	0.00	0.35	0.056	IO	|	|	|	0.83
17.833	0.00	0.34	0.054	IO	|	|	|	0.79
17.917	0.00	0.32	0.052	IO	|	|	|	0.76
18.000	0.00	0.31	0.049	IO	|	|	|	0.73
18.083	0.00	0.30	0.047	IO	|	|	|	0.70
18.167	0.00	0.28	0.045	IO	|	|	|	0.67
18.250	0.00	0.27	0.043	IO	|	|	|	0.64
18.333	0.00	0.26	0.042	O	|	|	|	0.61
18.417	0.00	0.25	0.040	O	|	|	|	0.59
18.500	0.00	0.24	0.038	O	|	|	|	0.56
18.583	0.00	0.23	0.036	O	|	|	|	0.54
18.667	0.00	0.22	0.035	O	|	|	|	0.51
18.750	0.00	0.21	0.033	O	|	|	|	0.49
18.833	0.00	0.20	0.032	O	|	|	|	0.47

18.917	0.00	0.19	0.031	O	|	|	|	0.45
19.000	0.00	0.18	0.029	O	|	|	|	0.43
19.083	0.00	0.18	0.028	O	|	|	|	0.41
19.167	0.00	0.17	0.027	O	|	|	|	0.40
19.250	0.00	0.16	0.026	O	|	|	|	0.38
19.333	0.00	0.16	0.025	O	|	|	|	0.36
19.417	0.00	0.15	0.024	O	|	|	|	0.35
19.500	0.00	0.14	0.023	O	|	|	|	0.33
19.583	0.00	0.14	0.022	O	|	|	|	0.32
19.667	0.00	0.13	0.021	O	|	|	|	0.31
19.750	0.00	0.13	0.020	O	|	|	|	0.29
19.833	0.00	0.12	0.019	O	|	|	|	0.28
19.917	0.00	0.11	0.018	O	|	|	|	0.27
20.000	0.00	0.11	0.018	O	|	|	|	0.26
20.083	0.00	0.11	0.017	O	|	|	|	0.25
20.167	0.00	0.10	0.016	O	|	|	|	0.24
20.250	0.00	0.10	0.015	O	|	|	|	0.23
20.333	0.00	0.09	0.015	O	|	|	|	0.22
20.417	0.00	0.09	0.014	O	|	|	|	0.21
20.500	0.00	0.08	0.014	O	|	|	|	0.20
20.583	0.00	0.08	0.013	O	|	|	|	0.19
20.667	0.00	0.08	0.012	O	|	|	|	0.18
20.750	0.00	0.07	0.012	O	|	|	|	0.17
20.833	0.00	0.07	0.011	O	|	|	|	0.17
20.917	0.00	0.07	0.011	O	|	|	|	0.16
21.000	0.00	0.07	0.010	O	|	|	|	0.15
21.083	0.00	0.06	0.010	O	|	|	|	0.15
21.167	0.00	0.06	0.010	O	|	|	|	0.14
21.250	0.00	0.06	0.009	O	|	|	|	0.13
21.333	0.00	0.06	0.009	O	|	|	|	0.13
21.417	0.00	0.05	0.008	O	|	|	|	0.12
21.500	0.00	0.05	0.008	O	|	|	|	0.12
21.583	0.00	0.05	0.008	O	|	|	|	0.11
21.667	0.00	0.05	0.007	O	|	|	|	0.11
21.750	0.00	0.04	0.007	O	|	|	|	0.10
21.833	0.00	0.04	0.007	O	|	|	|	0.10
21.917	0.00	0.04	0.006	O	|	|	|	0.10
22.000	0.00	0.04	0.006	O	|	|	|	0.09
22.083	0.00	0.04	0.006	O	|	|	|	0.09
22.167	0.00	0.04	0.006	O	|	|	|	0.08
22.250	0.00	0.03	0.005	O	|	|	|	0.08
22.333	0.00	0.03	0.005	O	|	|	|	0.08
22.417	0.00	0.03	0.005	O	|	|	|	0.07
22.500	0.00	0.03	0.005	O	|	|	|	0.07
22.583	0.00	0.03	0.005	O	|	|	|	0.07
22.667	0.00	0.03	0.004	O	|	|	|	0.06
22.750	0.00	0.03	0.004	O	|	|	|	0.06
22.833	0.00	0.03	0.004	O	|	|	|	0.06
22.917	0.00	0.02	0.004	O	|	|	|	0.06
23.000	0.00	0.02	0.004	O	|	|	|	0.05
23.083	0.00	0.02	0.004	O	|	|	|	0.05
23.167	0.00	0.02	0.003	O	|	|	|	0.05
23.250	0.00	0.02	0.003	O	|	|	|	0.05
23.333	0.00	0.02	0.003	O	|	|	|	0.05
23.417	0.00	0.02	0.003	O	|	|	|	0.04
23.500	0.00	0.02	0.003	O	|	|	|	0.04
23.583	0.00	0.02	0.003	O	|	|	|	0.04
23.667	0.00	0.02	0.003	O	|	|	|	0.04
23.750	0.00	0.02	0.003	O	|	|	|	0.04
23.833	0.00	0.02	0.002	O	|	|	|	0.04

23.917	0.00	0.01	0.002	O	|	|	|	0.03
24.000	0.00	0.01	0.002	O	|	|	|	0.03
24.083	0.00	0.01	0.002	O	|	|	|	0.03
24.167	0.00	0.01	0.002	O	|	|	|	0.03
24.250	0.00	0.01	0.002	O	|	|	|	0.03
24.333	0.00	0.01	0.002	O	|	|	|	0.03
24.417	0.00	0.01	0.002	O	|	|	|	0.03
24.500	0.00	0.01	0.002	O	|	|	|	0.02
24.583	0.00	0.01	0.002	O	|	|	|	0.02
24.667	0.00	0.01	0.002	O	|	|	|	0.02
24.750	0.00	0.01	0.001	O	|	|	|	0.02
24.833	0.00	0.01	0.001	O	|	|	|	0.02
24.917	0.00	0.01	0.001	O	|	|	|	0.02
25.000	0.00	0.01	0.001	O	|	|	|	0.02
25.083	0.00	0.01	0.001	O	|	|	|	0.02
25.167	0.00	0.01	0.001	O	|	|	|	0.02
25.250	0.00	0.01	0.001	O	|	|	|	0.02
25.333	0.00	0.01	0.001	O	|	|	|	0.02
25.417	0.00	0.01	0.001	O	|	|	|	0.02
25.500	0.00	0.01	0.001	O	|	|	|	0.01
25.583	0.00	0.01	0.001	O	|	|	|	0.01
25.667	0.00	0.01	0.001	O	|	|	|	0.01
25.750	0.00	0.01	0.001	O	|	|	|	0.01
25.833	0.00	0.01	0.001	O	|	|	|	0.01
25.917	0.00	0.01	0.001	O	|	|	|	0.01
26.000	0.00	0.00	0.001	O	|	|	|	0.01
26.083	0.00	0.00	0.001	O	|	|	|	0.01
26.167	0.00	0.00	0.001	O	|	|	|	0.01
26.250	0.00	0.00	0.001	O	|	|	|	0.01
26.333	0.00	0.00	0.001	O	|	|	|	0.01
26.417	0.00	0.00	0.001	O	|	|	|	0.01
26.500	0.00	0.00	0.001	O	|	|	|	0.01
26.583	0.00	0.00	0.001	O	|	|	|	0.01
26.667	0.00	0.00	0.001	O	|	|	|	0.01
26.750	0.00	0.00	0.001	O	|	|	|	0.01
26.833	0.00	0.00	0.001	O	|	|	|	0.01
26.917	0.00	0.00	0.000	O	|	|	|	0.01
27.000	0.00	0.00	0.000	O	|	|	|	0.01
27.083	0.00	0.00	0.000	O	|	|	|	0.01
27.167	0.00	0.00	0.000	O	|	|	|	0.01
27.250	0.00	0.00	0.000	O	|	|	|	0.01
27.333	0.00	0.00	0.000	O	|	|	|	0.01
27.417	0.00	0.00	0.000	O	|	|	|	0.01
27.500	0.00	0.00	0.000	O	|	|	|	0.01
27.583	0.00	0.00	0.000	O	|	|	|	0.01
27.667	0.00	0.00	0.000	O	|	|	|	0.00
27.750	0.00	0.00	0.000	O	|	|	|	0.00
27.833	0.00	0.00	0.000	O	|	|	|	0.00
27.917	0.00	0.00	0.000	O	|	|	|	0.00
28.000	0.00	0.00	0.000	O	|	|	|	0.00
28.083	0.00	0.00	0.000	O	|	|	|	0.00
28.167	0.00	0.00	0.000	O	|	|	|	0.00
28.250	0.00	0.00	0.000	O	|	|	|	0.00
28.333	0.00	0.00	0.000	O	|	|	|	0.00
28.417	0.00	0.00	0.000	O	|	|	|	0.00
28.500	0.00	0.00	0.000	O	|	|	|	0.00
28.583	0.00	0.00	0.000	O	|	|	|	0.00
28.667	0.00	0.00	0.000	O	|	|	|	0.00
28.750	0.00	0.00	0.000	O	|	|	|	0.00
28.833	0.00	0.00	0.000	O	|	|	|	0.00

28.917	0.00	0.00	0.000	O	|	|	|	|	0.00
29.000	0.00	0.00	0.000	O	|	|	|	|	0.00
29.083	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 349
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.923 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
100-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.603 (CFS)
Total volume = 1.478 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.7	1.30	1.95	2.60	Depth (Ft.)
0.083	0.08	0.00	0.000	OI	|	|	|	|	0.00
0.167	0.13	0.01	0.001	OI	|	|	|	|	0.01
0.250	0.14	0.01	0.002	OI	|	|	|	|	0.03
0.333	0.18	0.02	0.003	O I	|	|	|	|	0.04
0.417	0.21	0.03	0.004	O I	|	|	|	|	0.06
0.500	0.21	0.03	0.005	O I	|	|	|	|	0.08
0.583	0.21	0.04	0.007	O I	|	|	|	|	0.10
0.667	0.21	0.05	0.008	O I	|	|	|	|	0.11
0.750	0.21	0.06	0.009	O I	|	|	|	|	0.13
0.833	0.26	0.06	0.010	O I	|	|	|	|	0.15
0.917	0.28	0.07	0.011	O I	|	|	|	|	0.17
1.000	0.28	0.08	0.013	O I	|	|	|	|	0.19
1.083	0.24	0.09	0.014	|OI	|	|	|	|	0.21
1.167	0.22	0.09	0.015	|OI	|	|	|	|	0.22
1.250	0.21	0.10	0.016	|OI	|	|	|	|	0.23
1.333	0.21	0.10	0.017	|OI	|	|	|	|	0.24
1.417	0.21	0.11	0.017	|OI	|	|	|	|	0.26
1.500	0.21	0.11	0.018	|OI	|	|	|	|	0.27
1.583	0.21	0.12	0.019	|OI	|	|	|	|	0.28
1.667	0.21	0.12	0.019	|OI	|	|	|	|	0.29
1.750	0.21	0.13	0.020	|OI	|	|	|	|	0.29
1.833	0.26	0.13	0.021	|O I	|	|	|	|	0.31
1.917	0.28	0.14	0.022	|O I	|	|	|	|	0.32
2.000	0.28	0.14	0.023	|O I	|	|	|	|	0.33
2.083	0.28	0.15	0.024	|O I	|	|	|	|	0.35
2.167	0.28	0.15	0.025	|O I	|	|	|	|	0.36
2.250	0.28	0.16	0.025	|O I	|	|	|	|	0.37
2.333	0.28	0.16	0.026	| OI	|	|	|	|	0.39
2.417	0.28	0.17	0.027	| OI	|	|	|	|	0.40
2.500	0.28	0.17	0.028	| OI	|	|	|	|	0.41
2.583	0.33	0.18	0.029	| O I	|	|	|	|	0.42
2.667	0.35	0.19	0.030	| O I	|	|	|	|	0.44
2.750	0.36	0.19	0.031	| O I	|	|	|	|	0.46
2.833	0.36	0.20	0.032	| O I	|	|	|	|	0.47
2.917	0.36	0.21	0.033	| O I	|	|	|	|	0.49
3.000	0.36	0.21	0.034	| O I	|	|	|	|	0.50
3.083	0.36	0.22	0.035	| O I	|	|	|	|	0.52
3.167	0.36	0.23	0.036	| O I	|	|	|	|	0.53
3.250	0.36	0.23	0.037	| O I	|	|	|	|	0.54
3.333	0.36	0.24	0.038	| O I	|	|	|	|	0.55
3.417	0.36	0.24	0.038	| O I	|	|	|	|	0.57
3.500	0.36	0.25	0.039	| OI	|	|	|	|	0.58
3.583	0.36	0.25	0.040	| OI	|	|	|	|	0.59
3.667	0.36	0.26	0.041	| OI	|	|	|	|	0.60
3.750	0.36	0.26	0.041	| OI	|	|	|	|	0.61
3.833	0.40	0.26	0.042	| OI	|	|	|	|	0.62

3.917	0.42	0.27	0.043	O I				0.63
4.000	0.43	0.28	0.044	O I				0.65
4.083	0.43	0.28	0.045	O I				0.66
4.167	0.43	0.29	0.046	O I				0.68
4.250	0.43	0.30	0.047	O I				0.69
4.333	0.47	0.30	0.048	O I				0.71
4.417	0.49	0.31	0.049	O I				0.73
4.500	0.50	0.32	0.051	O I				0.74
4.583	0.50	0.33	0.052	O I				0.76
4.667	0.50	0.33	0.053	O I				0.78
4.750	0.50	0.34	0.054	O I				0.80
4.833	0.54	0.35	0.055	O I				0.81
4.917	0.57	0.36	0.057	O I				0.83
5.000	0.57	0.36	0.058	O I				0.85
5.083	0.49	0.37	0.059	OI				0.87
5.167	0.43	0.38	0.060	OI				0.88
5.250	0.43	0.38	0.060	OI				0.89
5.333	0.47	0.38	0.061	OI				0.89
5.417	0.49	0.38	0.061	O I				0.90
5.500	0.50	0.39	0.062	O I				0.91
5.583	0.54	0.40	0.063	O I				0.93
5.667	0.57	0.40	0.064	O I				0.94
5.750	0.57	0.41	0.065	OI				0.96
5.833	0.57	0.42	0.066	OI				0.97
5.917	0.57	0.42	0.067	OI				0.99
6.000	0.57	0.43	0.068	OI				1.00
6.083	0.61	0.44	0.069	O I				1.02
6.167	0.64	0.44	0.071	O I				1.04
6.250	0.64	0.45	0.072	O I				1.06
6.333	0.64	0.46	0.073	O I				1.08
6.417	0.64	0.47	0.074	O I				1.09
6.500	0.64	0.47	0.076	O I				1.11
6.583	0.68	0.48	0.077	O I				1.13
6.667	0.71	0.49	0.078	O I				1.15
6.750	0.71	0.50	0.080	O I				1.17
6.833	0.71	0.51	0.081	O I				1.19
6.917	0.71	0.52	0.083	O I				1.21
7.000	0.71	0.53	0.084	O I				1.23
7.083	0.71	0.53	0.085	O I				1.25
7.167	0.71	0.54	0.086	O I				1.27
7.250	0.71	0.55	0.087	O I				1.29
7.333	0.75	0.56	0.089	O I				1.30
7.417	0.78	0.57	0.090	O I				1.33
7.500	0.78	0.57	0.092	O I				1.35
7.583	0.82	0.58	0.093	O I				1.37
7.667	0.85	0.60	0.095	O I				1.39
7.750	0.85	0.61	0.097	O I				1.42
7.833	0.90	0.62	0.098	O I				1.45
7.917	0.92	0.63	0.100	O I				1.48
8.000	0.93	0.64	0.102	O I				1.50
8.083	1.01	0.64	0.105	O I				1.53
8.167	1.06	0.64	0.107	O I				1.56
8.250	1.07	0.64	0.110	O I				1.59
8.333	1.07	0.64	0.113	O I				1.62
8.417	1.07	0.64	0.116	O I				1.65
8.500	1.07	0.64	0.119	O I				1.68
8.583	1.11	0.64	0.122	O I				1.71
8.667	1.14	0.64	0.125	O I				1.75
8.750	1.14	0.64	0.129	O I				1.78
8.833	1.18	0.64	0.132	O I				1.82

8.917	1.21	0.64	0.136	|	O|	I |	|	|	1.86
9.000	1.21	0.64	0.140	|	O|	I |	|	|	1.90
9.083	1.29	0.64	0.144	|	O|	I|	|	|	1.94
9.167	1.34	0.64	0.149	|	O|	I |	|	|	1.99
9.250	1.35	0.64	0.154	|	O|	I |	|	|	2.04
9.333	1.39	0.64	0.159	|	O|	|I |	|	|	2.10
9.417	1.42	0.64	0.164	|	O|	|I |	|	|	2.15
9.500	1.42	0.64	0.170	|	O|	|I |	|	|	2.21
9.583	1.47	0.64	0.175	|	O|	| I |	|	|	2.27
9.667	1.49	0.64	0.181	|	O|	| I |	|	|	2.33
9.750	1.49	0.64	0.187	|	O|	| I |	|	|	2.39
9.833	1.54	0.64	0.193	|	O|	| I |	|	|	2.45
9.917	1.56	0.64	0.199	|	O|	| I |	|	|	2.52
10.000	1.57	0.64	0.206	|	O|	| I |	|	|	2.58
10.083	1.27	0.64	0.211	|	O|	I|	|	|	2.64
10.167	1.09	0.64	0.215	|	O|	I |	|	|	2.68
10.250	1.07	0.64	0.218	|	O|	I |	|	|	2.71
10.333	1.07	0.64	0.221	|	O|	I |	|	|	2.74
10.417	1.07	0.64	0.224	|	O|	I |	|	|	2.77
10.500	1.07	0.64	0.227	|	O|	I |	|	|	2.80
10.583	1.28	0.64	0.230	|	O|	I|	|	|	2.84
10.667	1.41	0.64	0.235	|	O|	|I |	|	|	2.89
10.750	1.42	0.64	0.240	|	O|	|I |	|	|	2.95
10.833	1.42	0.64	0.246	|	O|	|I |	|	|	3.00
10.917	1.42	0.64	0.251	|	O|	|I |	|	|	3.06
11.000	1.42	0.64	0.257	|	O|	|I |	|	|	3.12
11.083	1.38	0.64	0.262	|	O|	I |	|	|	3.17
11.167	1.36	0.64	0.267	|	O|	I |	|	|	3.22
11.250	1.35	0.64	0.272	|	O|	I |	|	|	3.28
11.333	1.35	0.64	0.277	|	O|	I |	|	|	3.33
11.417	1.35	0.64	0.282	|	O|	I |	|	|	3.38
11.500	1.35	0.64	0.286	|	O|	I |	|	|	3.43
11.583	1.27	0.64	0.291	|	O|	I|	|	|	3.48
11.667	1.22	0.64	0.295	|	O|	I |	|	|	3.52
11.750	1.21	0.64	0.299	|	O|	I |	|	|	3.56
11.833	1.25	0.64	0.303	|	O|	I|	|	|	3.61
11.917	1.28	0.64	0.308	|	O|	I|	|	|	3.65
12.000	1.28	0.64	0.312	|	O|	I|	|	|	3.70
12.083	1.57	0.64	0.317	|	O|	| I |	|	|	3.75
12.167	1.75	0.64	0.324	|	O|	| I |	|	|	3.83
12.250	1.78	0.64	0.332	|	O|	| I |	|	|	3.91
12.333	1.82	0.64	0.340	|	O|	| I |	|	|	3.99
12.417	1.85	0.64	0.348	|	O|	| I |	|	|	4.08
12.500	1.85	0.64	0.357	|	O|	| I |	|	|	4.16
12.583	1.93	0.64	0.365	|	O|	| I|	|	|	4.25
12.667	1.99	0.64	0.374	|	O|	| I |	|	|	4.35
12.750	1.99	0.64	0.384	|	O|	| I |	|	|	4.45
12.833	2.03	0.64	0.393	|	O|	| |I |	|	|	4.55
12.917	2.06	0.64	0.403	|	O|	| |I |	|	|	4.65
13.000	2.06	0.64	0.413	|	O|	| |I |	|	|	4.75
13.083	2.36	0.64	0.424	|	O|	| | I |	|	|	4.86
13.167	2.55	0.64	0.436	|	O|	| | I|	|	|	4.99
13.250	2.58	0.64	0.449	|	O|	| | I|	|	|	5.13
13.333	2.59	0.64	0.463	|	O|	| | I|	|	|	5.27
13.417	2.60	0.64	0.476	|	O|	| | I|	|	|	5.41
13.500	2.60	0.64	0.490	|	O|	| | I |	|	|	5.56
13.583	2.04	0.64	0.501	|	O|	| |I |	|	|	5.68
13.667	1.69	0.64	0.510	|	O|	| I |	|	|	5.76
13.750	1.64	0.64	0.517	|	O|	| I |	|	|	5.84
13.833	1.64	0.64	0.524	|	O|	| I |	|	|	5.91

13.917	1.64	0.64	0.530	|	O|	|	I	|	5.98
14.000	1.64	0.64	0.537	|	O|	|	I	|	6.05
14.083	1.80	0.64	0.545	|	O|	|	I	|	6.13
14.167	1.91	0.64	0.553	|	O|	|	I|	|	6.22
14.250	1.92	0.64	0.562	|	O|	|	I|	|	6.31
14.333	1.88	0.64	0.571	|	O|	|	I|	|	6.40
14.417	1.85	0.64	0.579	|	O|	|	I	|	6.49
14.500	1.85	0.64	0.587	|	O|	|	I	|	6.58
14.583	1.85	0.64	0.596	|	O|	|	I	|	6.66
14.667	1.85	0.64	0.604	|	O|	|	I	|	6.75
14.750	1.85	0.64	0.612	|	O|	|	I	|	6.84
14.833	1.81	0.64	0.621	|	O|	|	I	|	6.92
14.917	1.78	0.64	0.629	|	O|	|	I	|	7.01
15.000	1.78	0.64	0.636	|	O|	|	I	|	7.09
15.083	1.74	0.64	0.644	|	O|	|	I	|	7.17
15.167	1.71	0.64	0.652	|	O|	|	I	|	7.25
15.250	1.71	0.64	0.659	|	O|	|	I	|	7.33
15.333	1.67	0.64	0.666	|	O|	|	I	|	7.40
15.417	1.64	0.64	0.673	|	O|	|	I	|	7.47
15.500	1.64	0.64	0.680	|	O|	|	I	|	7.55
15.583	1.47	0.64	0.686	|	O|	I		|	7.61
15.667	1.37	0.64	0.692	|	O|	I		|	7.67
15.750	1.35	0.64	0.697	|	O|	I		|	7.72
15.833	1.35	0.64	0.702	|	O|	I		|	7.77
15.917	1.35	0.64	0.706	|	O|	I		|	7.82
16.000	1.35	0.64	0.711	|	O|	I		|	7.87
16.083	0.72	0.64	0.714	|	OI	|		|	7.90
16.167	0.34	0.64	0.713	|	I O|	|		|	7.90
16.250	0.28	0.64	0.711	|	I O|	|		|	7.87
16.333	0.28	0.64	0.709	|	I O|	|		|	7.85
16.417	0.28	0.64	0.706	|	I O|	|		|	7.82
16.500	0.28	0.64	0.704	|	I O|	|		|	7.79
16.583	0.24	0.64	0.701	|	I O|	|		|	7.77
16.667	0.22	0.64	0.698	|	I O|	|		|	7.74
16.750	0.21	0.64	0.695	|	I O|	|		|	7.71
16.833	0.21	0.64	0.693	|	I O|	|		|	7.68
16.917	0.21	0.64	0.690	|	I O|	|		|	7.65
17.000	0.21	0.64	0.687	|	I O|	|		|	7.62
17.083	0.30	0.64	0.684	|	I O|	|		|	7.59
17.167	0.35	0.64	0.682	|	I O|	|		|	7.56
17.250	0.36	0.64	0.680	|	I O|	|		|	7.54
17.333	0.36	0.64	0.678	|	I O|	|		|	7.52
17.417	0.36	0.64	0.676	|	I O|	|		|	7.50
17.500	0.36	0.64	0.674	|	I O|	|		|	7.48
17.583	0.36	0.64	0.672	|	I O|	|		|	7.46
17.667	0.36	0.64	0.670	|	I O|	|		|	7.44
17.750	0.36	0.64	0.668	|	I O|	|		|	7.42
17.833	0.31	0.64	0.666	|	I O|	|		|	7.40
17.917	0.29	0.64	0.664	|	I O|	|		|	7.37
18.000	0.28	0.64	0.661	|	I O|	|		|	7.35
18.083	0.28	0.64	0.659	|	I O|	|		|	7.32
18.167	0.28	0.64	0.656	|	I O|	|		|	7.30
18.250	0.28	0.64	0.654	|	I O|	|		|	7.27
18.333	0.28	0.64	0.651	|	I O|	|		|	7.25
18.417	0.28	0.64	0.649	|	I O|	|		|	7.22
18.500	0.28	0.64	0.647	|	I O|	|		|	7.20
18.583	0.24	0.64	0.644	|	I O|	|		|	7.17
18.667	0.22	0.64	0.641	|	I O|	|		|	7.14
18.750	0.21	0.64	0.638	|	I O|	|		|	7.11
18.833	0.17	0.64	0.635	|	I O|	|		|	7.08

18.917	0.15	0.64	0.632	I	O			7.04
19.000	0.14	0.64	0.628	I	O			7.01
19.083	0.18	0.64	0.625	I	O			6.97
19.167	0.21	0.64	0.622	I	O			6.94
19.250	0.21	0.64	0.619	I	O			6.91
19.333	0.26	0.64	0.616	I	O			6.88
19.417	0.28	0.64	0.614	I	O			6.85
19.500	0.28	0.64	0.611	I	O			6.83
19.583	0.24	0.64	0.609	I	O			6.80
19.667	0.22	0.64	0.606	I	O			6.77
19.750	0.21	0.64	0.603	I	O			6.74
19.833	0.17	0.64	0.600	I	O			6.71
19.917	0.15	0.64	0.597	I	O			6.67
20.000	0.14	0.64	0.593	I	O			6.64
20.083	0.18	0.64	0.590	I	O			6.60
20.167	0.21	0.64	0.587	I	O			6.57
20.250	0.21	0.64	0.584	I	O			6.54
20.333	0.21	0.64	0.581	I	O			6.51
20.417	0.21	0.64	0.578	I	O			6.48
20.500	0.21	0.64	0.575	I	O			6.45
20.583	0.21	0.64	0.572	I	O			6.42
20.667	0.21	0.64	0.569	I	O			6.39
20.750	0.21	0.64	0.566	I	O			6.36
20.833	0.17	0.64	0.563	I	O			6.32
20.917	0.15	0.64	0.560	I	O			6.29
21.000	0.14	0.64	0.556	I	O			6.25
21.083	0.18	0.64	0.553	I	O			6.22
21.167	0.21	0.64	0.550	I	O			6.19
21.250	0.21	0.64	0.547	I	O			6.16
21.333	0.17	0.64	0.544	I	O			6.12
21.417	0.15	0.64	0.541	I	O			6.09
21.500	0.14	0.64	0.537	I	O			6.05
21.583	0.18	0.64	0.534	I	O			6.02
21.667	0.21	0.64	0.531	I	O			5.99
21.750	0.21	0.64	0.528	I	O			5.96
21.833	0.17	0.64	0.525	I	O			5.92
21.917	0.15	0.64	0.522	I	O			5.89
22.000	0.14	0.64	0.518	I	O			5.85
22.083	0.18	0.64	0.515	I	O			5.82
22.167	0.21	0.64	0.512	I	O			5.79
22.250	0.21	0.64	0.509	I	O			5.76
22.333	0.17	0.64	0.506	I	O			5.72
22.417	0.15	0.64	0.503	I	O			5.69
22.500	0.14	0.64	0.499	I	O			5.65
22.583	0.14	0.64	0.496	I	O			5.62
22.667	0.14	0.64	0.492	I	O			5.58
22.750	0.14	0.64	0.489	I	O			5.55
22.833	0.14	0.64	0.485	I	O			5.51
22.917	0.14	0.64	0.482	I	O			5.48
23.000	0.14	0.64	0.479	I	O			5.44
23.083	0.14	0.64	0.475	I	O			5.40
23.167	0.14	0.64	0.472	I	O			5.37
23.250	0.14	0.64	0.468	I	O			5.33
23.333	0.14	0.64	0.465	I	O			5.30
23.417	0.14	0.64	0.461	I	O			5.26
23.500	0.14	0.64	0.458	I	O			5.22
23.583	0.14	0.64	0.455	I	O			5.19
23.667	0.14	0.64	0.451	I	O			5.15
23.750	0.14	0.64	0.448	I	O			5.12
23.833	0.14	0.64	0.444	I	O			5.08

23.917	0.14	0.64	0.441	|I	O|	|	|	|	5.04
24.000	0.14	0.64	0.437	|I	O|	|	|	|	5.01
24.083	0.06	0.64	0.434	I	O|	|	|	|	4.97
24.167	0.01	0.64	0.430	I	O|	|	|	|	4.93
24.250	0.00	0.64	0.425	I	O|	|	|	|	4.88
24.333	0.00	0.64	0.421	I	O|	|	|	|	4.83
24.417	0.00	0.64	0.416	I	O|	|	|	|	4.79
24.500	0.00	0.64	0.412	I	O|	|	|	|	4.74
24.583	0.00	0.64	0.408	I	O|	|	|	|	4.70
24.667	0.00	0.64	0.403	I	O|	|	|	|	4.65
24.750	0.00	0.64	0.399	I	O|	|	|	|	4.60
24.833	0.00	0.64	0.394	I	O|	|	|	|	4.56
24.917	0.00	0.64	0.390	I	O|	|	|	|	4.51
25.000	0.00	0.64	0.386	I	O|	|	|	|	4.47
25.083	0.00	0.64	0.381	I	O|	|	|	|	4.42
25.167	0.00	0.64	0.377	I	O|	|	|	|	4.37
25.250	0.00	0.64	0.372	I	O|	|	|	|	4.33
25.333	0.00	0.64	0.368	I	O|	|	|	|	4.28
25.417	0.00	0.64	0.363	I	O|	|	|	|	4.24
25.500	0.00	0.64	0.359	I	O|	|	|	|	4.19
25.583	0.00	0.64	0.355	I	O|	|	|	|	4.14
25.667	0.00	0.64	0.350	I	O|	|	|	|	4.10
25.750	0.00	0.64	0.346	I	O|	|	|	|	4.05
25.833	0.00	0.64	0.341	I	O|	|	|	|	4.00
25.917	0.00	0.64	0.337	I	O|	|	|	|	3.96
26.000	0.00	0.64	0.333	I	O|	|	|	|	3.91
26.083	0.00	0.64	0.328	I	O|	|	|	|	3.87
26.167	0.00	0.64	0.324	I	O|	|	|	|	3.82
26.250	0.00	0.64	0.319	I	O|	|	|	|	3.77
26.333	0.00	0.64	0.315	I	O|	|	|	|	3.73
26.417	0.00	0.64	0.311	I	O|	|	|	|	3.68
26.500	0.00	0.64	0.306	I	O|	|	|	|	3.64
26.583	0.00	0.64	0.302	I	O|	|	|	|	3.59
26.667	0.00	0.64	0.297	I	O|	|	|	|	3.54
26.750	0.00	0.64	0.293	I	O|	|	|	|	3.50
26.833	0.00	0.64	0.289	I	O|	|	|	|	3.45
26.917	0.00	0.64	0.284	I	O|	|	|	|	3.41
27.000	0.00	0.64	0.280	I	O|	|	|	|	3.36
27.083	0.00	0.64	0.275	I	O|	|	|	|	3.31
27.167	0.00	0.64	0.271	I	O|	|	|	|	3.27
27.250	0.00	0.64	0.267	I	O|	|	|	|	3.22
27.333	0.00	0.64	0.262	I	O|	|	|	|	3.17
27.417	0.00	0.64	0.258	I	O|	|	|	|	3.13
27.500	0.00	0.64	0.253	I	O|	|	|	|	3.08
27.583	0.00	0.64	0.249	I	O|	|	|	|	3.04
27.667	0.00	0.64	0.244	I	O|	|	|	|	2.99
27.750	0.00	0.64	0.240	I	O|	|	|	|	2.94
27.833	0.00	0.64	0.236	I	O|	|	|	|	2.90
27.917	0.00	0.64	0.231	I	O|	|	|	|	2.85
28.000	0.00	0.64	0.227	I	O|	|	|	|	2.81
28.083	0.00	0.64	0.222	I	O|	|	|	|	2.76
28.167	0.00	0.64	0.218	I	O|	|	|	|	2.71
28.250	0.00	0.64	0.214	I	O|	|	|	|	2.67
28.333	0.00	0.64	0.209	I	O|	|	|	|	2.62
28.417	0.00	0.64	0.205	I	O|	|	|	|	2.58
28.500	0.00	0.64	0.200	I	O|	|	|	|	2.53
28.583	0.00	0.64	0.196	I	O|	|	|	|	2.48
28.667	0.00	0.64	0.192	I	O|	|	|	|	2.44
28.750	0.00	0.64	0.187	I	O|	|	|	|	2.39
28.833	0.00	0.64	0.183	I	O|	|	|	|	2.34

28.917	0.00	0.64	0.178	I	O			2.30
29.000	0.00	0.64	0.174	I	O			2.25
29.083	0.00	0.64	0.170	I	O			2.21
29.167	0.00	0.64	0.165	I	O			2.16
29.250	0.00	0.64	0.161	I	O			2.11
29.333	0.00	0.64	0.156	I	O			2.07
29.417	0.00	0.64	0.152	I	O			2.02
29.500	0.00	0.64	0.147	I	O			1.98
29.583	0.00	0.64	0.143	I	O			1.93
29.667	0.00	0.64	0.139	I	O			1.88
29.750	0.00	0.64	0.134	I	O			1.84
29.833	0.00	0.64	0.130	I	O			1.79
29.917	0.00	0.64	0.125	I	O			1.75
30.000	0.00	0.64	0.121	I	O			1.70
30.083	0.00	0.64	0.117	I	O			1.65
30.167	0.00	0.64	0.112	I	O			1.61
30.250	0.00	0.64	0.108	I	O			1.56
30.333	0.00	0.64	0.103	I	O			1.51
30.417	0.00	0.62	0.099	I	O			1.46
30.500	0.00	0.60	0.095	I	O			1.40
30.583	0.00	0.57	0.091	I	O			1.34
30.667	0.00	0.55	0.087	I	O			1.28
30.750	0.00	0.52	0.083	I	O			1.23
30.833	0.00	0.50	0.080	I	O			1.17
30.917	0.00	0.48	0.076	I	O			1.12
31.000	0.00	0.46	0.073	I	O			1.08
31.083	0.00	0.44	0.070	I	O			1.03
31.167	0.00	0.42	0.067	I	O			0.99
31.250	0.00	0.40	0.064	I	O			0.95
31.333	0.00	0.39	0.062	I	O			0.91
31.417	0.00	0.37	0.059	I	O			0.87
31.500	0.00	0.35	0.056	I	O			0.83
31.583	0.00	0.34	0.054	I	O			0.80
31.667	0.00	0.33	0.052	I	O			0.76
31.750	0.00	0.31	0.050	I	O			0.73
31.833	0.00	0.30	0.048	I	O			0.70
31.917	0.00	0.29	0.046	I	O			0.67
32.000	0.00	0.27	0.044	I	O			0.64
32.083	0.00	0.26	0.042	I	O			0.61
32.167	0.00	0.25	0.040	I	O			0.59
32.250	0.00	0.24	0.038	I	O			0.56
32.333	0.00	0.23	0.037	I	O			0.54
32.417	0.00	0.22	0.035	I	O			0.52
32.500	0.00	0.21	0.034	I	O			0.49
32.583	0.00	0.20	0.032	I	O			0.47
32.667	0.00	0.19	0.031	I	O			0.45
32.750	0.00	0.19	0.030	I	O			0.43
32.833	0.00	0.18	0.028	I	O			0.42
32.917	0.00	0.17	0.027	I	O			0.40
33.000	0.00	0.16	0.026	I	O			0.38
33.083	0.00	0.16	0.025	I	O			0.37
33.167	0.00	0.15	0.024	I	O			0.35
33.250	0.00	0.14	0.023	I	O			0.34
33.333	0.00	0.14	0.022	I	O			0.32
33.417	0.00	0.13	0.021	I	O			0.31
33.500	0.00	0.13	0.020	I	O			0.29
33.583	0.00	0.12	0.019	I	O			0.28
33.667	0.00	0.12	0.018	I	O			0.27
33.750	0.00	0.11	0.018	I	O			0.26
33.833	0.00	0.11	0.017	I	O			0.25

33.917	0.00	0.10	0.016	IO					0.24
34.000	0.00	0.10	0.015	IO					0.23
34.083	0.00	0.09	0.015	IO					0.22
34.167	0.00	0.09	0.014	IO					0.21
34.250	0.00	0.09	0.014	IO					0.20
34.333	0.00	0.08	0.013	IO					0.19
34.417	0.00	0.08	0.012	O					0.18
34.500	0.00	0.07	0.012	O					0.18
34.583	0.00	0.07	0.011	O					0.17
34.667	0.00	0.07	0.011	O					0.16
34.750	0.00	0.07	0.010	O					0.15
34.833	0.00	0.06	0.010	O					0.15
34.917	0.00	0.06	0.010	O					0.14
35.000	0.00	0.06	0.009	O					0.14
35.083	0.00	0.06	0.009	O					0.13
35.167	0.00	0.05	0.008	O					0.12
35.250	0.00	0.05	0.008	O					0.12
35.333	0.00	0.05	0.008	O					0.11
35.417	0.00	0.05	0.007	O					0.11
35.500	0.00	0.04	0.007	O					0.10
35.583	0.00	0.04	0.007	O					0.10
35.667	0.00	0.04	0.007	O					0.10
35.750	0.00	0.04	0.006	O					0.09
35.833	0.00	0.04	0.006	O					0.09
35.917	0.00	0.04	0.006	O					0.08
36.000	0.00	0.03	0.005	O					0.08
36.083	0.00	0.03	0.005	O					0.08
36.167	0.00	0.03	0.005	O					0.07
36.250	0.00	0.03	0.005	O					0.07
36.333	0.00	0.03	0.005	O					0.07
36.417	0.00	0.03	0.004	O					0.06
36.500	0.00	0.03	0.004	O					0.06
36.583	0.00	0.03	0.004	O					0.06
36.667	0.00	0.02	0.004	O					0.06
36.750	0.00	0.02	0.004	O					0.05
36.833	0.00	0.02	0.004	O					0.05
36.917	0.00	0.02	0.003	O					0.05
37.000	0.00	0.02	0.003	O					0.05
37.083	0.00	0.02	0.003	O					0.05
37.167	0.00	0.02	0.003	O					0.04
37.250	0.00	0.02	0.003	O					0.04
37.333	0.00	0.02	0.003	O					0.04
37.417	0.00	0.02	0.003	O					0.04
37.500	0.00	0.02	0.003	O					0.04
37.583	0.00	0.02	0.002	O					0.04
37.667	0.00	0.01	0.002	O					0.03
37.750	0.00	0.01	0.002	O					0.03
37.833	0.00	0.01	0.002	O					0.03
37.917	0.00	0.01	0.002	O					0.03
38.000	0.00	0.01	0.002	O					0.03
38.083	0.00	0.01	0.002	O					0.03
38.167	0.00	0.01	0.002	O					0.03
38.250	0.00	0.01	0.002	O					0.03
38.333	0.00	0.01	0.002	O					0.02
38.417	0.00	0.01	0.002	O					0.02
38.500	0.00	0.01	0.001	O					0.02
38.583	0.00	0.01	0.001	O					0.02
38.667	0.00	0.01	0.001	O					0.02
38.750	0.00	0.01	0.001	O					0.02
38.833	0.00	0.01	0.001	O					0.02

38.917	0.00	0.01	0.001	O	|	|	|	|	0.02
39.000	0.00	0.01	0.001	O	|	|	|	|	0.02
39.083	0.00	0.01	0.001	O	|	|	|	|	0.02
39.167	0.00	0.01	0.001	O	|	|	|	|	0.02
39.250	0.00	0.01	0.001	O	|	|	|	|	0.01
39.333	0.00	0.01	0.001	O	|	|	|	|	0.01
39.417	0.00	0.01	0.001	O	|	|	|	|	0.01
39.500	0.00	0.01	0.001	O	|	|	|	|	0.01
39.583	0.00	0.01	0.001	O	|	|	|	|	0.01
39.667	0.00	0.01	0.001	O	|	|	|	|	0.01
39.750	0.00	0.00	0.001	O	|	|	|	|	0.01
39.833	0.00	0.00	0.001	O	|	|	|	|	0.01
39.917	0.00	0.00	0.001	O	|	|	|	|	0.01
40.000	0.00	0.00	0.001	O	|	|	|	|	0.01
40.083	0.00	0.00	0.001	O	|	|	|	|	0.01
40.167	0.00	0.00	0.001	O	|	|	|	|	0.01
40.250	0.00	0.00	0.001	O	|	|	|	|	0.01
40.333	0.00	0.00	0.001	O	|	|	|	|	0.01
40.417	0.00	0.00	0.001	O	|	|	|	|	0.01
40.500	0.00	0.00	0.001	O	|	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	|	0.01
40.667	0.00	0.00	0.000	O	|	|	|	|	0.01
40.750	0.00	0.00	0.000	O	|	|	|	|	0.01
40.833	0.00	0.00	0.000	O	|	|	|	|	0.01
40.917	0.00	0.00	0.000	O	|	|	|	|	0.01
41.000	0.00	0.00	0.000	O	|	|	|	|	0.01
41.083	0.00	0.00	0.000	O	|	|	|	|	0.01
41.167	0.00	0.00	0.000	O	|	|	|	|	0.01
41.250	0.00	0.00	0.000	O	|	|	|	|	0.01
41.333	0.00	0.00	0.000	O	|	|	|	|	0.01
41.417	0.00	0.00	0.000	O	|	|	|	|	0.00
41.500	0.00	0.00	0.000	O	|	|	|	|	0.00
41.583	0.00	0.00	0.000	O	|	|	|	|	0.00
41.667	0.00	0.00	0.000	O	|	|	|	|	0.00
41.750	0.00	0.00	0.000	O	|	|	|	|	0.00
41.833	0.00	0.00	0.000	O	|	|	|	|	0.00
41.917	0.00	0.00	0.000	O	|	|	|	|	0.00
42.000	0.00	0.00	0.000	O	|	|	|	|	0.00
42.083	0.00	0.00	0.000	O	|	|	|	|	0.00
42.167	0.00	0.00	0.000	O	|	|	|	|	0.00
42.250	0.00	0.00	0.000	O	|	|	|	|	0.00
42.333	0.00	0.00	0.000	O	|	|	|	|	0.00
42.417	0.00	0.00	0.000	O	|	|	|	|	0.00
42.500	0.00	0.00	0.000	O	|	|	|	|	0.00
42.583	0.00	0.00	0.000	O	|	|	|	|	0.00
42.667	0.00	0.00	0.000	O	|	|	|	|	0.00
42.750	0.00	0.00	0.000	O	|	|	|	|	0.00
42.833	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 514
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 1.478 (Ac.Ft)

Status of hydrographs being held in storage

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

****

100-YEAR STORM

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
100-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 16
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 19.439 (CFS)
Total volume = 0.730 (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 12.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 16
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.9 9.72 14.58 19.44	Depth (Ft.)
0.083	1.71	0.03	0.006	O I | | | |	0.07
0.167	3.63	0.13	0.024	O I | | | |	0.28
0.250	4.51	0.28	0.050	O I| | | |	0.60
0.333	5.15	0.45	0.081	O I | | |	0.97
0.417	5.46	0.46	0.114	O I | | |	1.23
0.500	6.00	0.46	0.151	O |I | | |	1.49
0.583	7.13	0.46	0.193	O | I | | |	1.79
0.667	8.58	0.46	0.244	O | I | |	2.16
0.750	11.18	0.46	0.308	O | | I | |	2.63
0.833	19.44	0.46	0.411	O | | | I	3.37
0.917	18.16	0.46	0.537	O | | | I |	4.29
1.000	9.09	0.46	0.628	O | I | |	4.94
1.083	4.26	0.46	0.671	O I| | | |	5.25
1.167	1.25	0.46	0.686	O I | | | |	5.37
1.250	0.32	0.46	0.689	O | | | |	5.38
1.333	0.08	0.46	0.687	O | | | |	5.37
1.417	0.00	0.46	0.684	O | | | |	5.35
1.500	0.00	0.46	0.681	O | | | |	5.33
1.583	0.00	0.46	0.678	O | | | |	5.30
1.667	0.00	0.46	0.674	O | | | |	5.28
1.750	0.00	0.46	0.671	O | | | |	5.26
1.833	0.00	0.46	0.668	O | | | |	5.23
1.917	0.00	0.46	0.665	O | | | |	5.21
2.000	0.00	0.46	0.662	O | | | |	5.19
2.083	0.00	0.46	0.659	O | | | |	5.17
2.167	0.00	0.46	0.655	O | | | |	5.14
2.250	0.00	0.46	0.652	O | | | |	5.12
2.333	0.00	0.46	0.649	O | | | |	5.10
2.417	0.00	0.46	0.646	O | | | |	5.07
2.500	0.00	0.46	0.643	O | | | |	5.05
2.583	0.00	0.46	0.640	O | | | |	5.03
2.667	0.00	0.46	0.636	O | | | |	5.00
2.750	0.00	0.46	0.633	O | | | |	4.98
2.833	0.00	0.46	0.630	O | | | |	4.96
2.917	0.00	0.46	0.627	O | | | |	4.94
3.000	0.00	0.46	0.624	O | | | |	4.91
3.083	0.00	0.46	0.621	O | | | |	4.89
3.167	0.00	0.46	0.617	O | | | |	4.87
3.250	0.00	0.46	0.614	O | | | |	4.84
3.333	0.00	0.46	0.611	O | | | |	4.82
3.417	0.00	0.46	0.608	O | | | |	4.80
3.500	0.00	0.46	0.605	O | | | |	4.78
3.583	0.00	0.46	0.602	O | | | |	4.75
3.667	0.00	0.46	0.598	O | | | |	4.73
3.750	0.00	0.46	0.595	O | | | |	4.71

3.833	0.00	0.46	0.592	O				4.68
3.917	0.00	0.46	0.589	O				4.66
4.000	0.00	0.46	0.586	O				4.64
4.083	0.00	0.46	0.583	O				4.61
4.167	0.00	0.46	0.579	O				4.59
4.250	0.00	0.46	0.576	O				4.57
4.333	0.00	0.46	0.573	O				4.55
4.417	0.00	0.46	0.570	O				4.52
4.500	0.00	0.46	0.567	O				4.50
4.583	0.00	0.46	0.564	O				4.48
4.667	0.00	0.46	0.560	O				4.45
4.750	0.00	0.46	0.557	O				4.43
4.833	0.00	0.46	0.554	O				4.41
4.917	0.00	0.46	0.551	O				4.39
5.000	0.00	0.46	0.548	O				4.36
5.083	0.00	0.46	0.545	O				4.34
5.167	0.00	0.46	0.541	O				4.32
5.250	0.00	0.46	0.538	O				4.29
5.333	0.00	0.46	0.535	O				4.27
5.417	0.00	0.46	0.532	O				4.25
5.500	0.00	0.46	0.529	O				4.23
5.583	0.00	0.46	0.526	O				4.20
5.667	0.00	0.46	0.522	O				4.18
5.750	0.00	0.46	0.519	O				4.16
5.833	0.00	0.46	0.516	O				4.13
5.917	0.00	0.46	0.513	O				4.11
6.000	0.00	0.46	0.510	O				4.09
6.083	0.00	0.46	0.507	O				4.06
6.167	0.00	0.46	0.503	O				4.04
6.250	0.00	0.46	0.500	O				4.02
6.333	0.00	0.46	0.497	O				4.00
6.417	0.00	0.46	0.494	O				3.97
6.500	0.00	0.46	0.491	O				3.95
6.583	0.00	0.46	0.488	O				3.93
6.667	0.00	0.46	0.484	O				3.90
6.750	0.00	0.46	0.481	O				3.88
6.833	0.00	0.46	0.478	O				3.86
6.917	0.00	0.46	0.475	O				3.84
7.000	0.00	0.46	0.472	O				3.81
7.083	0.00	0.46	0.469	O				3.79
7.167	0.00	0.46	0.465	O				3.77
7.250	0.00	0.46	0.462	O				3.74
7.333	0.00	0.46	0.459	O				3.72
7.417	0.00	0.46	0.456	O				3.70
7.500	0.00	0.46	0.453	O				3.68
7.583	0.00	0.46	0.450	O				3.65
7.667	0.00	0.46	0.446	O				3.63
7.750	0.00	0.46	0.443	O				3.61
7.833	0.00	0.46	0.440	O				3.58
7.917	0.00	0.46	0.437	O				3.56
8.000	0.00	0.46	0.434	O				3.54
8.083	0.00	0.46	0.431	O				3.51
8.167	0.00	0.46	0.427	O				3.49
8.250	0.00	0.46	0.424	O				3.47
8.333	0.00	0.46	0.421	O				3.45
8.417	0.00	0.46	0.418	O				3.42
8.500	0.00	0.46	0.415	O				3.40
8.583	0.00	0.46	0.412	O				3.38
8.667	0.00	0.46	0.408	O				3.35
8.750	0.00	0.46	0.405	O				3.33

8.833	0.00	0.46	0.402	O					3.31
8.917	0.00	0.46	0.399	O					3.29
9.000	0.00	0.46	0.396	O					3.26
9.083	0.00	0.46	0.392	O					3.24
9.167	0.00	0.46	0.389	O					3.22
9.250	0.00	0.46	0.386	O					3.19
9.333	0.00	0.46	0.383	O					3.17
9.417	0.00	0.46	0.380	O					3.15
9.500	0.00	0.46	0.377	O					3.12
9.583	0.00	0.46	0.373	O					3.10
9.667	0.00	0.46	0.370	O					3.08
9.750	0.00	0.46	0.367	O					3.06
9.833	0.00	0.46	0.364	O					3.03
9.917	0.00	0.46	0.361	O					3.01
10.000	0.00	0.46	0.358	O					2.99
10.083	0.00	0.46	0.354	O					2.96
10.167	0.00	0.46	0.351	O					2.94
10.250	0.00	0.46	0.348	O					2.92
10.333	0.00	0.46	0.345	O					2.90
10.417	0.00	0.46	0.342	O					2.87
10.500	0.00	0.46	0.339	O					2.85
10.583	0.00	0.46	0.335	O					2.83
10.667	0.00	0.46	0.332	O					2.80
10.750	0.00	0.46	0.329	O					2.78
10.833	0.00	0.46	0.326	O					2.76
10.917	0.00	0.46	0.323	O					2.74
11.000	0.00	0.46	0.320	O					2.71
11.083	0.00	0.46	0.316	O					2.69
11.167	0.00	0.46	0.313	O					2.67
11.250	0.00	0.46	0.310	O					2.64
11.333	0.00	0.46	0.307	O					2.62
11.417	0.00	0.46	0.304	O					2.60
11.500	0.00	0.46	0.301	O					2.57
11.583	0.00	0.46	0.297	O					2.55
11.667	0.00	0.46	0.294	O					2.53
11.750	0.00	0.46	0.291	O					2.51
11.833	0.00	0.46	0.288	O					2.48
11.917	0.00	0.46	0.285	O					2.46
12.000	0.00	0.46	0.282	O					2.44
12.083	0.00	0.46	0.278	O					2.41
12.167	0.00	0.46	0.275	O					2.39
12.250	0.00	0.46	0.272	O					2.37
12.333	0.00	0.46	0.269	O					2.35
12.417	0.00	0.46	0.266	O					2.32
12.500	0.00	0.46	0.263	O					2.30
12.583	0.00	0.46	0.259	O					2.28
12.667	0.00	0.46	0.256	O					2.25
12.750	0.00	0.46	0.253	O					2.23
12.833	0.00	0.46	0.250	O					2.21
12.917	0.00	0.46	0.247	O					2.18
13.000	0.00	0.46	0.244	O					2.16
13.083	0.00	0.46	0.240	O					2.14
13.167	0.00	0.46	0.237	O					2.12
13.250	0.00	0.46	0.234	O					2.09
13.333	0.00	0.46	0.231	O					2.07
13.417	0.00	0.46	0.228	O					2.05
13.500	0.00	0.46	0.225	O					2.02
13.583	0.00	0.46	0.221	O					2.00
13.667	0.00	0.46	0.218	O					1.98
13.750	0.00	0.46	0.215	O					1.96

13.833	0.00	0.46	0.212	O					1.93
13.917	0.00	0.46	0.209	O					1.91
14.000	0.00	0.46	0.206	O					1.89
14.083	0.00	0.46	0.202	O					1.86
14.167	0.00	0.46	0.199	O					1.84
14.250	0.00	0.46	0.196	O					1.82
14.333	0.00	0.46	0.193	O					1.80
14.417	0.00	0.46	0.190	O					1.77
14.500	0.00	0.46	0.187	O					1.75
14.583	0.00	0.46	0.183	O					1.73
14.667	0.00	0.46	0.180	O					1.70
14.750	0.00	0.46	0.177	O					1.68
14.833	0.00	0.46	0.174	O					1.66
14.917	0.00	0.46	0.171	O					1.63
15.000	0.00	0.46	0.168	O					1.61
15.083	0.00	0.46	0.164	O					1.59
15.167	0.00	0.46	0.161	O					1.57
15.250	0.00	0.46	0.158	O					1.54
15.333	0.00	0.46	0.155	O					1.52
15.417	0.00	0.46	0.152	O					1.50
15.500	0.00	0.46	0.149	O					1.47
15.583	0.00	0.46	0.145	O					1.45
15.667	0.00	0.46	0.142	O					1.43
15.750	0.00	0.46	0.139	O					1.41
15.833	0.00	0.46	0.136	O					1.38
15.917	0.00	0.46	0.133	O					1.36
16.000	0.00	0.46	0.130	O					1.34
16.083	0.00	0.46	0.126	O					1.31
16.167	0.00	0.46	0.123	O					1.29
16.250	0.00	0.46	0.120	O					1.27
16.333	0.00	0.46	0.117	O					1.25
16.417	0.00	0.46	0.114	O					1.22
16.500	0.00	0.46	0.111	O					1.20
16.583	0.00	0.46	0.107	O					1.18
16.667	0.00	0.46	0.104	O					1.15
16.750	0.00	0.46	0.101	O					1.13
16.833	0.00	0.46	0.098	O					1.11
16.917	0.00	0.46	0.095	O					1.08
17.000	0.00	0.46	0.092	O					1.06
17.083	0.00	0.46	0.088	O					1.04
17.167	0.00	0.46	0.085	O					1.02
17.250	0.00	0.45	0.082	O					0.99
17.333	0.00	0.44	0.079	O					0.95
17.417	0.00	0.42	0.076	O					0.92
17.500	0.00	0.41	0.073	O					0.88
17.583	0.00	0.39	0.070	O					0.85
17.667	0.00	0.38	0.068	O					0.82
17.750	0.00	0.36	0.065	O					0.79
17.833	0.00	0.35	0.063	O					0.76
17.917	0.00	0.34	0.060	O					0.73
18.000	0.00	0.32	0.058	O					0.70
18.083	0.00	0.31	0.056	O					0.67
18.167	0.00	0.30	0.054	O					0.65
18.250	0.00	0.29	0.052	O					0.63
18.333	0.00	0.28	0.050	O					0.60
18.417	0.00	0.27	0.048	O					0.58
18.500	0.00	0.26	0.046	O					0.56
18.583	0.00	0.25	0.045	O					0.54
18.667	0.00	0.24	0.043	O					0.52
18.750	0.00	0.23	0.041	O					0.50

18.833	0.00	0.22	0.040	O	|	|	|	|	0.48
18.917	0.00	0.21	0.038	O	|	|	|	|	0.46
19.000	0.00	0.20	0.037	O	|	|	|	|	0.44
19.083	0.00	0.20	0.035	O	|	|	|	|	0.43
19.167	0.00	0.19	0.034	O	|	|	|	|	0.41
19.250	0.00	0.18	0.033	O	|	|	|	|	0.40
19.333	0.00	0.18	0.032	O	|	|	|	|	0.38
19.417	0.00	0.17	0.030	O	|	|	|	|	0.37
19.500	0.00	0.16	0.029	O	|	|	|	|	0.35
19.583	0.00	0.16	0.028	O	|	|	|	|	0.34
19.667	0.00	0.15	0.027	O	|	|	|	|	0.33
19.750	0.00	0.14	0.026	O	|	|	|	|	0.31
19.833	0.00	0.14	0.025	O	|	|	|	|	0.30
19.917	0.00	0.13	0.024	O	|	|	|	|	0.29
20.000	0.00	0.13	0.023	O	|	|	|	|	0.28
20.083	0.00	0.12	0.022	O	|	|	|	|	0.27
20.167	0.00	0.12	0.022	O	|	|	|	|	0.26
20.250	0.00	0.12	0.021	O	|	|	|	|	0.25
20.333	0.00	0.11	0.020	O	|	|	|	|	0.24
20.417	0.00	0.11	0.019	O	|	|	|	|	0.23
20.500	0.00	0.10	0.019	O	|	|	|	|	0.22
20.583	0.00	0.10	0.018	O	|	|	|	|	0.21
20.667	0.00	0.10	0.017	O	|	|	|	|	0.21
20.750	0.00	0.09	0.017	O	|	|	|	|	0.20
20.833	0.00	0.09	0.016	O	|	|	|	|	0.19
20.917	0.00	0.08	0.015	O	|	|	|	|	0.18
21.000	0.00	0.08	0.015	O	|	|	|	|	0.18
21.083	0.00	0.08	0.014	O	|	|	|	|	0.17
21.167	0.00	0.08	0.014	O	|	|	|	|	0.16
21.250	0.00	0.07	0.013	O	|	|	|	|	0.16
21.333	0.00	0.07	0.013	O	|	|	|	|	0.15
21.417	0.00	0.07	0.012	O	|	|	|	|	0.15
21.500	0.00	0.06	0.012	O	|	|	|	|	0.14
21.583	0.00	0.06	0.011	O	|	|	|	|	0.14
21.667	0.00	0.06	0.011	O	|	|	|	|	0.13
21.750	0.00	0.06	0.010	O	|	|	|	|	0.13
21.833	0.00	0.06	0.010	O	|	|	|	|	0.12
21.917	0.00	0.05	0.010	O	|	|	|	|	0.12
22.000	0.00	0.05	0.009	O	|	|	|	|	0.11
22.083	0.00	0.05	0.009	O	|	|	|	|	0.11
22.167	0.00	0.05	0.009	O	|	|	|	|	0.10
22.250	0.00	0.05	0.008	O	|	|	|	|	0.10
22.333	0.00	0.04	0.008	O	|	|	|	|	0.10
22.417	0.00	0.04	0.008	O	|	|	|	|	0.09
22.500	0.00	0.04	0.007	O	|	|	|	|	0.09
22.583	0.00	0.04	0.007	O	|	|	|	|	0.09
22.667	0.00	0.04	0.007	O	|	|	|	|	0.08
22.750	0.00	0.04	0.007	O	|	|	|	|	0.08
22.833	0.00	0.04	0.006	O	|	|	|	|	0.08
22.917	0.00	0.03	0.006	O	|	|	|	|	0.07
23.000	0.00	0.03	0.006	O	|	|	|	|	0.07
23.083	0.00	0.03	0.006	O	|	|	|	|	0.07
23.167	0.00	0.03	0.005	O	|	|	|	|	0.07
23.250	0.00	0.03	0.005	O	|	|	|	|	0.06
23.333	0.00	0.03	0.005	O	|	|	|	|	0.06
23.417	0.00	0.03	0.005	O	|	|	|	|	0.06
23.500	0.00	0.03	0.005	O	|	|	|	|	0.06
23.583	0.00	0.02	0.005	O	|	|	|	|	0.05
23.667	0.00	0.02	0.004	O	|	|	|	|	0.05
23.750	0.00	0.02	0.004	O	|	|	|	|	0.05

23.833	0.00	0.02	0.004	O	|	|	|	0.05
23.917	0.00	0.02	0.004	O	|	|	|	0.05
24.000	0.00	0.02	0.004	O	|	|	|	0.04
24.083	0.00	0.02	0.004	O	|	|	|	0.04
24.167	0.00	0.02	0.003	O	|	|	|	0.04
24.250	0.00	0.02	0.003	O	|	|	|	0.04
24.333	0.00	0.02	0.003	O	|	|	|	0.04
24.417	0.00	0.02	0.003	O	|	|	|	0.04
24.500	0.00	0.02	0.003	O	|	|	|	0.04
24.583	0.00	0.02	0.003	O	|	|	|	0.03
24.667	0.00	0.02	0.003	O	|	|	|	0.03
24.750	0.00	0.01	0.003	O	|	|	|	0.03
24.833	0.00	0.01	0.003	O	|	|	|	0.03
24.917	0.00	0.01	0.002	O	|	|	|	0.03
25.000	0.00	0.01	0.002	O	|	|	|	0.03
25.083	0.00	0.01	0.002	O	|	|	|	0.03
25.167	0.00	0.01	0.002	O	|	|	|	0.03
25.250	0.00	0.01	0.002	O	|	|	|	0.03
25.333	0.00	0.01	0.002	O	|	|	|	0.02
25.417	0.00	0.01	0.002	O	|	|	|	0.02
25.500	0.00	0.01	0.002	O	|	|	|	0.02
25.583	0.00	0.01	0.002	O	|	|	|	0.02
25.667	0.00	0.01	0.002	O	|	|	|	0.02
25.750	0.00	0.01	0.002	O	|	|	|	0.02
25.833	0.00	0.01	0.002	O	|	|	|	0.02
25.917	0.00	0.01	0.002	O	|	|	|	0.02
26.000	0.00	0.01	0.001	O	|	|	|	0.02
26.083	0.00	0.01	0.001	O	|	|	|	0.02
26.167	0.00	0.01	0.001	O	|	|	|	0.02
26.250	0.00	0.01	0.001	O	|	|	|	0.02
26.333	0.00	0.01	0.001	O	|	|	|	0.02
26.417	0.00	0.01	0.001	O	|	|	|	0.01
26.500	0.00	0.01	0.001	O	|	|	|	0.01
26.583	0.00	0.01	0.001	O	|	|	|	0.01
26.667	0.00	0.01	0.001	O	|	|	|	0.01
26.750	0.00	0.01	0.001	O	|	|	|	0.01
26.833	0.00	0.01	0.001	O	|	|	|	0.01
26.917	0.00	0.01	0.001	O	|	|	|	0.01
27.000	0.00	0.01	0.001	O	|	|	|	0.01
27.083	0.00	0.01	0.001	O	|	|	|	0.01
27.167	0.00	0.00	0.001	O	|	|	|	0.01
27.250	0.00	0.00	0.001	O	|	|	|	0.01
27.333	0.00	0.00	0.001	O	|	|	|	0.01
27.417	0.00	0.00	0.001	O	|	|	|	0.01
27.500	0.00	0.00	0.001	O	|	|	|	0.01
27.583	0.00	0.00	0.001	O	|	|	|	0.01
27.667	0.00	0.00	0.001	O	|	|	|	0.01
27.750	0.00	0.00	0.001	O	|	|	|	0.01
27.833	0.00	0.00	0.001	O	|	|	|	0.01
27.917	0.00	0.00	0.001	O	|	|	|	0.01
28.000	0.00	0.00	0.001	O	|	|	|	0.01
28.083	0.00	0.00	0.001	O	|	|	|	0.01
28.167	0.00	0.00	0.001	O	|	|	|	0.01
28.250	0.00	0.00	0.001	O	|	|	|	0.01
28.333	0.00	0.00	0.001	O	|	|	|	0.01
28.417	0.00	0.00	0.000	O	|	|	|	0.01
28.500	0.00	0.00	0.000	O	|	|	|	0.01
28.583	0.00	0.00	0.000	O	|	|	|	0.01
28.667	0.00	0.00	0.000	O	|	|	|	0.01
28.750	0.00	0.00	0.000	O	|	|	|	0.01

28.833	0.00	0.00	0.000	O	|	|	|	|	0.00
28.917	0.00	0.00	0.000	O	|	|	|	|	0.00
29.000	0.00	0.00	0.000	O	|	|	|	|	0.00
29.083	0.00	0.00	0.000	O	|	|	|	|	0.00
29.167	0.00	0.00	0.000	O	|	|	|	|	0.00
29.250	0.00	0.00	0.000	O	|	|	|	|	0.00
29.333	0.00	0.00	0.000	O	|	|	|	|	0.00
29.417	0.00	0.00	0.000	O	|	|	|	|	0.00
29.500	0.00	0.00	0.000	O	|	|	|	|	0.00
29.583	0.00	0.00	0.000	O	|	|	|	|	0.00
29.667	0.00	0.00	0.000	O	|	|	|	|	0.00
29.750	0.00	0.00	0.000	O	|	|	|	|	0.00
29.833	0.00	0.00	0.000	O	|	|	|	|	0.00
29.917	0.00	0.00	0.000	O	|	|	|	|	0.00
30.000	0.00	0.00	0.000	O	|	|	|	|	0.00
30.083	0.00	0.00	0.000	O	|	|	|	|	0.00
30.167	0.00	0.00	0.000	O	|	|	|	|	0.00
30.250	0.00	0.00	0.000	O	|	|	|	|	0.00
30.333	0.00	0.00	0.000	O	|	|	|	|	0.00
30.417	0.00	0.00	0.000	O	|	|	|	|	0.00
30.500	0.00	0.00	0.000	O	|	|	|	|	0.00
30.583	0.00	0.00	0.000	O	|	|	|	|	0.00
30.667	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 368
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.460 (CFS)
Total volume = 0.730 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
100-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte

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

Number of intervals = 40
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 14.103 (CFS)
Total volume = 1.174 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 40
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.5 7.05 10.58 14.10	Depth (Ft.)
0.083	0.79	0.01	0.003	OI | | | | |	0.03
0.167	1.66	0.06	0.011	O I | | | | |	0.13
0.250	1.72	0.12	0.022	O I | | | | |	0.26
0.333	1.91	0.18	0.033	O I | | | | |	0.40
0.417	2.18	0.25	0.046	O I | | | | |	0.55
0.500	2.40	0.33	0.060	O I | | | | |	0.72
0.583	2.44	0.41	0.074	O I | | | | |	0.89
0.667	2.47	0.46	0.088	|O I | | | |	1.03
0.750	2.65	0.46	0.102	|O I | | | |	1.14
0.833	2.50	0.46	0.117	|O I | | | |	1.24
0.917	2.37	0.46	0.130	|O I | | | |	1.34
1.000	2.52	0.46	0.144	|O I | | | |	1.44
1.083	2.98	0.46	0.160	|O I | | | |	1.56
1.167	3.36	0.46	0.178	|O I| | | |	1.69
1.250	3.44	0.46	0.199	|O I| | | |	1.84
1.333	3.31	0.46	0.219	|O I| | | |	1.98
1.417	3.64	0.46	0.240	|O I | | |	2.13
1.500	4.23	0.46	0.263	|O |I | | |	2.31
1.583	4.17	0.46	0.289	|O |I | | |	2.49
1.667	4.20	0.46	0.315	|O |I | | |	2.68
1.750	4.94	0.46	0.343	|O | I | | |	2.88
1.833	5.35	0.46	0.375	|O | I | | |	3.12
1.917	5.14	0.46	0.408	|O | I | | |	3.35
2.000	5.06	0.46	0.440	|O | I | | |	3.59
2.083	5.19	0.46	0.472	|O | I | | |	3.82
2.167	6.19	0.46	0.509	|O | I | |	4.08
2.250	7.86	0.46	0.554	|O | |I | |	4.41
2.333	7.56	0.46	0.604	|O | |I | |	4.77
2.417	9.17	0.46	0.658	|O | | I | |	5.16
2.500	12.37	0.46	0.729	|O | | | I |	5.68
2.583	14.10	0.46	0.817	|O | | | | I	6.52
2.667	13.32	0.46	0.908	|O | | | I |	7.63
2.750	8.36	0.70	0.979	|O | | I | |	8.48
2.833	4.33	0.92	1.017	| O |I | | |	8.94
2.917	3.27	1.15	1.036	| O I| | | |	9.89
3.000	2.12	1.46	1.046	| OI | | | |	10.30
3.083	0.81	1.46	1.046	|I O | | | |	10.30
3.167	0.23	1.25	1.040	I O | | | |	10.08
3.250	0.08	1.11	1.033	I O | | | |	9.68
3.333	0.01	1.01	1.026	I O | | | |	9.25
3.417	0.00	0.93	1.019	I O | | | |	8.97
3.500	0.00	0.90	1.013	I O | | | |	8.89
3.583	0.00	0.86	1.007	IO | | | |	8.82
3.667	0.00	0.83	1.001	IO | | | |	8.75
3.750	0.00	0.79	0.996	IO | | | |	8.68

3.833	0.00	0.76	0.990	IO				8.62
3.917	0.00	0.73	0.985	IO				8.56
4.000	0.00	0.70	0.980	IO				8.50
4.083	0.00	0.67	0.975	IO				8.44
4.167	0.00	0.65	0.971	IO				8.38
4.250	0.00	0.62	0.966	IO				8.33
4.333	0.00	0.60	0.962	IO				8.28
4.417	0.00	0.57	0.958	IO				8.23
4.500	0.00	0.55	0.954	IO				8.19
4.583	0.00	0.53	0.951	IO				8.14
4.667	0.00	0.51	0.947	IO				8.10
4.750	0.00	0.49	0.944	IO				8.06
4.833	0.00	0.47	0.940	IO				8.02
4.917	0.00	0.46	0.937	IO				7.98
5.000	0.00	0.46	0.934	IO				7.94
5.083	0.00	0.46	0.931	IO				7.90
5.167	0.00	0.46	0.928	IO				7.86
5.250	0.00	0.46	0.924	IO				7.82
5.333	0.00	0.46	0.921	IO				7.79
5.417	0.00	0.46	0.918	IO				7.75
5.500	0.00	0.46	0.915	IO				7.71
5.583	0.00	0.46	0.912	IO				7.67
5.667	0.00	0.46	0.909	IO				7.63
5.750	0.00	0.46	0.905	IO				7.59
5.833	0.00	0.46	0.902	IO				7.56
5.917	0.00	0.46	0.899	IO				7.52
6.000	0.00	0.46	0.896	IO				7.48
6.083	0.00	0.46	0.893	IO				7.44
6.167	0.00	0.46	0.890	IO				7.40
6.250	0.00	0.46	0.886	IO				7.36
6.333	0.00	0.46	0.883	IO				7.32
6.417	0.00	0.46	0.880	IO				7.29
6.500	0.00	0.46	0.877	IO				7.25
6.583	0.00	0.46	0.874	IO				7.21
6.667	0.00	0.46	0.871	IO				7.17
6.750	0.00	0.46	0.867	IO				7.13
6.833	0.00	0.46	0.864	IO				7.09
6.917	0.00	0.46	0.861	IO				7.06
7.000	0.00	0.46	0.858	IO				7.02
7.083	0.00	0.46	0.855	IO				6.98
7.167	0.00	0.46	0.852	IO				6.94
7.250	0.00	0.46	0.848	IO				6.90
7.333	0.00	0.46	0.845	IO				6.86
7.417	0.00	0.46	0.842	IO				6.83
7.500	0.00	0.46	0.839	IO				6.79
7.583	0.00	0.46	0.836	IO				6.75
7.667	0.00	0.46	0.833	IO				6.71
7.750	0.00	0.46	0.829	IO				6.67
7.833	0.00	0.46	0.826	IO				6.63
7.917	0.00	0.46	0.823	IO				6.60
8.000	0.00	0.46	0.820	IO				6.56
8.083	0.00	0.46	0.817	IO				6.52
8.167	0.00	0.46	0.814	IO				6.48
8.250	0.00	0.46	0.810	IO				6.44
8.333	0.00	0.46	0.807	IO				6.40
8.417	0.00	0.46	0.804	IO				6.36
8.500	0.00	0.46	0.801	IO				6.33
8.583	0.00	0.46	0.798	IO				6.29
8.667	0.00	0.46	0.795	IO				6.25
8.750	0.00	0.46	0.791	IO				6.21

8.833	0.00	0.46	0.788	IO				6.17
8.917	0.00	0.46	0.785	IO				6.13
9.000	0.00	0.46	0.782	IO				6.10
9.083	0.00	0.46	0.779	IO				6.06
9.167	0.00	0.46	0.776	IO				6.02
9.250	0.00	0.46	0.772	IO				5.99
9.333	0.00	0.46	0.769	IO				5.97
9.417	0.00	0.46	0.766	IO				5.94
9.500	0.00	0.46	0.763	IO				5.92
9.583	0.00	0.46	0.760	IO				5.90
9.667	0.00	0.46	0.757	IO				5.87
9.750	0.00	0.46	0.753	IO				5.85
9.833	0.00	0.46	0.750	IO				5.83
9.917	0.00	0.46	0.747	IO				5.81
10.000	0.00	0.46	0.744	IO				5.78
10.083	0.00	0.46	0.741	IO				5.76
10.167	0.00	0.46	0.738	IO				5.74
10.250	0.00	0.46	0.734	IO				5.71
10.333	0.00	0.46	0.731	IO				5.69
10.417	0.00	0.46	0.728	IO				5.67
10.500	0.00	0.46	0.725	IO				5.64
10.583	0.00	0.46	0.722	IO				5.62
10.667	0.00	0.46	0.719	IO				5.60
10.750	0.00	0.46	0.715	IO				5.58
10.833	0.00	0.46	0.712	IO				5.55
10.917	0.00	0.46	0.709	IO				5.53
11.000	0.00	0.46	0.706	IO				5.51
11.083	0.00	0.46	0.703	IO				5.48
11.167	0.00	0.46	0.700	IO				5.46
11.250	0.00	0.46	0.696	IO				5.44
11.333	0.00	0.46	0.693	IO				5.42
11.417	0.00	0.46	0.690	IO				5.39
11.500	0.00	0.46	0.687	IO				5.37
11.583	0.00	0.46	0.684	IO				5.35
11.667	0.00	0.46	0.681	IO				5.32
11.750	0.00	0.46	0.677	IO				5.30
11.833	0.00	0.46	0.674	IO				5.28
11.917	0.00	0.46	0.671	IO				5.26
12.000	0.00	0.46	0.668	IO				5.23
12.083	0.00	0.46	0.665	IO				5.21
12.167	0.00	0.46	0.662	IO				5.19
12.250	0.00	0.46	0.658	IO				5.16
12.333	0.00	0.46	0.655	IO				5.14
12.417	0.00	0.46	0.652	IO				5.12
12.500	0.00	0.46	0.649	IO				5.09
12.583	0.00	0.46	0.646	IO				5.07
12.667	0.00	0.46	0.643	IO				5.05
12.750	0.00	0.46	0.639	IO				5.03
12.833	0.00	0.46	0.636	IO				5.00
12.917	0.00	0.46	0.633	IO				4.98
13.000	0.00	0.46	0.630	IO				4.96
13.083	0.00	0.46	0.627	IO				4.93
13.167	0.00	0.46	0.624	IO				4.91
13.250	0.00	0.46	0.620	IO				4.89
13.333	0.00	0.46	0.617	IO				4.87
13.417	0.00	0.46	0.614	IO				4.84
13.500	0.00	0.46	0.611	IO				4.82
13.583	0.00	0.46	0.608	IO				4.80
13.667	0.00	0.46	0.605	IO				4.77
13.750	0.00	0.46	0.601	IO				4.75

13.833	0.00	0.46	0.598	IO				4.73
13.917	0.00	0.46	0.595	IO				4.70
14.000	0.00	0.46	0.592	IO				4.68
14.083	0.00	0.46	0.589	IO				4.66
14.167	0.00	0.46	0.586	IO				4.64
14.250	0.00	0.46	0.582	IO				4.61
14.333	0.00	0.46	0.579	IO				4.59
14.417	0.00	0.46	0.576	IO				4.57
14.500	0.00	0.46	0.573	IO				4.54
14.583	0.00	0.46	0.570	IO				4.52
14.667	0.00	0.46	0.567	IO				4.50
14.750	0.00	0.46	0.563	IO				4.48
14.833	0.00	0.46	0.560	IO				4.45
14.917	0.00	0.46	0.557	IO				4.43
15.000	0.00	0.46	0.554	IO				4.41
15.083	0.00	0.46	0.551	IO				4.38
15.167	0.00	0.46	0.547	IO				4.36
15.250	0.00	0.46	0.544	IO				4.34
15.333	0.00	0.46	0.541	IO				4.32
15.417	0.00	0.46	0.538	IO				4.29
15.500	0.00	0.46	0.535	IO				4.27
15.583	0.00	0.46	0.532	IO				4.25
15.667	0.00	0.46	0.528	IO				4.22
15.750	0.00	0.46	0.525	IO				4.20
15.833	0.00	0.46	0.522	IO				4.18
15.917	0.00	0.46	0.519	IO				4.15
16.000	0.00	0.46	0.516	IO				4.13
16.083	0.00	0.46	0.513	IO				4.11
16.167	0.00	0.46	0.509	IO				4.09
16.250	0.00	0.46	0.506	IO				4.06
16.333	0.00	0.46	0.503	IO				4.04
16.417	0.00	0.46	0.500	IO				4.02
16.500	0.00	0.46	0.497	IO				3.99
16.583	0.00	0.46	0.494	IO				3.97
16.667	0.00	0.46	0.490	IO				3.95
16.750	0.00	0.46	0.487	IO				3.93
16.833	0.00	0.46	0.484	IO				3.90
16.917	0.00	0.46	0.481	IO				3.88
17.000	0.00	0.46	0.478	IO				3.86
17.083	0.00	0.46	0.475	IO				3.83
17.167	0.00	0.46	0.471	IO				3.81
17.250	0.00	0.46	0.468	IO				3.79
17.333	0.00	0.46	0.465	IO				3.77
17.417	0.00	0.46	0.462	IO				3.74
17.500	0.00	0.46	0.459	IO				3.72
17.583	0.00	0.46	0.456	IO				3.70
17.667	0.00	0.46	0.452	IO				3.67
17.750	0.00	0.46	0.449	IO				3.65
17.833	0.00	0.46	0.446	IO				3.63
17.917	0.00	0.46	0.443	IO				3.60
18.000	0.00	0.46	0.440	IO				3.58
18.083	0.00	0.46	0.437	IO				3.56
18.167	0.00	0.46	0.433	IO				3.54
18.250	0.00	0.46	0.430	IO				3.51
18.333	0.00	0.46	0.427	IO				3.49
18.417	0.00	0.46	0.424	IO				3.47
18.500	0.00	0.46	0.421	IO				3.44
18.583	0.00	0.46	0.418	IO				3.42
18.667	0.00	0.46	0.414	IO				3.40
18.750	0.00	0.46	0.411	IO				3.38

18.833	0.00	0.46	0.408	IO				3.35
18.917	0.00	0.46	0.405	IO				3.33
19.000	0.00	0.46	0.402	IO				3.31
19.083	0.00	0.46	0.399	IO				3.28
19.167	0.00	0.46	0.395	IO				3.26
19.250	0.00	0.46	0.392	IO				3.24
19.333	0.00	0.46	0.389	IO				3.21
19.417	0.00	0.46	0.386	IO				3.19
19.500	0.00	0.46	0.383	IO				3.17
19.583	0.00	0.46	0.380	IO				3.15
19.667	0.00	0.46	0.376	IO				3.12
19.750	0.00	0.46	0.373	IO				3.10
19.833	0.00	0.46	0.370	IO				3.08
19.917	0.00	0.46	0.367	IO				3.05
20.000	0.00	0.46	0.364	IO				3.03
20.083	0.00	0.46	0.361	IO				3.01
20.167	0.00	0.46	0.357	IO				2.99
20.250	0.00	0.46	0.354	IO				2.96
20.333	0.00	0.46	0.351	IO				2.94
20.417	0.00	0.46	0.348	IO				2.92
20.500	0.00	0.46	0.345	IO				2.89
20.583	0.00	0.46	0.342	IO				2.87
20.667	0.00	0.46	0.338	IO				2.85
20.750	0.00	0.46	0.335	IO				2.83
20.833	0.00	0.46	0.332	IO				2.80
20.917	0.00	0.46	0.329	IO				2.78
21.000	0.00	0.46	0.326	IO				2.76
21.083	0.00	0.46	0.323	IO				2.73
21.167	0.00	0.46	0.319	IO				2.71
21.250	0.00	0.46	0.316	IO				2.69
21.333	0.00	0.46	0.313	IO				2.66
21.417	0.00	0.46	0.310	IO				2.64
21.500	0.00	0.46	0.307	IO				2.62
21.583	0.00	0.46	0.304	IO				2.60
21.667	0.00	0.46	0.300	IO				2.57
21.750	0.00	0.46	0.297	IO				2.55
21.833	0.00	0.46	0.294	IO				2.53
21.917	0.00	0.46	0.291	IO				2.50
22.000	0.00	0.46	0.288	IO				2.48
22.083	0.00	0.46	0.285	IO				2.46
22.167	0.00	0.46	0.281	IO				2.44
22.250	0.00	0.46	0.278	IO				2.41
22.333	0.00	0.46	0.275	IO				2.39
22.417	0.00	0.46	0.272	IO				2.37
22.500	0.00	0.46	0.269	IO				2.34
22.583	0.00	0.46	0.266	IO				2.32
22.667	0.00	0.46	0.262	IO				2.30
22.750	0.00	0.46	0.259	IO				2.27
22.833	0.00	0.46	0.256	IO				2.25
22.917	0.00	0.46	0.253	IO				2.23
23.000	0.00	0.46	0.250	IO				2.21
23.083	0.00	0.46	0.247	IO				2.18
23.167	0.00	0.46	0.243	IO				2.16
23.250	0.00	0.46	0.240	IO				2.14
23.333	0.00	0.46	0.237	IO				2.11
23.417	0.00	0.46	0.234	IO				2.09
23.500	0.00	0.46	0.231	IO				2.07
23.583	0.00	0.46	0.228	IO				2.05
23.667	0.00	0.46	0.224	IO				2.02
23.750	0.00	0.46	0.221	IO				2.00

23.833	0.00	0.46	0.218	IO				1.98
23.917	0.00	0.46	0.215	IO				1.95
24.000	0.00	0.46	0.212	IO				1.93
24.083	0.00	0.46	0.209	IO				1.91
24.167	0.00	0.46	0.205	IO				1.89
24.250	0.00	0.46	0.202	IO				1.86
24.333	0.00	0.46	0.199	IO				1.84
24.417	0.00	0.46	0.196	IO				1.82
24.500	0.00	0.46	0.193	IO				1.79
24.583	0.00	0.46	0.190	IO				1.77
24.667	0.00	0.46	0.186	IO				1.75
24.750	0.00	0.46	0.183	IO				1.72
24.833	0.00	0.46	0.180	IO				1.70
24.917	0.00	0.46	0.177	IO				1.68
25.000	0.00	0.46	0.174	IO				1.66
25.083	0.00	0.46	0.170	IO				1.63
25.167	0.00	0.46	0.167	IO				1.61
25.250	0.00	0.46	0.164	IO				1.59
25.333	0.00	0.46	0.161	IO				1.56
25.417	0.00	0.46	0.158	IO				1.54
25.500	0.00	0.46	0.155	IO				1.52
25.583	0.00	0.46	0.151	IO				1.50
25.667	0.00	0.46	0.148	IO				1.47
25.750	0.00	0.46	0.145	IO				1.45
25.833	0.00	0.46	0.142	IO				1.43
25.917	0.00	0.46	0.139	IO				1.40
26.000	0.00	0.46	0.136	IO				1.38
26.083	0.00	0.46	0.132	IO				1.36
26.167	0.00	0.46	0.129	IO				1.34
26.250	0.00	0.46	0.126	IO				1.31
26.333	0.00	0.46	0.123	IO				1.29
26.417	0.00	0.46	0.120	IO				1.27
26.500	0.00	0.46	0.117	IO				1.24
26.583	0.00	0.46	0.113	IO				1.22
26.667	0.00	0.46	0.110	IO				1.20
26.750	0.00	0.46	0.107	IO				1.17
26.833	0.00	0.46	0.104	IO				1.15
26.917	0.00	0.46	0.101	IO				1.13
27.000	0.00	0.46	0.098	IO				1.11
27.083	0.00	0.46	0.094	IO				1.08
27.167	0.00	0.46	0.091	IO				1.06
27.250	0.00	0.46	0.088	IO				1.04
27.333	0.00	0.46	0.085	IO				1.01
27.417	0.00	0.45	0.082	IO				0.99
27.500	0.00	0.44	0.079	O				0.95
27.583	0.00	0.42	0.076	O				0.91
27.667	0.00	0.40	0.073	O				0.88
27.750	0.00	0.39	0.070	O				0.85
27.833	0.00	0.37	0.068	O				0.81
27.917	0.00	0.36	0.065	O				0.78
28.000	0.00	0.35	0.063	O				0.75
28.083	0.00	0.33	0.060	O				0.73
28.167	0.00	0.32	0.058	O				0.70
28.250	0.00	0.31	0.056	O				0.67
28.333	0.00	0.30	0.054	O				0.65
28.417	0.00	0.29	0.052	O				0.62
28.500	0.00	0.28	0.050	O				0.60
28.583	0.00	0.27	0.048	O				0.58
28.667	0.00	0.26	0.046	O				0.56
28.750	0.00	0.25	0.044	O				0.54

28.833	0.00	0.24	0.043	O					0.52
28.917	0.00	0.23	0.041	O					0.50
29.000	0.00	0.22	0.040	O					0.48
29.083	0.00	0.21	0.038	O					0.46
29.167	0.00	0.20	0.037	O					0.44
29.250	0.00	0.20	0.035	O					0.43
29.333	0.00	0.19	0.034	O					0.41
29.417	0.00	0.18	0.033	O					0.39
29.500	0.00	0.17	0.032	O					0.38
29.583	0.00	0.17	0.030	O					0.37
29.667	0.00	0.16	0.029	O					0.35
29.750	0.00	0.16	0.028	O					0.34
29.833	0.00	0.15	0.027	O					0.33
29.917	0.00	0.14	0.026	O					0.31
30.000	0.00	0.14	0.025	O					0.30
30.083	0.00	0.13	0.024	O					0.29
30.167	0.00	0.13	0.023	O					0.28
30.250	0.00	0.12	0.022	O					0.27
30.333	0.00	0.12	0.022	O					0.26
30.417	0.00	0.11	0.021	O					0.25
30.500	0.00	0.11	0.020	O					0.24
30.583	0.00	0.11	0.019	O					0.23
30.667	0.00	0.10	0.018	O					0.22
30.750	0.00	0.10	0.018	O					0.21
30.833	0.00	0.09	0.017	O					0.21
30.917	0.00	0.09	0.016	O					0.20
31.000	0.00	0.09	0.016	O					0.19
31.083	0.00	0.08	0.015	O					0.18
31.167	0.00	0.08	0.015	O					0.18
31.250	0.00	0.08	0.014	O					0.17
31.333	0.00	0.08	0.014	O					0.16
31.417	0.00	0.07	0.013	O					0.16
31.500	0.00	0.07	0.013	O					0.15
31.583	0.00	0.07	0.012	O					0.15
31.667	0.00	0.06	0.012	O					0.14
31.750	0.00	0.06	0.011	O					0.14
31.833	0.00	0.06	0.011	O					0.13
31.917	0.00	0.06	0.010	O					0.13
32.000	0.00	0.06	0.010	O					0.12
32.083	0.00	0.05	0.010	O					0.12
32.167	0.00	0.05	0.009	O					0.11
32.250	0.00	0.05	0.009	O					0.11
32.333	0.00	0.05	0.009	O					0.10
32.417	0.00	0.05	0.008	O					0.10
32.500	0.00	0.04	0.008	O					0.10
32.583	0.00	0.04	0.008	O					0.09
32.667	0.00	0.04	0.007	O					0.09
32.750	0.00	0.04	0.007	O					0.09
32.833	0.00	0.04	0.007	O					0.08
32.917	0.00	0.04	0.007	O					0.08
33.000	0.00	0.04	0.006	O					0.08
33.083	0.00	0.03	0.006	O					0.07
33.167	0.00	0.03	0.006	O					0.07
33.250	0.00	0.03	0.006	O					0.07
33.333	0.00	0.03	0.005	O					0.07
33.417	0.00	0.03	0.005	O					0.06
33.500	0.00	0.03	0.005	O					0.06
33.583	0.00	0.03	0.005	O					0.06
33.667	0.00	0.03	0.005	O					0.06
33.750	0.00	0.02	0.004	O					0.05

33.833	0.00	0.02	0.004	O	|	|	|	0.05
33.917	0.00	0.02	0.004	O	|	|	|	0.05
34.000	0.00	0.02	0.004	O	|	|	|	0.05
34.083	0.00	0.02	0.004	O	|	|	|	0.05
34.167	0.00	0.02	0.004	O	|	|	|	0.04
34.250	0.00	0.02	0.004	O	|	|	|	0.04
34.333	0.00	0.02	0.003	O	|	|	|	0.04
34.417	0.00	0.02	0.003	O	|	|	|	0.04
34.500	0.00	0.02	0.003	O	|	|	|	0.04
34.583	0.00	0.02	0.003	O	|	|	|	0.04
34.667	0.00	0.02	0.003	O	|	|	|	0.04
34.750	0.00	0.02	0.003	O	|	|	|	0.03
34.833	0.00	0.02	0.003	O	|	|	|	0.03
34.917	0.00	0.01	0.003	O	|	|	|	0.03
35.000	0.00	0.01	0.003	O	|	|	|	0.03
35.083	0.00	0.01	0.002	O	|	|	|	0.03
35.167	0.00	0.01	0.002	O	|	|	|	0.03
35.250	0.00	0.01	0.002	O	|	|	|	0.03
35.333	0.00	0.01	0.002	O	|	|	|	0.03
35.417	0.00	0.01	0.002	O	|	|	|	0.03
35.500	0.00	0.01	0.002	O	|	|	|	0.02
35.583	0.00	0.01	0.002	O	|	|	|	0.02
35.667	0.00	0.01	0.002	O	|	|	|	0.02
35.750	0.00	0.01	0.002	O	|	|	|	0.02
35.833	0.00	0.01	0.002	O	|	|	|	0.02
35.917	0.00	0.01	0.002	O	|	|	|	0.02
36.000	0.00	0.01	0.002	O	|	|	|	0.02
36.083	0.00	0.01	0.002	O	|	|	|	0.02
36.167	0.00	0.01	0.001	O	|	|	|	0.02
36.250	0.00	0.01	0.001	O	|	|	|	0.02
36.333	0.00	0.01	0.001	O	|	|	|	0.02
36.417	0.00	0.01	0.001	O	|	|	|	0.02
36.500	0.00	0.01	0.001	O	|	|	|	0.02
36.583	0.00	0.01	0.001	O	|	|	|	0.01
36.667	0.00	0.01	0.001	O	|	|	|	0.01
36.750	0.00	0.01	0.001	O	|	|	|	0.01
36.833	0.00	0.01	0.001	O	|	|	|	0.01
36.917	0.00	0.01	0.001	O	|	|	|	0.01
37.000	0.00	0.01	0.001	O	|	|	|	0.01
37.083	0.00	0.01	0.001	O	|	|	|	0.01
37.167	0.00	0.01	0.001	O	|	|	|	0.01
37.250	0.00	0.01	0.001	O	|	|	|	0.01
37.333	0.00	0.00	0.001	O	|	|	|	0.01
37.417	0.00	0.00	0.001	O	|	|	|	0.01
37.500	0.00	0.00	0.001	O	|	|	|	0.01
37.583	0.00	0.00	0.001	O	|	|	|	0.01
37.667	0.00	0.00	0.001	O	|	|	|	0.01
37.750	0.00	0.00	0.001	O	|	|	|	0.01
37.833	0.00	0.00	0.001	O	|	|	|	0.01
37.917	0.00	0.00	0.001	O	|	|	|	0.01
38.000	0.00	0.00	0.001	O	|	|	|	0.01
38.083	0.00	0.00	0.001	O	|	|	|	0.01
38.167	0.00	0.00	0.001	O	|	|	|	0.01
38.250	0.00	0.00	0.001	O	|	|	|	0.01
38.333	0.00	0.00	0.001	O	|	|	|	0.01
38.417	0.00	0.00	0.001	O	|	|	|	0.01
38.500	0.00	0.00	0.001	O	|	|	|	0.01
38.583	0.00	0.00	0.000	O	|	|	|	0.01
38.667	0.00	0.00	0.000	O	|	|	|	0.01
38.750	0.00	0.00	0.000	O	|	|	|	0.01

38.833	0.00	0.00	0.000	O	|	|	|	|	0.01
38.917	0.00	0.00	0.000	O	|	|	|	|	0.01
39.000	0.00	0.00	0.000	O	|	|	|	|	0.00
39.083	0.00	0.00	0.000	O	|	|	|	|	0.00
39.167	0.00	0.00	0.000	O	|	|	|	|	0.00
39.250	0.00	0.00	0.000	O	|	|	|	|	0.00
39.333	0.00	0.00	0.000	O	|	|	|	|	0.00
39.417	0.00	0.00	0.000	O	|	|	|	|	0.00
39.500	0.00	0.00	0.000	O	|	|	|	|	0.00
39.583	0.00	0.00	0.000	O	|	|	|	|	0.00
39.667	0.00	0.00	0.000	O	|	|	|	|	0.00
39.750	0.00	0.00	0.000	O	|	|	|	|	0.00
39.833	0.00	0.00	0.000	O	|	|	|	|	0.00
39.917	0.00	0.00	0.000	O	|	|	|	|	0.00
40.000	0.00	0.00	0.000	O	|	|	|	|	0.00
40.083	0.00	0.00	0.000	O	|	|	|	|	0.00
40.167	0.00	0.00	0.000	O	|	|	|	|	0.00
40.250	0.00	0.00	0.000	O	|	|	|	|	0.00
40.333	0.00	0.00	0.000	O	|	|	|	|	0.00
40.417	0.00	0.00	0.000	O	|	|	|	|	0.00
40.500	0.00	0.00	0.000	O	|	|	|	|	0.00
40.583	0.00	0.00	0.000	O	|	|	|	|	0.00
40.667	0.00	0.00	0.000	O	|	|	|	|	0.00
40.750	0.00	0.00	0.000	O	|	|	|	|	0.00
40.833	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 490
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.463 (CFS)
Total volume = 1.173 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
100-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte
**********HYDROGRAPH DATA**********
Number of intervals = 76
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.135 (CFS)
Total volume = 1.595 (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 12.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 76
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.3 6.57 9.85 13.14	Depth (Ft.)
0.083	0.43	0.01	0.001	OI | | | |	0.02
0.167	0.98	0.03	0.006	O I | | | |	0.07
0.250	1.17	0.07	0.013	O I | | | |	0.16
0.333	1.23	0.12	0.021	O I | | | |	0.25
0.417	1.26	0.16	0.028	O I | | | |	0.34
0.500	1.35	0.20	0.036	O I | | | |	0.44
0.583	1.44	0.24	0.044	O I | | | |	0.53
0.667	1.46	0.29	0.052	O I | | | |	0.63
0.750	1.47	0.33	0.060	O I | | | |	0.73
0.833	1.47	0.38	0.068	O I | | | |	0.82
0.917	1.47	0.42	0.075	|O I | | | |	0.91
1.000	1.56	0.46	0.083	|O I | | | |	1.00
1.083	1.65	0.46	0.091	|O I | | | |	1.05
1.167	1.67	0.46	0.099	|O I | | | |	1.11
1.250	1.68	0.46	0.107	|O I | | | |	1.17
1.333	1.68	0.46	0.116	|O I | | | |	1.24
1.417	1.68	0.46	0.124	|O I | | | |	1.30
1.500	1.68	0.46	0.132	|O I | | | |	1.36
1.583	1.68	0.46	0.141	|O I | | | |	1.42
1.667	1.68	0.46	0.149	|O I | | | |	1.48
1.750	1.68	0.46	0.158	|O I | | | |	1.54
1.833	1.68	0.46	0.166	|O I | | | |	1.60
1.917	1.68	0.46	0.174	|O I | | | |	1.66
2.000	1.77	0.46	0.183	|O I | | | |	1.72
2.083	1.77	0.46	0.192	|O I | | | |	1.79
2.167	1.78	0.46	0.201	|O I | | | |	1.86
2.250	1.87	0.46	0.211	|O I | | | |	1.92
2.333	1.88	0.46	0.220	|O I | | | |	1.99
2.417	1.89	0.46	0.230	|O I | | | |	2.06
2.500	1.89	0.46	0.240	|O I | | | |	2.14
2.583	1.89	0.46	0.250	|O I | | | |	2.21
2.667	1.89	0.46	0.260	|O I | | | |	2.28
2.750	1.98	0.46	0.270	|O I | | | |	2.35
2.833	2.07	0.46	0.281	|O I | | | |	2.43
2.917	2.09	0.46	0.292	|O I | | | |	2.51
3.000	2.10	0.46	0.303	|O I | | | |	2.59
3.083	2.10	0.46	0.314	|O I | | | |	2.67
3.167	2.19	0.46	0.326	|O I | | | |	2.76
3.250	2.28	0.46	0.338	|O I | | | |	2.85
3.333	2.30	0.46	0.351	|O I | | | |	2.94
3.417	2.39	0.46	0.364	|O I | | | |	3.03
3.500	2.57	0.46	0.377	|O I | | | |	3.13
3.583	2.80	0.46	0.393	|O I | | | |	3.24
3.667	2.95	0.46	0.409	|O I| | | |	3.36
3.750	3.10	0.46	0.427	|O I| | | |	3.49

3.833	3.24	0.46	0.446	O I				3.63
3.917	3.39	0.46	0.465	O I				3.77
4.000	3.53	0.46	0.486	O I				3.92
4.083	3.67	0.46	0.508	O I				4.07
4.167	3.93	0.46	0.531	O I				4.24
4.250	4.20	0.46	0.556	O I				4.42
4.333	4.48	0.46	0.582	O I				4.61
4.417	4.76	0.46	0.611	O I				4.82
4.500	4.93	0.46	0.641	O I				5.04
4.583	5.09	0.46	0.672	O I				5.27
4.667	5.34	0.46	0.705	O I				5.50
4.750	5.62	0.46	0.740	O I				5.75
4.833	5.78	0.46	0.776	O I				6.02
4.917	5.94	0.46	0.813	O I				6.47
5.000	6.20	0.46	0.852	O I				6.94
5.083	6.93	0.46	0.894	O I				7.45
5.167	8.17	0.48	0.942	O	I			8.04
5.250	9.30	0.81	0.998	O	I			8.71
5.333	10.22	1.85	1.056	O	I			10.70
5.417	11.33	2.97	1.114	O	I			12.28
5.500	13.14	6.18	1.167	O	I			13.26
5.583	10.18	9.78	1.192	O	I			13.67
5.667	4.80	8.28	1.181	I	O			13.50
5.750	2.54	5.25	1.160	I	O			13.16
5.833	1.58	3.67	1.144	I	O			12.87
5.917	0.99	3.31	1.128	I	O			12.57
6.000	0.63	2.93	1.112	I	O			12.25
6.083	0.31	2.59	1.097	I	O			11.91
6.167	0.08	2.37	1.081	I	O			11.47
6.250	0.03	2.15	1.066	I	O			11.05
6.333	0.01	1.71	1.053	I	O			10.56
6.417	0.00	1.33	1.042	I	O			10.16
6.500	0.00	1.12	1.034	I O				9.73
6.583	0.00	1.01	1.026	I O				9.27
6.667	0.00	0.94	1.020	I O				8.97
6.750	0.00	0.90	1.013	I O				8.89
6.833	0.00	0.86	1.007	I O				8.82
6.917	0.00	0.83	1.001	I O				8.75
7.000	0.00	0.80	0.996	IO				8.68
7.083	0.00	0.76	0.990	IO				8.62
7.167	0.00	0.73	0.985	IO				8.56
7.250	0.00	0.70	0.980	IO				8.50
7.333	0.00	0.68	0.976	IO				8.44
7.417	0.00	0.65	0.971	IO				8.39
7.500	0.00	0.62	0.967	IO				8.33
7.583	0.00	0.60	0.962	IO				8.28
7.667	0.00	0.57	0.958	IO				8.23
7.750	0.00	0.55	0.955	IO				8.19
7.833	0.00	0.53	0.951	IO				8.14
7.917	0.00	0.51	0.947	IO				8.10
8.000	0.00	0.49	0.944	IO				8.06
8.083	0.00	0.47	0.940	IO				8.02
8.167	0.00	0.46	0.937	IO				7.98
8.250	0.00	0.46	0.934	IO				7.94
8.333	0.00	0.46	0.931	IO				7.90
8.417	0.00	0.46	0.928	IO				7.86
8.500	0.00	0.46	0.925	IO				7.83
8.583	0.00	0.46	0.921	IO				7.79
8.667	0.00	0.46	0.918	IO				7.75
8.750	0.00	0.46	0.915	IO				7.71

8.833	0.00	0.46	0.912	IO				7.67
8.917	0.00	0.46	0.909	IO				7.63
9.000	0.00	0.46	0.906	IO				7.60
9.083	0.00	0.46	0.902	IO				7.56
9.167	0.00	0.46	0.899	IO				7.52
9.250	0.00	0.46	0.896	IO				7.48
9.333	0.00	0.46	0.893	IO				7.44
9.417	0.00	0.46	0.890	IO				7.40
9.500	0.00	0.46	0.887	IO				7.36
9.583	0.00	0.46	0.883	IO				7.33
9.667	0.00	0.46	0.880	IO				7.29
9.750	0.00	0.46	0.877	IO				7.25
9.833	0.00	0.46	0.874	IO				7.21
9.917	0.00	0.46	0.871	IO				7.17
10.000	0.00	0.46	0.868	IO				7.13
10.083	0.00	0.46	0.864	IO				7.10
10.167	0.00	0.46	0.861	IO				7.06
10.250	0.00	0.46	0.858	IO				7.02
10.333	0.00	0.46	0.855	IO				6.98
10.417	0.00	0.46	0.852	IO				6.94
10.500	0.00	0.46	0.849	IO				6.90
10.583	0.00	0.46	0.845	IO				6.87
10.667	0.00	0.46	0.842	IO				6.83
10.750	0.00	0.46	0.839	IO				6.79
10.833	0.00	0.46	0.836	IO				6.75
10.917	0.00	0.46	0.833	IO				6.71
11.000	0.00	0.46	0.830	IO				6.67
11.083	0.00	0.46	0.826	IO				6.64
11.167	0.00	0.46	0.823	IO				6.60
11.250	0.00	0.46	0.820	IO				6.56
11.333	0.00	0.46	0.817	IO				6.52
11.417	0.00	0.46	0.814	IO				6.48
11.500	0.00	0.46	0.811	IO				6.44
11.583	0.00	0.46	0.807	IO				6.40
11.667	0.00	0.46	0.804	IO				6.37
11.750	0.00	0.46	0.801	IO				6.33
11.833	0.00	0.46	0.798	IO				6.29
11.917	0.00	0.46	0.795	IO				6.25
12.000	0.00	0.46	0.792	IO				6.21
12.083	0.00	0.46	0.788	IO				6.17
12.167	0.00	0.46	0.785	IO				6.14
12.250	0.00	0.46	0.782	IO				6.10
12.333	0.00	0.46	0.779	IO				6.06
12.417	0.00	0.46	0.776	IO				6.02
12.500	0.00	0.46	0.773	IO				5.99
12.583	0.00	0.46	0.769	IO				5.97
12.667	0.00	0.46	0.766	IO				5.94
12.750	0.00	0.46	0.763	IO				5.92
12.833	0.00	0.46	0.760	IO				5.90
12.917	0.00	0.46	0.757	IO				5.87
13.000	0.00	0.46	0.754	IO				5.85
13.083	0.00	0.46	0.750	IO				5.83
13.167	0.00	0.46	0.747	IO				5.81
13.250	0.00	0.46	0.744	IO				5.78
13.333	0.00	0.46	0.741	IO				5.76
13.417	0.00	0.46	0.738	IO				5.74
13.500	0.00	0.46	0.735	IO				5.71
13.583	0.00	0.46	0.731	IO				5.69
13.667	0.00	0.46	0.728	IO				5.67
13.750	0.00	0.46	0.725	IO				5.65

13.833	0.00	0.46	0.722	IO				5.62
13.917	0.00	0.46	0.719	IO				5.60
14.000	0.00	0.46	0.716	IO				5.58
14.083	0.00	0.46	0.712	IO				5.55
14.167	0.00	0.46	0.709	IO				5.53
14.250	0.00	0.46	0.706	IO				5.51
14.333	0.00	0.46	0.703	IO				5.49
14.417	0.00	0.46	0.700	IO				5.46
14.500	0.00	0.46	0.697	IO				5.44
14.583	0.00	0.46	0.693	IO				5.42
14.667	0.00	0.46	0.690	IO				5.39
14.750	0.00	0.46	0.687	IO				5.37
14.833	0.00	0.46	0.684	IO				5.35
14.917	0.00	0.46	0.681	IO				5.32
15.000	0.00	0.46	0.678	IO				5.30
15.083	0.00	0.46	0.674	IO				5.28
15.167	0.00	0.46	0.671	IO				5.26
15.250	0.00	0.46	0.668	IO				5.23
15.333	0.00	0.46	0.665	IO				5.21
15.417	0.00	0.46	0.662	IO				5.19
15.500	0.00	0.46	0.659	IO				5.16
15.583	0.00	0.46	0.655	IO				5.14
15.667	0.00	0.46	0.652	IO				5.12
15.750	0.00	0.46	0.649	IO				5.10
15.833	0.00	0.46	0.646	IO				5.07
15.917	0.00	0.46	0.643	IO				5.05
16.000	0.00	0.46	0.639	IO				5.03
16.083	0.00	0.46	0.636	IO				5.00
16.167	0.00	0.46	0.633	IO				4.98
16.250	0.00	0.46	0.630	IO				4.96
16.333	0.00	0.46	0.627	IO				4.94
16.417	0.00	0.46	0.624	IO				4.91
16.500	0.00	0.46	0.620	IO				4.89
16.583	0.00	0.46	0.617	IO				4.87
16.667	0.00	0.46	0.614	IO				4.84
16.750	0.00	0.46	0.611	IO				4.82
16.833	0.00	0.46	0.608	IO				4.80
16.917	0.00	0.46	0.605	IO				4.77
17.000	0.00	0.46	0.601	IO				4.75
17.083	0.00	0.46	0.598	IO				4.73
17.167	0.00	0.46	0.595	IO				4.71
17.250	0.00	0.46	0.592	IO				4.68
17.333	0.00	0.46	0.589	IO				4.66
17.417	0.00	0.46	0.586	IO				4.64
17.500	0.00	0.46	0.582	IO				4.61
17.583	0.00	0.46	0.579	IO				4.59
17.667	0.00	0.46	0.576	IO				4.57
17.750	0.00	0.46	0.573	IO				4.55
17.833	0.00	0.46	0.570	IO				4.52
17.917	0.00	0.46	0.567	IO				4.50
18.000	0.00	0.46	0.563	IO				4.48
18.083	0.00	0.46	0.560	IO				4.45
18.167	0.00	0.46	0.557	IO				4.43
18.250	0.00	0.46	0.554	IO				4.41
18.333	0.00	0.46	0.551	IO				4.38
18.417	0.00	0.46	0.548	IO				4.36
18.500	0.00	0.46	0.544	IO				4.34
18.583	0.00	0.46	0.541	IO				4.32
18.667	0.00	0.46	0.538	IO				4.29
18.750	0.00	0.46	0.535	IO				4.27

18.833	0.00	0.46	0.532	IO				4.25
18.917	0.00	0.46	0.529	IO				4.22
19.000	0.00	0.46	0.525	IO				4.20
19.083	0.00	0.46	0.522	IO				4.18
19.167	0.00	0.46	0.519	IO				4.16
19.250	0.00	0.46	0.516	IO				4.13
19.333	0.00	0.46	0.513	IO				4.11
19.417	0.00	0.46	0.510	IO				4.09
19.500	0.00	0.46	0.506	IO				4.06
19.583	0.00	0.46	0.503	IO				4.04
19.667	0.00	0.46	0.500	IO				4.02
19.750	0.00	0.46	0.497	IO				4.00
19.833	0.00	0.46	0.494	IO				3.97
19.917	0.00	0.46	0.491	IO				3.95
20.000	0.00	0.46	0.487	IO				3.93
20.083	0.00	0.46	0.484	IO				3.90
20.167	0.00	0.46	0.481	IO				3.88
20.250	0.00	0.46	0.478	IO				3.86
20.333	0.00	0.46	0.475	IO				3.83
20.417	0.00	0.46	0.472	IO				3.81
20.500	0.00	0.46	0.468	IO				3.79
20.583	0.00	0.46	0.465	IO				3.77
20.667	0.00	0.46	0.462	IO				3.74
20.750	0.00	0.46	0.459	IO				3.72
20.833	0.00	0.46	0.456	IO				3.70
20.917	0.00	0.46	0.453	IO				3.67
21.000	0.00	0.46	0.449	IO				3.65
21.083	0.00	0.46	0.446	IO				3.63
21.167	0.00	0.46	0.443	IO				3.61
21.250	0.00	0.46	0.440	IO				3.58
21.333	0.00	0.46	0.437	IO				3.56
21.417	0.00	0.46	0.434	IO				3.54
21.500	0.00	0.46	0.430	IO				3.51
21.583	0.00	0.46	0.427	IO				3.49
21.667	0.00	0.46	0.424	IO				3.47
21.750	0.00	0.46	0.421	IO				3.45
21.833	0.00	0.46	0.418	IO				3.42
21.917	0.00	0.46	0.415	IO				3.40
22.000	0.00	0.46	0.411	IO				3.38
22.083	0.00	0.46	0.408	IO				3.35
22.167	0.00	0.46	0.405	IO				3.33
22.250	0.00	0.46	0.402	IO				3.31
22.333	0.00	0.46	0.399	IO				3.28
22.417	0.00	0.46	0.396	IO				3.26
22.500	0.00	0.46	0.392	IO				3.24
22.583	0.00	0.46	0.389	IO				3.22
22.667	0.00	0.46	0.386	IO				3.19
22.750	0.00	0.46	0.383	IO				3.17
22.833	0.00	0.46	0.380	IO				3.15
22.917	0.00	0.46	0.377	IO				3.12
23.000	0.00	0.46	0.373	IO				3.10
23.083	0.00	0.46	0.370	IO				3.08
23.167	0.00	0.46	0.367	IO				3.06
23.250	0.00	0.46	0.364	IO				3.03
23.333	0.00	0.46	0.361	IO				3.01
23.417	0.00	0.46	0.358	IO				2.99
23.500	0.00	0.46	0.354	IO				2.96
23.583	0.00	0.46	0.351	IO				2.94
23.667	0.00	0.46	0.348	IO				2.92
23.750	0.00	0.46	0.345	IO				2.89

23.833	0.00	0.46	0.342	IO				2.87
23.917	0.00	0.46	0.339	IO				2.85
24.000	0.00	0.46	0.335	IO				2.83
24.083	0.00	0.46	0.332	IO				2.80
24.167	0.00	0.46	0.329	IO				2.78
24.250	0.00	0.46	0.326	IO				2.76
24.333	0.00	0.46	0.323	IO				2.73
24.417	0.00	0.46	0.320	IO				2.71
24.500	0.00	0.46	0.316	IO				2.69
24.583	0.00	0.46	0.313	IO				2.67
24.667	0.00	0.46	0.310	IO				2.64
24.750	0.00	0.46	0.307	IO				2.62
24.833	0.00	0.46	0.304	IO				2.60
24.917	0.00	0.46	0.301	IO				2.57
25.000	0.00	0.46	0.297	IO				2.55
25.083	0.00	0.46	0.294	IO				2.53
25.167	0.00	0.46	0.291	IO				2.51
25.250	0.00	0.46	0.288	IO				2.48
25.333	0.00	0.46	0.285	IO				2.46
25.417	0.00	0.46	0.282	IO				2.44
25.500	0.00	0.46	0.278	IO				2.41
25.583	0.00	0.46	0.275	IO				2.39
25.667	0.00	0.46	0.272	IO				2.37
25.750	0.00	0.46	0.269	IO				2.34
25.833	0.00	0.46	0.266	IO				2.32
25.917	0.00	0.46	0.262	IO				2.30
26.000	0.00	0.46	0.259	IO				2.28
26.083	0.00	0.46	0.256	IO				2.25
26.167	0.00	0.46	0.253	IO				2.23
26.250	0.00	0.46	0.250	IO				2.21
26.333	0.00	0.46	0.247	IO				2.18
26.417	0.00	0.46	0.243	IO				2.16
26.500	0.00	0.46	0.240	IO				2.14
26.583	0.00	0.46	0.237	IO				2.12
26.667	0.00	0.46	0.234	IO				2.09
26.750	0.00	0.46	0.231	IO				2.07
26.833	0.00	0.46	0.228	IO				2.05
26.917	0.00	0.46	0.224	IO				2.02
27.000	0.00	0.46	0.221	IO				2.00
27.083	0.00	0.46	0.218	IO				1.98
27.167	0.00	0.46	0.215	IO				1.95
27.250	0.00	0.46	0.212	IO				1.93
27.333	0.00	0.46	0.209	IO				1.91
27.417	0.00	0.46	0.205	IO				1.89
27.500	0.00	0.46	0.202	IO				1.86
27.583	0.00	0.46	0.199	IO				1.84
27.667	0.00	0.46	0.196	IO				1.82
27.750	0.00	0.46	0.193	IO				1.79
27.833	0.00	0.46	0.190	IO				1.77
27.917	0.00	0.46	0.186	IO				1.75
28.000	0.00	0.46	0.183	IO				1.73
28.083	0.00	0.46	0.180	IO				1.70
28.167	0.00	0.46	0.177	IO				1.68
28.250	0.00	0.46	0.174	IO				1.66
28.333	0.00	0.46	0.171	IO				1.63
28.417	0.00	0.46	0.167	IO				1.61
28.500	0.00	0.46	0.164	IO				1.59
28.583	0.00	0.46	0.161	IO				1.57
28.667	0.00	0.46	0.158	IO				1.54
28.750	0.00	0.46	0.155	IO				1.52

28.833	0.00	0.46	0.152	IO				1.50
28.917	0.00	0.46	0.148	IO				1.47
29.000	0.00	0.46	0.145	IO				1.45
29.083	0.00	0.46	0.142	IO				1.43
29.167	0.00	0.46	0.139	IO				1.40
29.250	0.00	0.46	0.136	IO				1.38
29.333	0.00	0.46	0.133	IO				1.36
29.417	0.00	0.46	0.129	IO				1.34
29.500	0.00	0.46	0.126	IO				1.31
29.583	0.00	0.46	0.123	IO				1.29
29.667	0.00	0.46	0.120	IO				1.27
29.750	0.00	0.46	0.117	IO				1.24
29.833	0.00	0.46	0.114	IO				1.22
29.917	0.00	0.46	0.110	IO				1.20
30.000	0.00	0.46	0.107	IO				1.18
30.083	0.00	0.46	0.104	IO				1.15
30.167	0.00	0.46	0.101	IO				1.13
30.250	0.00	0.46	0.098	IO				1.11
30.333	0.00	0.46	0.095	IO				1.08
30.417	0.00	0.46	0.091	IO				1.06
30.500	0.00	0.46	0.088	IO				1.04
30.583	0.00	0.46	0.085	IO				1.02
30.667	0.00	0.45	0.082	IO				0.99
30.750	0.00	0.44	0.079	IO				0.95
30.833	0.00	0.42	0.076	IO				0.91
30.917	0.00	0.40	0.073	O				0.88
31.000	0.00	0.39	0.070	O				0.85
31.083	0.00	0.38	0.068	O				0.82
31.167	0.00	0.36	0.065	O				0.79
31.250	0.00	0.35	0.063	O				0.76
31.333	0.00	0.33	0.060	O				0.73
31.417	0.00	0.32	0.058	O				0.70
31.500	0.00	0.31	0.056	O				0.67
31.583	0.00	0.30	0.054	O				0.65
31.667	0.00	0.29	0.052	O				0.62
31.750	0.00	0.28	0.050	O				0.60
31.833	0.00	0.27	0.048	O				0.58
31.917	0.00	0.26	0.046	O				0.56
32.000	0.00	0.25	0.044	O				0.54
32.083	0.00	0.24	0.043	O				0.52
32.167	0.00	0.23	0.041	O				0.50
32.250	0.00	0.22	0.040	O				0.48
32.333	0.00	0.21	0.038	O				0.46
32.417	0.00	0.20	0.037	O				0.44
32.500	0.00	0.20	0.035	O				0.43
32.583	0.00	0.19	0.034	O				0.41
32.667	0.00	0.18	0.033	O				0.39
32.750	0.00	0.17	0.032	O				0.38
32.833	0.00	0.17	0.030	O				0.37
32.917	0.00	0.16	0.029	O				0.35
33.000	0.00	0.16	0.028	O				0.34
33.083	0.00	0.15	0.027	O				0.33
33.167	0.00	0.14	0.026	O				0.31
33.250	0.00	0.14	0.025	O				0.30
33.333	0.00	0.13	0.024	O				0.29
33.417	0.00	0.13	0.023	O				0.28
33.500	0.00	0.12	0.022	O				0.27
33.583	0.00	0.12	0.022	O				0.26
33.667	0.00	0.11	0.021	O				0.25
33.750	0.00	0.11	0.020	O				0.24

33.833	0.00	0.11	0.019	O	|	|	|	0.23
33.917	0.00	0.10	0.018	O	|	|	|	0.22
34.000	0.00	0.10	0.018	O	|	|	|	0.21
34.083	0.00	0.09	0.017	O	|	|	|	0.21
34.167	0.00	0.09	0.016	O	|	|	|	0.20
34.250	0.00	0.09	0.016	O	|	|	|	0.19
34.333	0.00	0.08	0.015	O	|	|	|	0.18
34.417	0.00	0.08	0.015	O	|	|	|	0.18
34.500	0.00	0.08	0.014	O	|	|	|	0.17
34.583	0.00	0.08	0.014	O	|	|	|	0.16
34.667	0.00	0.07	0.013	O	|	|	|	0.16
34.750	0.00	0.07	0.013	O	|	|	|	0.15
34.833	0.00	0.07	0.012	O	|	|	|	0.15
34.917	0.00	0.06	0.012	O	|	|	|	0.14
35.000	0.00	0.06	0.011	O	|	|	|	0.14
35.083	0.00	0.06	0.011	O	|	|	|	0.13
35.167	0.00	0.06	0.010	O	|	|	|	0.13
35.250	0.00	0.06	0.010	O	|	|	|	0.12
35.333	0.00	0.05	0.010	O	|	|	|	0.12
35.417	0.00	0.05	0.009	O	|	|	|	0.11
35.500	0.00	0.05	0.009	O	|	|	|	0.11
35.583	0.00	0.05	0.009	O	|	|	|	0.10
35.667	0.00	0.05	0.008	O	|	|	|	0.10
35.750	0.00	0.04	0.008	O	|	|	|	0.10
35.833	0.00	0.04	0.008	O	|	|	|	0.09
35.917	0.00	0.04	0.007	O	|	|	|	0.09
36.000	0.00	0.04	0.007	O	|	|	|	0.09
36.083	0.00	0.04	0.007	O	|	|	|	0.08
36.167	0.00	0.04	0.007	O	|	|	|	0.08
36.250	0.00	0.04	0.006	O	|	|	|	0.08
36.333	0.00	0.03	0.006	O	|	|	|	0.07
36.417	0.00	0.03	0.006	O	|	|	|	0.07
36.500	0.00	0.03	0.006	O	|	|	|	0.07
36.583	0.00	0.03	0.005	O	|	|	|	0.07
36.667	0.00	0.03	0.005	O	|	|	|	0.06
36.750	0.00	0.03	0.005	O	|	|	|	0.06
36.833	0.00	0.03	0.005	O	|	|	|	0.06
36.917	0.00	0.03	0.005	O	|	|	|	0.06
37.000	0.00	0.02	0.005	O	|	|	|	0.05
37.083	0.00	0.02	0.004	O	|	|	|	0.05
37.167	0.00	0.02	0.004	O	|	|	|	0.05
37.250	0.00	0.02	0.004	O	|	|	|	0.05
37.333	0.00	0.02	0.004	O	|	|	|	0.05
37.417	0.00	0.02	0.004	O	|	|	|	0.04
37.500	0.00	0.02	0.004	O	|	|	|	0.04
37.583	0.00	0.02	0.003	O	|	|	|	0.04
37.667	0.00	0.02	0.003	O	|	|	|	0.04
37.750	0.00	0.02	0.003	O	|	|	|	0.04
37.833	0.00	0.02	0.003	O	|	|	|	0.04
37.917	0.00	0.02	0.003	O	|	|	|	0.04
38.000	0.00	0.02	0.003	O	|	|	|	0.03
38.083	0.00	0.02	0.003	O	|	|	|	0.03
38.167	0.00	0.01	0.003	O	|	|	|	0.03
38.250	0.00	0.01	0.003	O	|	|	|	0.03
38.333	0.00	0.01	0.002	O	|	|	|	0.03
38.417	0.00	0.01	0.002	O	|	|	|	0.03
38.500	0.00	0.01	0.002	O	|	|	|	0.03
38.583	0.00	0.01	0.002	O	|	|	|	0.03
38.667	0.00	0.01	0.002	O	|	|	|	0.03
38.750	0.00	0.01	0.002	O	|	|	|	0.02

38.833	0.00	0.01	0.002	O	|	|	|	0.02
38.917	0.00	0.01	0.002	O	|	|	|	0.02
39.000	0.00	0.01	0.002	O	|	|	|	0.02
39.083	0.00	0.01	0.002	O	|	|	|	0.02
39.167	0.00	0.01	0.002	O	|	|	|	0.02
39.250	0.00	0.01	0.002	O	|	|	|	0.02
39.333	0.00	0.01	0.002	O	|	|	|	0.02
39.417	0.00	0.01	0.001	O	|	|	|	0.02
39.500	0.00	0.01	0.001	O	|	|	|	0.02
39.583	0.00	0.01	0.001	O	|	|	|	0.02
39.667	0.00	0.01	0.001	O	|	|	|	0.02
39.750	0.00	0.01	0.001	O	|	|	|	0.02
39.833	0.00	0.01	0.001	O	|	|	|	0.01
39.917	0.00	0.01	0.001	O	|	|	|	0.01
40.000	0.00	0.01	0.001	O	|	|	|	0.01
40.083	0.00	0.01	0.001	O	|	|	|	0.01
40.167	0.00	0.01	0.001	O	|	|	|	0.01
40.250	0.00	0.01	0.001	O	|	|	|	0.01
40.333	0.00	0.01	0.001	O	|	|	|	0.01
40.417	0.00	0.01	0.001	O	|	|	|	0.01
40.500	0.00	0.01	0.001	O	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	0.01
40.667	0.00	0.00	0.001	O	|	|	|	0.01
40.750	0.00	0.00	0.001	O	|	|	|	0.01
40.833	0.00	0.00	0.001	O	|	|	|	0.01
40.917	0.00	0.00	0.001	O	|	|	|	0.01
41.000	0.00	0.00	0.001	O	|	|	|	0.01
41.083	0.00	0.00	0.001	O	|	|	|	0.01
41.167	0.00	0.00	0.001	O	|	|	|	0.01
41.250	0.00	0.00	0.001	O	|	|	|	0.01
41.333	0.00	0.00	0.001	O	|	|	|	0.01
41.417	0.00	0.00	0.001	O	|	|	|	0.01
41.500	0.00	0.00	0.001	O	|	|	|	0.01
41.583	0.00	0.00	0.001	O	|	|	|	0.01
41.667	0.00	0.00	0.001	O	|	|	|	0.01
41.750	0.00	0.00	0.001	O	|	|	|	0.01
41.833	0.00	0.00	0.000	O	|	|	|	0.01
41.917	0.00	0.00	0.000	O	|	|	|	0.01
42.000	0.00	0.00	0.000	O	|	|	|	0.01
42.083	0.00	0.00	0.000	O	|	|	|	0.01
42.167	0.00	0.00	0.000	O	|	|	|	0.01
42.250	0.00	0.00	0.000	O	|	|	|	0.00
42.333	0.00	0.00	0.000	O	|	|	|	0.00
42.417	0.00	0.00	0.000	O	|	|	|	0.00
42.500	0.00	0.00	0.000	O	|	|	|	0.00
42.583	0.00	0.00	0.000	O	|	|	|	0.00
42.667	0.00	0.00	0.000	O	|	|	|	0.00
42.750	0.00	0.00	0.000	O	|	|	|	0.00
42.833	0.00	0.00	0.000	O	|	|	|	0.00
42.917	0.00	0.00	0.000	O	|	|	|	0.00
43.000	0.00	0.00	0.000	O	|	|	|	0.00
43.083	0.00	0.00	0.000	O	|	|	|	0.00
43.167	0.00	0.00	0.000	O	|	|	|	0.00
43.250	0.00	0.00	0.000	O	|	|	|	0.00
43.333	0.00	0.00	0.000	O	|	|	|	0.00
43.417	0.00	0.00	0.000	O	|	|	|	0.00
43.500	0.00	0.00	0.000	O	|	|	|	0.00
43.583	0.00	0.00	0.000	O	|	|	|	0.00
43.667	0.00	0.00	0.000	O	|	|	|	0.00
43.750	0.00	0.00	0.000	O	|	|	|	0.00

43.833	0.00	0.00	0.000	O	|	|	|	|	0.00
43.917	0.00	0.00	0.000	O	|	|	|	|	0.00
44.000	0.00	0.00	0.000	O	|	|	|	|	0.00
44.083	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 529
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 9.777 (CFS)
Total volume = 1.595 (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 - 2005
Study date: 10/28/24

DEXTER VILLAGE
AREA A
100-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEA.rte

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

Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.682 (CFS)
Total volume = 2.572 (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 12.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
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 (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	0.083	0.460	0.081	0.085
6.000	0.774	0.460	0.772	0.776
8.000	0.939	0.460	0.937	0.941

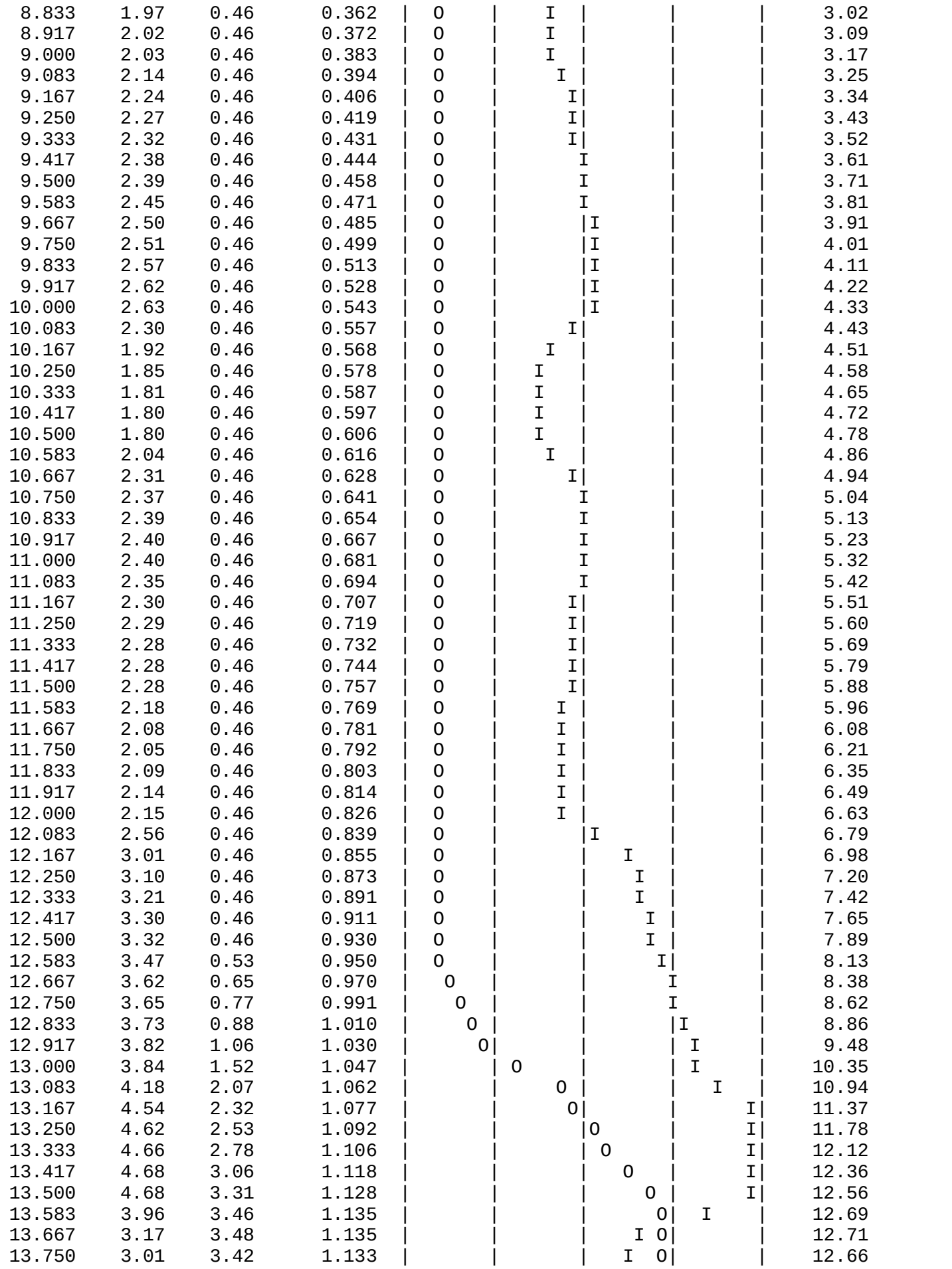
9.000	1.022	0.950	1.019	1.025
10.000	1.038	1.180	1.034	1.042
11.000	1.064	2.130	1.057	1.071
12.000	1.100	2.640	1.091	1.109
13.000	1.150	3.820	1.137	1.163
14.000	1.213	12.760	1.169	1.257
15.000	1.293	18.130	1.231	1.355

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.2 2.34 3.51 4.68	Depth (Ft.)
0.083	0.10	0.00	0.000	O | | | |	0.00
0.167	0.20	0.01	0.001	OI | | | |	0.02
0.250	0.23	0.02	0.003	OI | | | |	0.03
0.333	0.28	0.02	0.004	OI | | | |	0.05
0.417	0.34	0.04	0.006	O I | | | |	0.08
0.500	0.35	0.05	0.008	O I | | | |	0.10
0.583	0.36	0.06	0.011	O I | | | |	0.13
0.667	0.36	0.07	0.013	O I | | | |	0.15
0.750	0.36	0.08	0.015	O I | | | |	0.17
0.833	0.41	0.09	0.017	O I | | | |	0.20
0.917	0.46	0.10	0.019	O I | | | |	0.23
1.000	0.47	0.12	0.021	O I | | | |	0.26
1.083	0.43	0.13	0.024	O I | | | |	0.28
1.167	0.38	0.14	0.025	O I | | | |	0.31
1.250	0.37	0.15	0.027	|OI | | | |	0.33
1.333	0.36	0.16	0.028	|OI | | | |	0.34
1.417	0.36	0.17	0.030	|OI | | | |	0.36
1.500	0.36	0.17	0.031	|OI | | | |	0.38
1.583	0.36	0.18	0.032	|OI | | | |	0.39
1.667	0.36	0.19	0.034	|OI | | | |	0.41
1.750	0.36	0.19	0.035	|OI | | | |	0.42
1.833	0.41	0.20	0.036	|OI | | | |	0.43
1.917	0.46	0.21	0.038	|O I | | | |	0.45
2.000	0.47	0.22	0.039	|O I | | | |	0.48
2.083	0.48	0.23	0.041	|O I | | | |	0.50
2.167	0.48	0.24	0.043	|O I | | | |	0.52
2.250	0.48	0.25	0.045	|O I | | | |	0.54
2.333	0.48	0.26	0.046	|O I | | | |	0.56
2.417	0.48	0.26	0.048	|O I | | | |	0.57
2.500	0.48	0.27	0.049	|O I | | | |	0.59
2.583	0.53	0.28	0.051	|O I | | | |	0.61
2.667	0.58	0.29	0.052	|O I | | | |	0.63
2.750	0.59	0.30	0.054	| O I | | | |	0.66
2.833	0.60	0.31	0.056	| O I | | | |	0.68
2.917	0.60	0.32	0.058	| O I | | | |	0.70
3.000	0.60	0.33	0.060	| O I | | | |	0.73
3.083	0.60	0.34	0.062	| O I | | | |	0.75
3.167	0.60	0.35	0.064	| O I | | | |	0.77
3.250	0.60	0.36	0.065	| O I | | | |	0.79
3.333	0.60	0.37	0.067	| O I | | | |	0.81
3.417	0.60	0.38	0.069	| O I | | | |	0.83
3.500	0.60	0.39	0.070	| O I | | | |	0.84
3.583	0.60	0.40	0.072	| O I | | | |	0.86
3.667	0.60	0.40	0.073	| O I | | | |	0.88
3.750	0.60	0.41	0.074	| O I | | | |	0.89

3.833	0.65	0.42	0.076	O I				0.91
3.917	0.70	0.43	0.077	O I				0.93
4.000	0.71	0.44	0.079	OI				0.96
4.083	0.72	0.45	0.081	OI				0.98
4.167	0.72	0.46	0.083	OI				1.00
4.250	0.72	0.46	0.085	OI				1.01
4.333	0.77	0.46	0.087	O I				1.03
4.417	0.82	0.46	0.089	O I				1.04
4.500	0.83	0.46	0.092	O I				1.06
4.583	0.84	0.46	0.094	O I				1.08
4.667	0.84	0.46	0.097	O I				1.10
4.750	0.84	0.46	0.099	O I				1.12
4.833	0.89	0.46	0.102	O I				1.14
4.917	0.94	0.46	0.105	O I				1.16
5.000	0.95	0.46	0.109	O I				1.19
5.083	0.86	0.46	0.112	O I				1.21
5.167	0.76	0.46	0.114	O I				1.23
5.250	0.73	0.46	0.116	O I				1.24
5.333	0.77	0.46	0.118	O I				1.25
5.417	0.82	0.46	0.120	O I				1.27
5.500	0.83	0.46	0.123	O I				1.29
5.583	0.89	0.46	0.126	O I				1.31
5.667	0.94	0.46	0.129	O I				1.33
5.750	0.95	0.46	0.132	O I				1.36
5.833	0.96	0.46	0.136	O I				1.38
5.917	0.96	0.46	0.139	O I				1.41
6.000	0.96	0.46	0.142	O I				1.43
6.083	1.01	0.46	0.146	O I				1.46
6.167	1.06	0.46	0.150	O I				1.49
6.250	1.07	0.46	0.154	O I				1.52
6.333	1.08	0.46	0.158	O I				1.55
6.417	1.08	0.46	0.163	O I				1.58
6.500	1.08	0.46	0.167	O I				1.61
6.583	1.13	0.46	0.171	O I				1.64
6.667	1.18	0.46	0.176	O I				1.67
6.750	1.19	0.46	0.181	O I				1.71
6.833	1.20	0.46	0.186	O I				1.75
6.917	1.20	0.46	0.191	O I				1.78
7.000	1.20	0.46	0.196	O I				1.82
7.083	1.20	0.46	0.202	O I				1.86
7.167	1.20	0.46	0.207	O I				1.89
7.250	1.20	0.46	0.212	O I				1.93
7.333	1.25	0.46	0.217	O I				1.97
7.417	1.30	0.46	0.223	O I				2.01
7.500	1.31	0.46	0.228	O I				2.05
7.583	1.37	0.46	0.235	O I				2.10
7.667	1.42	0.46	0.241	O I				2.14
7.750	1.43	0.46	0.248	O I				2.19
7.833	1.49	0.46	0.255	O I				2.24
7.917	1.54	0.46	0.262	O I				2.29
8.000	1.55	0.46	0.269	O I				2.35
8.083	1.66	0.46	0.277	O I				2.40
8.167	1.76	0.46	0.286	O I				2.47
8.250	1.79	0.46	0.295	O I				2.53
8.333	1.80	0.46	0.304	O I				2.60
8.417	1.80	0.46	0.313	O I				2.67
8.500	1.80	0.46	0.322	O I				2.73
8.583	1.85	0.46	0.332	O I				2.80
8.667	1.90	0.46	0.342	O I				2.87
8.750	1.91	0.46	0.352	O I				2.94



13.833	2.94	3.35	1.130	|	|	| I O |	|	12.60
13.917	2.92	3.29	1.127	|	|	| I O |	|	12.55
14.000	2.92	3.23	1.125	|	|	| I O |	|	12.50
14.083	3.19	3.21	1.124	|	|	| O |	|	12.48
14.167	3.48	3.23	1.125	|	|	| OI|	|	12.50
14.250	3.55	3.27	1.127	|	|	| O I	|	12.53
14.333	3.51	3.31	1.128	|	|	| O I	|	12.57
14.417	3.45	3.33	1.129	|	|	| OI|	|	12.59
14.500	3.44	3.35	1.130	|	|	| OI|	|	12.60
14.583	3.44	3.37	1.131	|	|	| O|	|	12.61
14.667	3.44	3.38	1.131	|	|	| O|	|	12.62
14.750	3.45	3.39	1.132	|	|	| O|	|	12.63
14.833	3.38	3.39	1.132	|	|	| O|	|	12.64
14.917	3.32	3.39	1.132	|	|	| IO|	|	12.63
15.000	3.30	3.37	1.131	|	|	| IO|	|	12.62
15.083	3.24	3.36	1.130	|	|	| O |	|	12.61
15.167	3.17	3.33	1.129	|	|	| IO |	|	12.59
15.250	3.15	3.31	1.128	|	|	| IO |	|	12.57
15.333	3.09	3.28	1.127	|	|	| IO |	|	12.54
15.417	3.01	3.25	1.126	|	|	| I O |	|	12.51
15.500	3.00	3.21	1.124	|	|	| IO |	|	12.48
15.583	2.74	3.16	1.122	|	|	| I O |	|	12.44
15.667	2.45	3.07	1.118	|	|	I O |	|	12.37
15.750	2.39	2.98	1.114	|	|	I O |	|	12.28
15.833	2.37	2.89	1.110	|	|	I O |	|	12.21
15.917	2.36	2.81	1.107	|	|	I O |	|	12.14
16.000	2.37	2.74	1.104	|	|	I O |	|	12.09
16.083	1.60	2.63	1.099	|	| I |	O |	|	11.99
16.167	0.76	2.50	1.090	| I |	|	O |	|	11.72
16.250	0.58	2.33	1.078	| I |	| O|	|	|	11.39
16.333	0.51	2.16	1.066	| I |	| O |	|	|	11.06
16.417	0.48	1.84	1.056	| I |	| O |	|	|	10.69
16.500	0.48	1.53	1.048	| I |	| O |	|	|	10.37
16.583	0.43	1.29	1.041	| I |	O |	|	|	10.12
16.667	0.38	1.14	1.035	| I |	O|	|	|	9.84
16.750	0.37	1.07	1.030	| I |	O|	|	|	9.52
16.833	0.36	1.00	1.026	| I O |	|	|	|	9.23
16.917	0.36	0.95	1.022	| I O |	|	|	|	8.99
17.000	0.36	0.92	1.018	| I O |	|	|	|	8.95
17.083	0.46	0.90	1.014	| I O |	|	|	|	8.90
17.167	0.56	0.89	1.011	| I O |	|	|	|	8.87
17.250	0.59	0.88	1.009	| IO |	|	|	|	8.85
17.333	0.60	0.86	1.007	| IO |	|	|	|	8.82
17.417	0.60	0.85	1.006	| IO |	|	|	|	8.80
17.500	0.60	0.84	1.004	| IO |	|	|	|	8.78
17.583	0.60	0.83	1.002	| IO |	|	|	|	8.76
17.667	0.60	0.82	1.001	| IO |	|	|	|	8.74
17.750	0.60	0.82	0.999	| IO |	|	|	|	8.72
17.833	0.55	0.81	0.998	| I O |	|	|	|	8.71
17.917	0.50	0.79	0.996	| I O |	|	|	|	8.68
18.000	0.49	0.78	0.994	| I O |	|	|	|	8.66
18.083	0.48	0.77	0.992	| I O |	|	|	|	8.63
18.167	0.48	0.76	0.990	| I O |	|	|	|	8.61
18.250	0.48	0.75	0.988	| I O |	|	|	|	8.59
18.333	0.48	0.74	0.986	| I O |	|	|	|	8.57
18.417	0.48	0.73	0.984	| IO |	|	|	|	8.54
18.500	0.48	0.72	0.983	| IO |	|	|	|	8.52
18.583	0.43	0.71	0.981	| I O |	|	|	|	8.50
18.667	0.38	0.69	0.979	| I O |	|	|	|	8.48
18.750	0.37	0.68	0.977	| I O |	|	|	|	8.45

18.833	0.31	0.67	0.974	| I O	|	|	|	8.42
18.917	0.26	0.65	0.972	|I O	|	|	|	8.39
19.000	0.25	0.64	0.969	|I O	|	|	|	8.36
19.083	0.29	0.62	0.966	|I O	|	|	|	8.33
19.167	0.34	0.61	0.964	| I O	|	|	|	8.31
19.250	0.35	0.60	0.963	| I O	|	|	|	8.28
19.333	0.41	0.59	0.961	| I O	|	|	|	8.27
19.417	0.46	0.58	0.960	| O	|	|	|	8.25
19.500	0.47	0.58	0.959	| O	|	|	|	8.24
19.583	0.43	0.57	0.958	| IO	|	|	|	8.23
19.667	0.38	0.57	0.957	| IO	|	|	|	8.22
19.750	0.37	0.56	0.956	| IO	|	|	|	8.20
19.833	0.31	0.55	0.954	| IO	|	|	|	8.19
19.917	0.26	0.54	0.953	|I O	|	|	|	8.16
20.000	0.25	0.53	0.951	|I O	|	|	|	8.14
20.083	0.29	0.52	0.949	|I O	|	|	|	8.12
20.167	0.34	0.51	0.948	| IO	|	|	|	8.10
20.250	0.35	0.50	0.947	| IO	|	|	|	8.09
20.333	0.36	0.50	0.946	| IO	|	|	|	8.08
20.417	0.36	0.49	0.945	| IO	|	|	|	8.07
20.500	0.36	0.49	0.944	| IO	|	|	|	8.06
20.583	0.36	0.48	0.943	| IO	|	|	|	8.05
20.667	0.36	0.48	0.942	| IO	|	|	|	8.04
20.750	0.36	0.47	0.941	| IO	|	|	|	8.03
20.833	0.31	0.47	0.940	| IO	|	|	|	8.02
20.917	0.26	0.46	0.939	|I O	|	|	|	8.00
21.000	0.25	0.46	0.938	|I O	|	|	|	7.98
21.083	0.29	0.46	0.936	|I O	|	|	|	7.97
21.167	0.34	0.46	0.935	| IO	|	|	|	7.96
21.250	0.35	0.46	0.935	| IO	|	|	|	7.95
21.333	0.31	0.46	0.934	| IO	|	|	|	7.93
21.417	0.26	0.46	0.932	|I O	|	|	|	7.92
21.500	0.25	0.46	0.931	|I O	|	|	|	7.90
21.583	0.29	0.46	0.930	|I O	|	|	|	7.89
21.667	0.34	0.46	0.929	| IO	|	|	|	7.87
21.750	0.35	0.46	0.928	| IO	|	|	|	7.87
21.833	0.31	0.46	0.927	| IO	|	|	|	7.85
21.917	0.26	0.46	0.926	|I O	|	|	|	7.84
22.000	0.25	0.46	0.924	|I O	|	|	|	7.82
22.083	0.29	0.46	0.923	|I O	|	|	|	7.81
22.167	0.34	0.46	0.922	| IO	|	|	|	7.79
22.250	0.35	0.46	0.921	| IO	|	|	|	7.79
22.333	0.31	0.46	0.920	| IO	|	|	|	7.77
22.417	0.26	0.46	0.919	|I O	|	|	|	7.76
22.500	0.25	0.46	0.918	|I O	|	|	|	7.74
22.583	0.24	0.46	0.916	|I O	|	|	|	7.72
22.667	0.24	0.46	0.915	|I O	|	|	|	7.71
22.750	0.24	0.46	0.913	|I O	|	|	|	7.69
22.833	0.24	0.46	0.912	|I O	|	|	|	7.67
22.917	0.24	0.46	0.910	|I O	|	|	|	7.65
23.000	0.24	0.46	0.909	|I O	|	|	|	7.63
23.083	0.24	0.46	0.907	|I O	|	|	|	7.61
23.167	0.24	0.46	0.906	|I O	|	|	|	7.60
23.250	0.24	0.46	0.904	|I O	|	|	|	7.58
23.333	0.24	0.46	0.903	|I O	|	|	|	7.56
23.417	0.24	0.46	0.901	|I O	|	|	|	7.54
23.500	0.24	0.46	0.900	|I O	|	|	|	7.52
23.583	0.24	0.46	0.898	|I O	|	|	|	7.50
23.667	0.24	0.46	0.897	|I O	|	|	|	7.49
23.750	0.24	0.46	0.895	|I O	|	|	|	7.47

23.833	0.24	0.46	0.894	|I O	|	|	|	7.45
23.917	0.24	0.46	0.892	|I O	|	|	|	7.43
24.000	0.24	0.46	0.891	|I O	|	|	|	7.41
24.083	0.14	0.46	0.889	I O	|	|	|	7.39
24.167	0.04	0.46	0.886	I O	|	|	|	7.36
24.250	0.01	0.46	0.883	I O	|	|	|	7.32
24.333	0.00	0.46	0.880	I O	|	|	|	7.28
24.417	0.00	0.46	0.877	I O	|	|	|	7.25
24.500	0.00	0.46	0.874	I O	|	|	|	7.21
24.583	0.00	0.46	0.871	I O	|	|	|	7.17
24.667	0.00	0.46	0.867	I O	|	|	|	7.13
24.750	0.00	0.46	0.864	I O	|	|	|	7.09
24.833	0.00	0.46	0.861	I O	|	|	|	7.05
24.917	0.00	0.46	0.858	I O	|	|	|	7.02
25.000	0.00	0.46	0.855	I O	|	|	|	6.98
25.083	0.00	0.46	0.852	I O	|	|	|	6.94
25.167	0.00	0.46	0.848	I O	|	|	|	6.90
25.250	0.00	0.46	0.845	I O	|	|	|	6.86
25.333	0.00	0.46	0.842	I O	|	|	|	6.82
25.417	0.00	0.46	0.839	I O	|	|	|	6.79
25.500	0.00	0.46	0.836	I O	|	|	|	6.75
25.583	0.00	0.46	0.832	I O	|	|	|	6.71
25.667	0.00	0.46	0.829	I O	|	|	|	6.67
25.750	0.00	0.46	0.826	I O	|	|	|	6.63
25.833	0.00	0.46	0.823	I O	|	|	|	6.59
25.917	0.00	0.46	0.820	I O	|	|	|	6.56
26.000	0.00	0.46	0.817	I O	|	|	|	6.52
26.083	0.00	0.46	0.813	I O	|	|	|	6.48
26.167	0.00	0.46	0.810	I O	|	|	|	6.44
26.250	0.00	0.46	0.807	I O	|	|	|	6.40
26.333	0.00	0.46	0.804	I O	|	|	|	6.36
26.417	0.00	0.46	0.801	I O	|	|	|	6.33
26.500	0.00	0.46	0.798	I O	|	|	|	6.29
26.583	0.00	0.46	0.794	I O	|	|	|	6.25
26.667	0.00	0.46	0.791	I O	|	|	|	6.21
26.750	0.00	0.46	0.788	I O	|	|	|	6.17
26.833	0.00	0.46	0.785	I O	|	|	|	6.13
26.917	0.00	0.46	0.782	I O	|	|	|	6.09
27.000	0.00	0.46	0.779	I O	|	|	|	6.06
27.083	0.00	0.46	0.775	I O	|	|	|	6.02
27.167	0.00	0.46	0.772	I O	|	|	|	5.99
27.250	0.00	0.46	0.769	I O	|	|	|	5.96
27.333	0.00	0.46	0.766	I O	|	|	|	5.94
27.417	0.00	0.46	0.763	I O	|	|	|	5.92
27.500	0.00	0.46	0.760	I O	|	|	|	5.90
27.583	0.00	0.46	0.756	I O	|	|	|	5.87
27.667	0.00	0.46	0.753	I O	|	|	|	5.85
27.750	0.00	0.46	0.750	I O	|	|	|	5.83
27.833	0.00	0.46	0.747	I O	|	|	|	5.80
27.917	0.00	0.46	0.744	I O	|	|	|	5.78
28.000	0.00	0.46	0.741	I O	|	|	|	5.76
28.083	0.00	0.46	0.737	I O	|	|	|	5.74
28.167	0.00	0.46	0.734	I O	|	|	|	5.71
28.250	0.00	0.46	0.731	I O	|	|	|	5.69
28.333	0.00	0.46	0.728	I O	|	|	|	5.67
28.417	0.00	0.46	0.725	I O	|	|	|	5.64
28.500	0.00	0.46	0.722	I O	|	|	|	5.62
28.583	0.00	0.46	0.718	I O	|	|	|	5.60
28.667	0.00	0.46	0.715	I O	|	|	|	5.58
28.750	0.00	0.46	0.712	I O	|	|	|	5.55

28.833	0.00	0.46	0.709	I	O	|	|	|	|	5.53
28.917	0.00	0.46	0.706	I	O	|	|	|	|	5.51
29.000	0.00	0.46	0.703	I	O	|	|	|	|	5.48
29.083	0.00	0.46	0.699	I	O	|	|	|	|	5.46
29.167	0.00	0.46	0.696	I	O	|	|	|	|	5.44
29.250	0.00	0.46	0.693	I	O	|	|	|	|	5.41
29.333	0.00	0.46	0.690	I	O	|	|	|	|	5.39
29.417	0.00	0.46	0.687	I	O	|	|	|	|	5.37
29.500	0.00	0.46	0.684	I	O	|	|	|	|	5.35
29.583	0.00	0.46	0.680	I	O	|	|	|	|	5.32
29.667	0.00	0.46	0.677	I	O	|	|	|	|	5.30
29.750	0.00	0.46	0.674	I	O	|	|	|	|	5.28
29.833	0.00	0.46	0.671	I	O	|	|	|	|	5.25
29.917	0.00	0.46	0.668	I	O	|	|	|	|	5.23
30.000	0.00	0.46	0.665	I	O	|	|	|	|	5.21
30.083	0.00	0.46	0.661	I	O	|	|	|	|	5.19
30.167	0.00	0.46	0.658	I	O	|	|	|	|	5.16
30.250	0.00	0.46	0.655	I	O	|	|	|	|	5.14
30.333	0.00	0.46	0.652	I	O	|	|	|	|	5.12
30.417	0.00	0.46	0.649	I	O	|	|	|	|	5.09
30.500	0.00	0.46	0.646	I	O	|	|	|	|	5.07
30.583	0.00	0.46	0.642	I	O	|	|	|	|	5.05
30.667	0.00	0.46	0.639	I	O	|	|	|	|	5.02
30.750	0.00	0.46	0.636	I	O	|	|	|	|	5.00
30.833	0.00	0.46	0.633	I	O	|	|	|	|	4.98
30.917	0.00	0.46	0.630	I	O	|	|	|	|	4.96
31.000	0.00	0.46	0.627	I	O	|	|	|	|	4.93
31.083	0.00	0.46	0.623	I	O	|	|	|	|	4.91
31.167	0.00	0.46	0.620	I	O	|	|	|	|	4.89
31.250	0.00	0.46	0.617	I	O	|	|	|	|	4.86
31.333	0.00	0.46	0.614	I	O	|	|	|	|	4.84
31.417	0.00	0.46	0.611	I	O	|	|	|	|	4.82
31.500	0.00	0.46	0.608	I	O	|	|	|	|	4.80
31.583	0.00	0.46	0.604	I	O	|	|	|	|	4.77
31.667	0.00	0.46	0.601	I	O	|	|	|	|	4.75
31.750	0.00	0.46	0.598	I	O	|	|	|	|	4.73
31.833	0.00	0.46	0.595	I	O	|	|	|	|	4.70
31.917	0.00	0.46	0.592	I	O	|	|	|	|	4.68
32.000	0.00	0.46	0.589	I	O	|	|	|	|	4.66
32.083	0.00	0.46	0.585	I	O	|	|	|	|	4.64
32.167	0.00	0.46	0.582	I	O	|	|	|	|	4.61
32.250	0.00	0.46	0.579	I	O	|	|	|	|	4.59
32.333	0.00	0.46	0.576	I	O	|	|	|	|	4.57
32.417	0.00	0.46	0.573	I	O	|	|	|	|	4.54
32.500	0.00	0.46	0.570	I	O	|	|	|	|	4.52
32.583	0.00	0.46	0.566	I	O	|	|	|	|	4.50
32.667	0.00	0.46	0.563	I	O	|	|	|	|	4.47
32.750	0.00	0.46	0.560	I	O	|	|	|	|	4.45
32.833	0.00	0.46	0.557	I	O	|	|	|	|	4.43
32.917	0.00	0.46	0.554	I	O	|	|	|	|	4.41
33.000	0.00	0.46	0.551	I	O	|	|	|	|	4.38
33.083	0.00	0.46	0.547	I	O	|	|	|	|	4.36
33.167	0.00	0.46	0.544	I	O	|	|	|	|	4.34
33.250	0.00	0.46	0.541	I	O	|	|	|	|	4.31
33.333	0.00	0.46	0.538	I	O	|	|	|	|	4.29
33.417	0.00	0.46	0.535	I	O	|	|	|	|	4.27
33.500	0.00	0.46	0.532	I	O	|	|	|	|	4.25
33.583	0.00	0.46	0.528	I	O	|	|	|	|	4.22
33.667	0.00	0.46	0.525	I	O	|	|	|	|	4.20
33.750	0.00	0.46	0.522	I	O	|	|	|	|	4.18

33.833	0.00	0.46	0.519	I	O	|	|	|	|	4.15
33.917	0.00	0.46	0.516	I	O	|	|	|	|	4.13
34.000	0.00	0.46	0.513	I	O	|	|	|	|	4.11
34.083	0.00	0.46	0.509	I	O	|	|	|	|	4.09
34.167	0.00	0.46	0.506	I	O	|	|	|	|	4.06
34.250	0.00	0.46	0.503	I	O	|	|	|	|	4.04
34.333	0.00	0.46	0.500	I	O	|	|	|	|	4.02
34.417	0.00	0.46	0.497	I	O	|	|	|	|	3.99
34.500	0.00	0.46	0.494	I	O	|	|	|	|	3.97
34.583	0.00	0.46	0.490	I	O	|	|	|	|	3.95
34.667	0.00	0.46	0.487	I	O	|	|	|	|	3.92
34.750	0.00	0.46	0.484	I	O	|	|	|	|	3.90
34.833	0.00	0.46	0.481	I	O	|	|	|	|	3.88
34.917	0.00	0.46	0.478	I	O	|	|	|	|	3.86
35.000	0.00	0.46	0.475	I	O	|	|	|	|	3.83
35.083	0.00	0.46	0.471	I	O	|	|	|	|	3.81
35.167	0.00	0.46	0.468	I	O	|	|	|	|	3.79
35.250	0.00	0.46	0.465	I	O	|	|	|	|	3.76
35.333	0.00	0.46	0.462	I	O	|	|	|	|	3.74
35.417	0.00	0.46	0.459	I	O	|	|	|	|	3.72
35.500	0.00	0.46	0.455	I	O	|	|	|	|	3.70
35.583	0.00	0.46	0.452	I	O	|	|	|	|	3.67
35.667	0.00	0.46	0.449	I	O	|	|	|	|	3.65
35.750	0.00	0.46	0.446	I	O	|	|	|	|	3.63
35.833	0.00	0.46	0.443	I	O	|	|	|	|	3.60
35.917	0.00	0.46	0.440	I	O	|	|	|	|	3.58
36.000	0.00	0.46	0.436	I	O	|	|	|	|	3.56
36.083	0.00	0.46	0.433	I	O	|	|	|	|	3.53
36.167	0.00	0.46	0.430	I	O	|	|	|	|	3.51
36.250	0.00	0.46	0.427	I	O	|	|	|	|	3.49
36.333	0.00	0.46	0.424	I	O	|	|	|	|	3.47
36.417	0.00	0.46	0.421	I	O	|	|	|	|	3.44
36.500	0.00	0.46	0.417	I	O	|	|	|	|	3.42
36.583	0.00	0.46	0.414	I	O	|	|	|	|	3.40
36.667	0.00	0.46	0.411	I	O	|	|	|	|	3.37
36.750	0.00	0.46	0.408	I	O	|	|	|	|	3.35
36.833	0.00	0.46	0.405	I	O	|	|	|	|	3.33
36.917	0.00	0.46	0.402	I	O	|	|	|	|	3.31
37.000	0.00	0.46	0.398	I	O	|	|	|	|	3.28
37.083	0.00	0.46	0.395	I	O	|	|	|	|	3.26
37.167	0.00	0.46	0.392	I	O	|	|	|	|	3.24
37.250	0.00	0.46	0.389	I	O	|	|	|	|	3.21
37.333	0.00	0.46	0.386	I	O	|	|	|	|	3.19
37.417	0.00	0.46	0.383	I	O	|	|	|	|	3.17
37.500	0.00	0.46	0.379	I	O	|	|	|	|	3.15
37.583	0.00	0.46	0.376	I	O	|	|	|	|	3.12
37.667	0.00	0.46	0.373	I	O	|	|	|	|	3.10
37.750	0.00	0.46	0.370	I	O	|	|	|	|	3.08
37.833	0.00	0.46	0.367	I	O	|	|	|	|	3.05
37.917	0.00	0.46	0.364	I	O	|	|	|	|	3.03
38.000	0.00	0.46	0.360	I	O	|	|	|	|	3.01
38.083	0.00	0.46	0.357	I	O	|	|	|	|	2.98
38.167	0.00	0.46	0.354	I	O	|	|	|	|	2.96
38.250	0.00	0.46	0.351	I	O	|	|	|	|	2.94
38.333	0.00	0.46	0.348	I	O	|	|	|	|	2.92
38.417	0.00	0.46	0.345	I	O	|	|	|	|	2.89
38.500	0.00	0.46	0.341	I	O	|	|	|	|	2.87
38.583	0.00	0.46	0.338	I	O	|	|	|	|	2.85
38.667	0.00	0.46	0.335	I	O	|	|	|	|	2.82
38.750	0.00	0.46	0.332	I	O	|	|	|	|	2.80

38.833	0.00	0.46	0.329	I	O	|	|	|	|	2.78
38.917	0.00	0.46	0.326	I	O	|	|	|	|	2.76
39.000	0.00	0.46	0.322	I	O	|	|	|	|	2.73
39.083	0.00	0.46	0.319	I	O	|	|	|	|	2.71
39.167	0.00	0.46	0.316	I	O	|	|	|	|	2.69
39.250	0.00	0.46	0.313	I	O	|	|	|	|	2.66
39.333	0.00	0.46	0.310	I	O	|	|	|	|	2.64
39.417	0.00	0.46	0.307	I	O	|	|	|	|	2.62
39.500	0.00	0.46	0.303	I	O	|	|	|	|	2.60
39.583	0.00	0.46	0.300	I	O	|	|	|	|	2.57
39.667	0.00	0.46	0.297	I	O	|	|	|	|	2.55
39.750	0.00	0.46	0.294	I	O	|	|	|	|	2.53
39.833	0.00	0.46	0.291	I	O	|	|	|	|	2.50
39.917	0.00	0.46	0.288	I	O	|	|	|	|	2.48
40.000	0.00	0.46	0.284	I	O	|	|	|	|	2.46
40.083	0.00	0.46	0.281	I	O	|	|	|	|	2.43
40.167	0.00	0.46	0.278	I	O	|	|	|	|	2.41
40.250	0.00	0.46	0.275	I	O	|	|	|	|	2.39
40.333	0.00	0.46	0.272	I	O	|	|	|	|	2.37
40.417	0.00	0.46	0.269	I	O	|	|	|	|	2.34
40.500	0.00	0.46	0.265	I	O	|	|	|	|	2.32
40.583	0.00	0.46	0.262	I	O	|	|	|	|	2.30
40.667	0.00	0.46	0.259	I	O	|	|	|	|	2.27
40.750	0.00	0.46	0.256	I	O	|	|	|	|	2.25
40.833	0.00	0.46	0.253	I	O	|	|	|	|	2.23
40.917	0.00	0.46	0.250	I	O	|	|	|	|	2.21
41.000	0.00	0.46	0.246	I	O	|	|	|	|	2.18
41.083	0.00	0.46	0.243	I	O	|	|	|	|	2.16
41.167	0.00	0.46	0.240	I	O	|	|	|	|	2.14
41.250	0.00	0.46	0.237	I	O	|	|	|	|	2.11
41.333	0.00	0.46	0.234	I	O	|	|	|	|	2.09
41.417	0.00	0.46	0.231	I	O	|	|	|	|	2.07
41.500	0.00	0.46	0.227	I	O	|	|	|	|	2.04
41.583	0.00	0.46	0.224	I	O	|	|	|	|	2.02
41.667	0.00	0.46	0.221	I	O	|	|	|	|	2.00
41.750	0.00	0.46	0.218	I	O	|	|	|	|	1.98
41.833	0.00	0.46	0.215	I	O	|	|	|	|	1.95
41.917	0.00	0.46	0.212	I	O	|	|	|	|	1.93
42.000	0.00	0.46	0.208	I	O	|	|	|	|	1.91
42.083	0.00	0.46	0.205	I	O	|	|	|	|	1.88
42.167	0.00	0.46	0.202	I	O	|	|	|	|	1.86
42.250	0.00	0.46	0.199	I	O	|	|	|	|	1.84
42.333	0.00	0.46	0.196	I	O	|	|	|	|	1.82
42.417	0.00	0.46	0.193	I	O	|	|	|	|	1.79
42.500	0.00	0.46	0.189	I	O	|	|	|	|	1.77
42.583	0.00	0.46	0.186	I	O	|	|	|	|	1.75
42.667	0.00	0.46	0.183	I	O	|	|	|	|	1.72
42.750	0.00	0.46	0.180	I	O	|	|	|	|	1.70
42.833	0.00	0.46	0.177	I	O	|	|	|	|	1.68
42.917	0.00	0.46	0.174	I	O	|	|	|	|	1.66
43.000	0.00	0.46	0.170	I	O	|	|	|	|	1.63
43.083	0.00	0.46	0.167	I	O	|	|	|	|	1.61
43.167	0.00	0.46	0.164	I	O	|	|	|	|	1.59
43.250	0.00	0.46	0.161	I	O	|	|	|	|	1.56
43.333	0.00	0.46	0.158	I	O	|	|	|	|	1.54
43.417	0.00	0.46	0.155	I	O	|	|	|	|	1.52
43.500	0.00	0.46	0.151	I	O	|	|	|	|	1.49
43.583	0.00	0.46	0.148	I	O	|	|	|	|	1.47
43.667	0.00	0.46	0.145	I	O	|	|	|	|	1.45
43.750	0.00	0.46	0.142	I	O	|	|	|	|	1.43

43.833	0.00	0.46	0.139	I O	|	|	|	1.40
43.917	0.00	0.46	0.136	I O	|	|	|	1.38
44.000	0.00	0.46	0.132	I O	|	|	|	1.36
44.083	0.00	0.46	0.129	I O	|	|	|	1.33
44.167	0.00	0.46	0.126	I O	|	|	|	1.31
44.250	0.00	0.46	0.123	I O	|	|	|	1.29
44.333	0.00	0.46	0.120	I O	|	|	|	1.27
44.417	0.00	0.46	0.117	I O	|	|	|	1.24
44.500	0.00	0.46	0.113	I O	|	|	|	1.22
44.583	0.00	0.46	0.110	I O	|	|	|	1.20
44.667	0.00	0.46	0.107	I O	|	|	|	1.17
44.750	0.00	0.46	0.104	I O	|	|	|	1.15
44.833	0.00	0.46	0.101	I O	|	|	|	1.13
44.917	0.00	0.46	0.098	I O	|	|	|	1.10
45.000	0.00	0.46	0.094	I O	|	|	|	1.08
45.083	0.00	0.46	0.091	I O	|	|	|	1.06
45.167	0.00	0.46	0.088	I O	|	|	|	1.04
45.250	0.00	0.46	0.085	I O	|	|	|	1.01
45.333	0.00	0.45	0.082	I O	|	|	|	0.98
45.417	0.00	0.44	0.079	I O	|	|	|	0.95
45.500	0.00	0.42	0.076	I O	|	|	|	0.91
45.583	0.00	0.40	0.073	I O	|	|	|	0.88
45.667	0.00	0.39	0.070	I O	|	|	|	0.84
45.750	0.00	0.37	0.067	I O	|	|	|	0.81
45.833	0.00	0.36	0.065	I O	|	|	|	0.78
45.917	0.00	0.35	0.063	I O	|	|	|	0.75
46.000	0.00	0.33	0.060	I O	|	|	|	0.73
46.083	0.00	0.32	0.058	I O	|	|	|	0.70
46.167	0.00	0.31	0.056	I O	|	|	|	0.67
46.250	0.00	0.30	0.054	I O	|	|	|	0.65
46.333	0.00	0.29	0.052	IO	|	|	|	0.62
46.417	0.00	0.28	0.050	IO	|	|	|	0.60
46.500	0.00	0.27	0.048	IO	|	|	|	0.58
46.583	0.00	0.26	0.046	IO	|	|	|	0.56
46.667	0.00	0.25	0.044	IO	|	|	|	0.53
46.750	0.00	0.24	0.043	IO	|	|	|	0.51
46.833	0.00	0.23	0.041	IO	|	|	|	0.50
46.917	0.00	0.22	0.040	IO	|	|	|	0.48
47.000	0.00	0.21	0.038	IO	|	|	|	0.46
47.083	0.00	0.20	0.037	IO	|	|	|	0.44
47.167	0.00	0.20	0.035	IO	|	|	|	0.42
47.250	0.00	0.19	0.034	IO	|	|	|	0.41
47.333	0.00	0.18	0.033	IO	|	|	|	0.39
47.417	0.00	0.17	0.031	IO	|	|	|	0.38
47.500	0.00	0.17	0.030	IO	|	|	|	0.36
47.583	0.00	0.16	0.029	IO	|	|	|	0.35
47.667	0.00	0.16	0.028	IO	|	|	|	0.34
47.750	0.00	0.15	0.027	IO	|	|	|	0.33
47.833	0.00	0.14	0.026	O	|	|	|	0.31
47.917	0.00	0.14	0.025	O	|	|	|	0.30
48.000	0.00	0.13	0.024	O	|	|	|	0.29
48.083	0.00	0.13	0.023	O	|	|	|	0.28
48.167	0.00	0.12	0.022	O	|	|	|	0.27
48.250	0.00	0.12	0.021	O	|	|	|	0.26
48.333	0.00	0.11	0.021	O	|	|	|	0.25
48.417	0.00	0.11	0.020	O	|	|	|	0.24
48.500	0.00	0.11	0.019	O	|	|	|	0.23
48.583	0.00	0.10	0.018	O	|	|	|	0.22
48.667	0.00	0.10	0.018	O	|	|	|	0.21
48.750	0.00	0.09	0.017	O	|	|	|	0.21

48.833	0.00	0.09	0.016	O	|	|	|	0.20
48.917	0.00	0.09	0.016	O	|	|	|	0.19
49.000	0.00	0.08	0.015	O	|	|	|	0.18
49.083	0.00	0.08	0.015	O	|	|	|	0.18
49.167	0.00	0.08	0.014	O	|	|	|	0.17
49.250	0.00	0.08	0.014	O	|	|	|	0.16
49.333	0.00	0.07	0.013	O	|	|	|	0.16
49.417	0.00	0.07	0.013	O	|	|	|	0.15
49.500	0.00	0.07	0.012	O	|	|	|	0.15
49.583	0.00	0.06	0.012	O	|	|	|	0.14
49.667	0.00	0.06	0.011	O	|	|	|	0.14
49.750	0.00	0.06	0.011	O	|	|	|	0.13
49.833	0.00	0.06	0.010	O	|	|	|	0.13
49.917	0.00	0.06	0.010	O	|	|	|	0.12
50.000	0.00	0.05	0.010	O	|	|	|	0.12
50.083	0.00	0.05	0.009	O	|	|	|	0.11
50.167	0.00	0.05	0.009	O	|	|	|	0.11
50.250	0.00	0.05	0.009	O	|	|	|	0.10
50.333	0.00	0.05	0.008	O	|	|	|	0.10
50.417	0.00	0.04	0.008	O	|	|	|	0.10
50.500	0.00	0.04	0.008	O	|	|	|	0.09
50.583	0.00	0.04	0.007	O	|	|	|	0.09
50.667	0.00	0.04	0.007	O	|	|	|	0.09
50.750	0.00	0.04	0.007	O	|	|	|	0.08
50.833	0.00	0.04	0.007	O	|	|	|	0.08
50.917	0.00	0.04	0.006	O	|	|	|	0.08
51.000	0.00	0.03	0.006	O	|	|	|	0.07
51.083	0.00	0.03	0.006	O	|	|	|	0.07
51.167	0.00	0.03	0.006	O	|	|	|	0.07
51.250	0.00	0.03	0.005	O	|	|	|	0.07
51.333	0.00	0.03	0.005	O	|	|	|	0.06
51.417	0.00	0.03	0.005	O	|	|	|	0.06
51.500	0.00	0.03	0.005	O	|	|	|	0.06
51.583	0.00	0.03	0.005	O	|	|	|	0.06
51.667	0.00	0.02	0.004	O	|	|	|	0.05
51.750	0.00	0.02	0.004	O	|	|	|	0.05
51.833	0.00	0.02	0.004	O	|	|	|	0.05
51.917	0.00	0.02	0.004	O	|	|	|	0.05
52.000	0.00	0.02	0.004	O	|	|	|	0.05
52.083	0.00	0.02	0.004	O	|	|	|	0.04
52.167	0.00	0.02	0.004	O	|	|	|	0.04
52.250	0.00	0.02	0.003	O	|	|	|	0.04
52.333	0.00	0.02	0.003	O	|	|	|	0.04
52.417	0.00	0.02	0.003	O	|	|	|	0.04
52.500	0.00	0.02	0.003	O	|	|	|	0.04
52.583	0.00	0.02	0.003	O	|	|	|	0.04
52.667	0.00	0.02	0.003	O	|	|	|	0.03
52.750	0.00	0.02	0.003	O	|	|	|	0.03
52.833	0.00	0.01	0.003	O	|	|	|	0.03
52.917	0.00	0.01	0.003	O	|	|	|	0.03
53.000	0.00	0.01	0.002	O	|	|	|	0.03
53.083	0.00	0.01	0.002	O	|	|	|	0.03
53.167	0.00	0.01	0.002	O	|	|	|	0.03
53.250	0.00	0.01	0.002	O	|	|	|	0.03
53.333	0.00	0.01	0.002	O	|	|	|	0.03
53.417	0.00	0.01	0.002	O	|	|	|	0.02
53.500	0.00	0.01	0.002	O	|	|	|	0.02
53.583	0.00	0.01	0.002	O	|	|	|	0.02
53.667	0.00	0.01	0.002	O	|	|	|	0.02
53.750	0.00	0.01	0.002	O	|	|	|	0.02

53.833	0.00	0.01	0.002	O	|	|	|	0.02
53.917	0.00	0.01	0.002	O	|	|	|	0.02
54.000	0.00	0.01	0.002	O	|	|	|	0.02
54.083	0.00	0.01	0.001	O	|	|	|	0.02
54.167	0.00	0.01	0.001	O	|	|	|	0.02
54.250	0.00	0.01	0.001	O	|	|	|	0.02
54.333	0.00	0.01	0.001	O	|	|	|	0.02
54.417	0.00	0.01	0.001	O	|	|	|	0.02
54.500	0.00	0.01	0.001	O	|	|	|	0.01
54.583	0.00	0.01	0.001	O	|	|	|	0.01
54.667	0.00	0.01	0.001	O	|	|	|	0.01
54.750	0.00	0.01	0.001	O	|	|	|	0.01
54.833	0.00	0.01	0.001	O	|	|	|	0.01
54.917	0.00	0.01	0.001	O	|	|	|	0.01
55.000	0.00	0.01	0.001	O	|	|	|	0.01
55.083	0.00	0.01	0.001	O	|	|	|	0.01
55.167	0.00	0.01	0.001	O	|	|	|	0.01
55.250	0.00	0.00	0.001	O	|	|	|	0.01
55.333	0.00	0.00	0.001	O	|	|	|	0.01
55.417	0.00	0.00	0.001	O	|	|	|	0.01
55.500	0.00	0.00	0.001	O	|	|	|	0.01
55.583	0.00	0.00	0.001	O	|	|	|	0.01
55.667	0.00	0.00	0.001	O	|	|	|	0.01
55.750	0.00	0.00	0.001	O	|	|	|	0.01
55.833	0.00	0.00	0.001	O	|	|	|	0.01
55.917	0.00	0.00	0.001	O	|	|	|	0.01
56.000	0.00	0.00	0.001	O	|	|	|	0.01
56.083	0.00	0.00	0.001	O	|	|	|	0.01
56.167	0.00	0.00	0.001	O	|	|	|	0.01
56.250	0.00	0.00	0.001	O	|	|	|	0.01
56.333	0.00	0.00	0.001	O	|	|	|	0.01
56.417	0.00	0.00	0.001	O	|	|	|	0.01
56.500	0.00	0.00	0.000	O	|	|	|	0.01
56.583	0.00	0.00	0.000	O	|	|	|	0.01
56.667	0.00	0.00	0.000	O	|	|	|	0.01
56.750	0.00	0.00	0.000	O	|	|	|	0.01
56.833	0.00	0.00	0.000	O	|	|	|	0.01
56.917	0.00	0.00	0.000	O	|	|	|	0.00
57.000	0.00	0.00	0.000	O	|	|	|	0.00
57.083	0.00	0.00	0.000	O	|	|	|	0.00
57.167	0.00	0.00	0.000	O	|	|	|	0.00
57.250	0.00	0.00	0.000	O	|	|	|	0.00
57.333	0.00	0.00	0.000	O	|	|	|	0.00
57.417	0.00	0.00	0.000	O	|	|	|	0.00
57.500	0.00	0.00	0.000	O	|	|	|	0.00
57.583	0.00	0.00	0.000	O	|	|	|	0.00
57.667	0.00	0.00	0.000	O	|	|	|	0.00
57.750	0.00	0.00	0.000	O	|	|	|	0.00
57.833	0.00	0.00	0.000	O	|	|	|	0.00
57.917	0.00	0.00	0.000	O	|	|	|	0.00
58.000	0.00	0.00	0.000	O	|	|	|	0.00
58.083	0.00	0.00	0.000	O	|	|	|	0.00
58.167	0.00	0.00	0.000	O	|	|	|	0.00
58.250	0.00	0.00	0.000	O	|	|	|	0.00
58.333	0.00	0.00	0.000	O	|	|	|	0.00
58.417	0.00	0.00	0.000	O	|	|	|	0.00
58.500	0.00	0.00	0.000	O	|	|	|	0.00
58.583	0.00	0.00	0.000	O	|	|	|	0.00
58.667	0.00	0.00	0.000	O	|	|	|	0.00
58.750	0.00	0.00	0.000	O	|	|	|	0.00

```
**************************HYDROGRAPH DATA**************************
           Number of intervals =   705
           Time interval =    5.0 (Min.)
           Maximum/Peak flow rate =        3.475 (CFS)
           Total volume =       2.572 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/26/24

DEXTER VILLAGE
AREA B
100-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 31.719 (CFS)
Total volume = 1.043 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 7.9 15.86 23.79 31.72	Depth (Ft.)
0.083	3.06	0.04	0.010	O I | | | |	0.19
0.167	5.41	0.17	0.039	O I | | | |	0.71
0.250	6.76	0.34	0.079	O I | | | |	1.45
0.333	7.39	0.35	0.125	O I| | | |	2.04
0.417	7.79	0.35	0.175	O I| | | |	2.65
0.500	8.64	0.35	0.229	O I | | |	3.32
0.583	10.55	0.35	0.293	O | I | | |	4.10
0.667	12.77	0.35	0.371	O | I | | |	5.06
0.750	17.21	0.35	0.472	O | |I | |	6.31
0.833	31.72	0.42	0.638	O | | | I	8.55
0.917	24.58	4.76	0.814	| O | | I |	10.91
1.000	11.55	8.45	0.893	| O I | | |	11.62
1.083	3.54	8.19	0.887	| I O | | |	11.58
1.167	0.53	6.46	0.851	I O | | | |	11.25
1.250	0.00	4.77	0.814	I O | | | |	10.91
1.333	0.00	3.58	0.785	I O | | | |	10.60
1.417	0.00	2.69	0.764	I O | | | |	10.36
1.500	0.00	2.02	0.747	I O | | | |	10.18
1.583	0.00	1.52	0.735	IO | | | |	10.05
1.667	0.00	1.28	0.725	IO | | | |	9.92
1.750	0.00	1.18	0.717	IO | | | |	9.80
1.833	0.00	1.08	0.709	IO | | | |	9.69
1.917	0.00	0.99	0.702	O | | | |	9.59
2.000	0.00	0.91	0.696	O | | | |	9.49
2.083	0.00	0.84	0.690	O | | | |	9.41
2.167	0.00	0.77	0.684	O | | | |	9.33
2.250	0.00	0.70	0.679	O | | | |	9.26
2.333	0.00	0.65	0.674	O | | | |	9.19
2.417	0.00	0.59	0.670	O | | | |	9.13
2.500	0.00	0.54	0.666	O | | | |	9.07
2.583	0.00	0.50	0.663	O | | | |	9.02
2.667	0.00	0.48	0.659	O | | | |	8.97
2.750	0.00	0.47	0.656	O | | | |	8.90
2.833	0.00	0.46	0.653	O | | | |	8.84
2.917	0.00	0.45	0.650	O | | | |	8.78
3.000	0.00	0.44	0.647	O | | | |	8.72
3.083	0.00	0.44	0.644	O | | | |	8.66
3.167	0.00	0.43	0.641	O | | | |	8.61
3.250	0.00	0.42	0.638	O | | | |	8.55
3.333	0.00	0.41	0.635	O | | | |	8.49
3.417	0.00	0.41	0.632	O | | | |	8.44
3.500	0.00	0.40	0.629	O | | | |	8.39
3.583	0.00	0.39	0.626	O | | | |	8.33
3.667	0.00	0.39	0.624	O | | | |	8.28
3.750	0.00	0.38	0.621	O | | | |	8.23
3.833	0.00	0.37	0.618	O | | | |	8.18

3.917	0.00	0.37	0.616	O				8.13
4.000	0.00	0.36	0.613	O				8.08
4.083	0.00	0.35	0.611	O				8.04
4.167	0.00	0.35	0.609	O				7.99
4.250	0.00	0.35	0.606	O				7.96
4.333	0.00	0.35	0.604	O				7.93
4.417	0.00	0.35	0.601	O				7.90
4.500	0.00	0.35	0.599	O				7.88
4.583	0.00	0.35	0.596	O				7.85
4.667	0.00	0.35	0.594	O				7.82
4.750	0.00	0.35	0.592	O				7.79
4.833	0.00	0.35	0.589	O				7.76
4.917	0.00	0.35	0.587	O				7.73
5.000	0.00	0.35	0.584	O				7.70
5.083	0.00	0.35	0.582	O				7.67
5.167	0.00	0.35	0.580	O				7.64
5.250	0.00	0.35	0.577	O				7.61
5.333	0.00	0.35	0.575	O				7.58
5.417	0.00	0.35	0.572	O				7.55
5.500	0.00	0.35	0.570	O				7.52
5.583	0.00	0.35	0.568	O				7.49
5.667	0.00	0.35	0.565	O				7.46
5.750	0.00	0.35	0.563	O				7.43
5.833	0.00	0.35	0.560	O				7.40
5.917	0.00	0.35	0.558	O				7.37
6.000	0.00	0.35	0.555	O				7.34
6.083	0.00	0.35	0.553	O				7.31
6.167	0.00	0.35	0.551	O				7.28
6.250	0.00	0.35	0.548	O				7.25
6.333	0.00	0.35	0.546	O				7.22
6.417	0.00	0.35	0.543	O				7.19
6.500	0.00	0.35	0.541	O				7.16
6.583	0.00	0.35	0.539	O				7.13
6.667	0.00	0.35	0.536	O				7.10
6.750	0.00	0.35	0.534	O				7.07
6.833	0.00	0.35	0.531	O				7.04
6.917	0.00	0.35	0.529	O				7.01
7.000	0.00	0.35	0.527	O				6.98
7.083	0.00	0.35	0.524	O				6.95
7.167	0.00	0.35	0.522	O				6.92
7.250	0.00	0.35	0.519	O				6.89
7.333	0.00	0.35	0.517	O				6.86
7.417	0.00	0.35	0.515	O				6.83
7.500	0.00	0.35	0.512	O				6.80
7.583	0.00	0.35	0.510	O				6.78
7.667	0.00	0.35	0.507	O				6.75
7.750	0.00	0.35	0.505	O				6.72
7.833	0.00	0.35	0.502	O				6.69
7.917	0.00	0.35	0.500	O				6.66
8.000	0.00	0.35	0.498	O				6.63
8.083	0.00	0.35	0.495	O				6.60
8.167	0.00	0.35	0.493	O				6.57
8.250	0.00	0.35	0.490	O				6.54
8.333	0.00	0.35	0.488	O				6.51
8.417	0.00	0.35	0.486	O				6.48
8.500	0.00	0.35	0.483	O				6.45
8.583	0.00	0.35	0.481	O				6.42
8.667	0.00	0.35	0.478	O				6.39
8.750	0.00	0.35	0.476	O				6.36
8.833	0.00	0.35	0.474	O				6.33

8.917	0.00	0.35	0.471	O	|	|	|	|	6.30
9.000	0.00	0.35	0.469	O	|	|	|	|	6.27
9.083	0.00	0.35	0.466	O	|	|	|	|	6.24
9.167	0.00	0.35	0.464	O	|	|	|	|	6.21
9.250	0.00	0.35	0.461	O	|	|	|	|	6.18
9.333	0.00	0.35	0.459	O	|	|	|	|	6.15
9.417	0.00	0.35	0.457	O	|	|	|	|	6.12
9.500	0.00	0.35	0.454	O	|	|	|	|	6.09
9.583	0.00	0.35	0.452	O	|	|	|	|	6.06
9.667	0.00	0.35	0.449	O	|	|	|	|	6.03
9.750	0.00	0.35	0.447	O	|	|	|	|	6.00
9.833	0.00	0.35	0.445	O	|	|	|	|	5.97
9.917	0.00	0.35	0.442	O	|	|	|	|	5.94
10.000	0.00	0.35	0.440	O	|	|	|	|	5.91
10.083	0.00	0.35	0.437	O	|	|	|	|	5.88
10.167	0.00	0.35	0.435	O	|	|	|	|	5.85
10.250	0.00	0.35	0.433	O	|	|	|	|	5.82
10.333	0.00	0.35	0.430	O	|	|	|	|	5.79
10.417	0.00	0.35	0.428	O	|	|	|	|	5.76
10.500	0.00	0.35	0.425	O	|	|	|	|	5.73
10.583	0.00	0.35	0.423	O	|	|	|	|	5.70
10.667	0.00	0.35	0.420	O	|	|	|	|	5.68
10.750	0.00	0.35	0.418	O	|	|	|	|	5.65
10.833	0.00	0.35	0.416	O	|	|	|	|	5.62
10.917	0.00	0.35	0.413	O	|	|	|	|	5.59
11.000	0.00	0.35	0.411	O	|	|	|	|	5.56
11.083	0.00	0.35	0.408	O	|	|	|	|	5.53
11.167	0.00	0.35	0.406	O	|	|	|	|	5.50
11.250	0.00	0.35	0.404	O	|	|	|	|	5.47
11.333	0.00	0.35	0.401	O	|	|	|	|	5.44
11.417	0.00	0.35	0.399	O	|	|	|	|	5.41
11.500	0.00	0.35	0.396	O	|	|	|	|	5.38
11.583	0.00	0.35	0.394	O	|	|	|	|	5.35
11.667	0.00	0.35	0.392	O	|	|	|	|	5.32
11.750	0.00	0.35	0.389	O	|	|	|	|	5.29
11.833	0.00	0.35	0.387	O	|	|	|	|	5.26
11.917	0.00	0.35	0.384	O	|	|	|	|	5.23
12.000	0.00	0.35	0.382	O	|	|	|	|	5.20
12.083	0.00	0.35	0.380	O	|	|	|	|	5.17
12.167	0.00	0.35	0.377	O	|	|	|	|	5.14
12.250	0.00	0.35	0.375	O	|	|	|	|	5.11
12.333	0.00	0.35	0.372	O	|	|	|	|	5.08
12.417	0.00	0.35	0.370	O	|	|	|	|	5.05
12.500	0.00	0.35	0.367	O	|	|	|	|	5.02
12.583	0.00	0.35	0.365	O	|	|	|	|	4.99
12.667	0.00	0.35	0.363	O	|	|	|	|	4.96
12.750	0.00	0.35	0.360	O	|	|	|	|	4.93
12.833	0.00	0.35	0.358	O	|	|	|	|	4.90
12.917	0.00	0.35	0.355	O	|	|	|	|	4.87
13.000	0.00	0.35	0.353	O	|	|	|	|	4.84
13.083	0.00	0.35	0.351	O	|	|	|	|	4.81
13.167	0.00	0.35	0.348	O	|	|	|	|	4.78
13.250	0.00	0.35	0.346	O	|	|	|	|	4.75
13.333	0.00	0.35	0.343	O	|	|	|	|	4.72
13.417	0.00	0.35	0.341	O	|	|	|	|	4.69
13.500	0.00	0.35	0.339	O	|	|	|	|	4.66
13.583	0.00	0.35	0.336	O	|	|	|	|	4.63
13.667	0.00	0.35	0.334	O	|	|	|	|	4.60
13.750	0.00	0.35	0.331	O	|	|	|	|	4.57
13.833	0.00	0.35	0.329	O	|	|	|	|	4.55

13.917	0.00	0.35	0.326	O					4.52
14.000	0.00	0.35	0.324	O					4.49
14.083	0.00	0.35	0.322	O					4.46
14.167	0.00	0.35	0.319	O					4.43
14.250	0.00	0.35	0.317	O					4.40
14.333	0.00	0.35	0.314	O					4.37
14.417	0.00	0.35	0.312	O					4.34
14.500	0.00	0.35	0.310	O					4.31
14.583	0.00	0.35	0.307	O					4.28
14.667	0.00	0.35	0.305	O					4.25
14.750	0.00	0.35	0.302	O					4.22
14.833	0.00	0.35	0.300	O					4.19
14.917	0.00	0.35	0.298	O					4.16
15.000	0.00	0.35	0.295	O					4.13
15.083	0.00	0.35	0.293	O					4.10
15.167	0.00	0.35	0.290	O					4.07
15.250	0.00	0.35	0.288	O					4.04
15.333	0.00	0.35	0.286	O					4.01
15.417	0.00	0.35	0.283	O					3.98
15.500	0.00	0.35	0.281	O					3.95
15.583	0.00	0.35	0.278	O					3.92
15.667	0.00	0.35	0.276	O					3.89
15.750	0.00	0.35	0.273	O					3.86
15.833	0.00	0.35	0.271	O					3.83
15.917	0.00	0.35	0.269	O					3.80
16.000	0.00	0.35	0.266	O					3.77
16.083	0.00	0.35	0.264	O					3.74
16.167	0.00	0.35	0.261	O					3.71
16.250	0.00	0.35	0.259	O					3.68
16.333	0.00	0.35	0.257	O					3.65
16.417	0.00	0.35	0.254	O					3.62
16.500	0.00	0.35	0.252	O					3.59
16.583	0.00	0.35	0.249	O					3.56
16.667	0.00	0.35	0.247	O					3.53
16.750	0.00	0.35	0.245	O					3.50
16.833	0.00	0.35	0.242	O					3.47
16.917	0.00	0.35	0.240	O					3.45
17.000	0.00	0.35	0.237	O					3.42
17.083	0.00	0.35	0.235	O					3.39
17.167	0.00	0.35	0.232	O					3.36
17.250	0.00	0.35	0.230	O					3.33
17.333	0.00	0.35	0.228	O					3.30
17.417	0.00	0.35	0.225	O					3.27
17.500	0.00	0.35	0.223	O					3.24
17.583	0.00	0.35	0.220	O					3.21
17.667	0.00	0.35	0.218	O					3.18
17.750	0.00	0.35	0.216	O					3.15
17.833	0.00	0.35	0.213	O					3.12
17.917	0.00	0.35	0.211	O					3.09
18.000	0.00	0.35	0.208	O					3.06
18.083	0.00	0.35	0.206	O					3.03
18.167	0.00	0.35	0.204	O					3.00
18.250	0.00	0.35	0.201	O					2.97
18.333	0.00	0.35	0.199	O					2.94
18.417	0.00	0.35	0.196	O					2.91
18.500	0.00	0.35	0.194	O					2.88
18.583	0.00	0.35	0.192	O					2.85
18.667	0.00	0.35	0.189	O					2.82
18.750	0.00	0.35	0.187	O					2.79
18.833	0.00	0.35	0.184	O					2.76

18.917	0.00	0.35	0.182	O					2.73
19.000	0.00	0.35	0.179	O					2.70
19.083	0.00	0.35	0.177	O					2.67
19.167	0.00	0.35	0.175	O					2.64
19.250	0.00	0.35	0.172	O					2.61
19.333	0.00	0.35	0.170	O					2.58
19.417	0.00	0.35	0.167	O					2.55
19.500	0.00	0.35	0.165	O					2.52
19.583	0.00	0.35	0.163	O					2.49
19.667	0.00	0.35	0.160	O					2.46
19.750	0.00	0.35	0.158	O					2.43
19.833	0.00	0.35	0.155	O					2.40
19.917	0.00	0.35	0.153	O					2.37
20.000	0.00	0.35	0.151	O					2.35
20.083	0.00	0.35	0.148	O					2.32
20.167	0.00	0.35	0.146	O					2.29
20.250	0.00	0.35	0.143	O					2.26
20.333	0.00	0.35	0.141	O					2.23
20.417	0.00	0.35	0.138	O					2.20
20.500	0.00	0.35	0.136	O					2.17
20.583	0.00	0.35	0.134	O					2.14
20.667	0.00	0.35	0.131	O					2.11
20.750	0.00	0.35	0.129	O					2.08
20.833	0.00	0.35	0.126	O					2.05
20.917	0.00	0.35	0.124	O					2.02
21.000	0.00	0.35	0.122	O					1.99
21.083	0.00	0.35	0.119	O					1.96
21.167	0.00	0.35	0.117	O					1.93
21.250	0.00	0.35	0.114	O					1.90
21.333	0.00	0.35	0.112	O					1.87
21.417	0.00	0.35	0.110	O					1.84
21.500	0.00	0.35	0.107	O					1.81
21.583	0.00	0.35	0.105	O					1.78
21.667	0.00	0.35	0.102	O					1.75
21.750	0.00	0.35	0.100	O					1.72
21.833	0.00	0.35	0.097	O					1.69
21.917	0.00	0.35	0.095	O					1.66
22.000	0.00	0.35	0.093	O					1.63
22.083	0.00	0.35	0.090	O					1.60
22.167	0.00	0.35	0.088	O					1.57
22.250	0.00	0.35	0.085	O					1.54
22.333	0.00	0.35	0.083	O					1.51
22.417	0.00	0.34	0.081	O					1.48
22.500	0.00	0.33	0.078	O					1.43
22.583	0.00	0.32	0.076	O					1.39
22.667	0.00	0.32	0.074	O					1.35
22.750	0.00	0.31	0.072	O					1.31
22.833	0.00	0.30	0.070	O					1.27
22.917	0.00	0.29	0.068	O					1.24
23.000	0.00	0.28	0.066	O					1.20
23.083	0.00	0.27	0.064	O					1.17
23.167	0.00	0.26	0.062	O					1.13
23.250	0.00	0.26	0.060	O					1.10
23.333	0.00	0.25	0.058	O					1.07
23.417	0.00	0.24	0.057	O					1.04
23.500	0.00	0.23	0.055	O					1.01
23.583	0.00	0.23	0.053	O					0.98
23.667	0.00	0.22	0.052	O					0.95
23.750	0.00	0.22	0.050	O					0.92
23.833	0.00	0.21	0.049	O					0.89

23.917	0.00	0.20	0.048	O	|	|	|	|	0.87
24.000	0.00	0.20	0.046	O	|	|	|	|	0.84
24.083	0.00	0.19	0.045	O	|	|	|	|	0.82
24.167	0.00	0.19	0.043	O	|	|	|	|	0.80
24.250	0.00	0.18	0.042	O	|	|	|	|	0.77
24.333	0.00	0.18	0.041	O	|	|	|	|	0.75
24.417	0.00	0.17	0.040	O	|	|	|	|	0.73
24.500	0.00	0.17	0.039	O	|	|	|	|	0.71
24.583	0.00	0.16	0.038	O	|	|	|	|	0.69
24.667	0.00	0.16	0.036	O	|	|	|	|	0.67
24.750	0.00	0.15	0.035	O	|	|	|	|	0.65
24.833	0.00	0.15	0.034	O	|	|	|	|	0.63
24.917	0.00	0.14	0.033	O	|	|	|	|	0.61
25.000	0.00	0.14	0.032	O	|	|	|	|	0.59
25.083	0.00	0.13	0.031	O	|	|	|	|	0.58
25.167	0.00	0.13	0.031	O	|	|	|	|	0.56
25.250	0.00	0.13	0.030	O	|	|	|	|	0.54
25.333	0.00	0.12	0.029	O	|	|	|	|	0.53
25.417	0.00	0.12	0.028	O	|	|	|	|	0.51
25.500	0.00	0.12	0.027	O	|	|	|	|	0.50
25.583	0.00	0.11	0.026	O	|	|	|	|	0.48
25.667	0.00	0.11	0.026	O	|	|	|	|	0.47
25.750	0.00	0.11	0.025	O	|	|	|	|	0.46
25.833	0.00	0.10	0.024	O	|	|	|	|	0.44
25.917	0.00	0.10	0.023	O	|	|	|	|	0.43
26.000	0.00	0.10	0.023	O	|	|	|	|	0.42
26.083	0.00	0.09	0.022	O	|	|	|	|	0.40
26.167	0.00	0.09	0.021	O	|	|	|	|	0.39
26.250	0.00	0.09	0.021	O	|	|	|	|	0.38
26.333	0.00	0.09	0.020	O	|	|	|	|	0.37
26.417	0.00	0.08	0.020	O	|	|	|	|	0.36
26.500	0.00	0.08	0.019	O	|	|	|	|	0.35
26.583	0.00	0.08	0.019	O	|	|	|	|	0.34
26.667	0.00	0.08	0.018	O	|	|	|	|	0.33
26.750	0.00	0.07	0.017	O	|	|	|	|	0.32
26.833	0.00	0.07	0.017	O	|	|	|	|	0.31
26.917	0.00	0.07	0.016	O	|	|	|	|	0.30
27.000	0.00	0.07	0.016	O	|	|	|	|	0.29
27.083	0.00	0.07	0.016	O	|	|	|	|	0.28
27.167	0.00	0.06	0.015	O	|	|	|	|	0.28
27.250	0.00	0.06	0.015	O	|	|	|	|	0.27
27.333	0.00	0.06	0.014	O	|	|	|	|	0.26
27.417	0.00	0.06	0.014	O	|	|	|	|	0.25
27.500	0.00	0.06	0.013	O	|	|	|	|	0.25
27.583	0.00	0.06	0.013	O	|	|	|	|	0.24
27.667	0.00	0.05	0.013	O	|	|	|	|	0.23
27.750	0.00	0.05	0.012	O	|	|	|	|	0.22
27.833	0.00	0.05	0.012	O	|	|	|	|	0.22
27.917	0.00	0.05	0.012	O	|	|	|	|	0.21
28.000	0.00	0.05	0.011	O	|	|	|	|	0.21
28.083	0.00	0.05	0.011	O	|	|	|	|	0.20
28.167	0.00	0.05	0.011	O	|	|	|	|	0.19
28.250	0.00	0.04	0.010	O	|	|	|	|	0.19
28.333	0.00	0.04	0.010	O	|	|	|	|	0.18
28.417	0.00	0.04	0.010	O	|	|	|	|	0.18
28.500	0.00	0.04	0.009	O	|	|	|	|	0.17
28.583	0.00	0.04	0.009	O	|	|	|	|	0.17
28.667	0.00	0.04	0.009	O	|	|	|	|	0.16
28.750	0.00	0.04	0.009	O	|	|	|	|	0.16
28.833	0.00	0.04	0.008	O	|	|	|	|	0.15

28.917	0.00	0.03	0.008	O	|	|	|	0.15
29.000	0.00	0.03	0.008	O	|	|	|	0.14
29.083	0.00	0.03	0.008	O	|	|	|	0.14
29.167	0.00	0.03	0.007	O	|	|	|	0.14
29.250	0.00	0.03	0.007	O	|	|	|	0.13
29.333	0.00	0.03	0.007	O	|	|	|	0.13
29.417	0.00	0.03	0.007	O	|	|	|	0.12
29.500	0.00	0.03	0.007	O	|	|	|	0.12
29.583	0.00	0.03	0.006	O	|	|	|	0.12
29.667	0.00	0.03	0.006	O	|	|	|	0.11
29.750	0.00	0.03	0.006	O	|	|	|	0.11
29.833	0.00	0.03	0.006	O	|	|	|	0.11
29.917	0.00	0.02	0.006	O	|	|	|	0.10
30.000	0.00	0.02	0.006	O	|	|	|	0.10
30.083	0.00	0.02	0.005	O	|	|	|	0.10
30.167	0.00	0.02	0.005	O	|	|	|	0.10
30.250	0.00	0.02	0.005	O	|	|	|	0.09
30.333	0.00	0.02	0.005	O	|	|	|	0.09
30.417	0.00	0.02	0.005	O	|	|	|	0.09
30.500	0.00	0.02	0.005	O	|	|	|	0.09
30.583	0.00	0.02	0.005	O	|	|	|	0.08
30.667	0.00	0.02	0.004	O	|	|	|	0.08
30.750	0.00	0.02	0.004	O	|	|	|	0.08
30.833	0.00	0.02	0.004	O	|	|	|	0.08
30.917	0.00	0.02	0.004	O	|	|	|	0.07
31.000	0.00	0.02	0.004	O	|	|	|	0.07
31.083	0.00	0.02	0.004	O	|	|	|	0.07
31.167	0.00	0.02	0.004	O	|	|	|	0.07
31.250	0.00	0.02	0.004	O	|	|	|	0.07
31.333	0.00	0.01	0.003	O	|	|	|	0.06
31.417	0.00	0.01	0.003	O	|	|	|	0.06
31.500	0.00	0.01	0.003	O	|	|	|	0.06
31.583	0.00	0.01	0.003	O	|	|	|	0.06
31.667	0.00	0.01	0.003	O	|	|	|	0.06
31.750	0.00	0.01	0.003	O	|	|	|	0.05
31.833	0.00	0.01	0.003	O	|	|	|	0.05
31.917	0.00	0.01	0.003	O	|	|	|	0.05
32.000	0.00	0.01	0.003	O	|	|	|	0.05
32.083	0.00	0.01	0.003	O	|	|	|	0.05
32.167	0.00	0.01	0.003	O	|	|	|	0.05
32.250	0.00	0.01	0.003	O	|	|	|	0.05
32.333	0.00	0.01	0.002	O	|	|	|	0.04
32.417	0.00	0.01	0.002	O	|	|	|	0.04
32.500	0.00	0.01	0.002	O	|	|	|	0.04
32.583	0.00	0.01	0.002	O	|	|	|	0.04
32.667	0.00	0.01	0.002	O	|	|	|	0.04
32.750	0.00	0.01	0.002	O	|	|	|	0.04
32.833	0.00	0.01	0.002	O	|	|	|	0.04
32.917	0.00	0.01	0.002	O	|	|	|	0.04
33.000	0.00	0.01	0.002	O	|	|	|	0.04
33.083	0.00	0.01	0.002	O	|	|	|	0.03
33.167	0.00	0.01	0.002	O	|	|	|	0.03
33.250	0.00	0.01	0.002	O	|	|	|	0.03
33.333	0.00	0.01	0.002	O	|	|	|	0.03
33.417	0.00	0.01	0.002	O	|	|	|	0.03
33.500	0.00	0.01	0.002	O	|	|	|	0.03
33.583	0.00	0.01	0.002	O	|	|	|	0.03
33.667	0.00	0.01	0.002	O	|	|	|	0.03
33.750	0.00	0.01	0.001	O	|	|	|	0.03
33.833	0.00	0.01	0.001	O	|	|	|	0.03

33.917	0.00	0.01	0.001	O	|	|	|	0.03
34.000	0.00	0.01	0.001	O	|	|	|	0.02
34.083	0.00	0.01	0.001	O	|	|	|	0.02
34.167	0.00	0.01	0.001	O	|	|	|	0.02
34.250	0.00	0.01	0.001	O	|	|	|	0.02
34.333	0.00	0.01	0.001	O	|	|	|	0.02
34.417	0.00	0.00	0.001	O	|	|	|	0.02
34.500	0.00	0.00	0.001	O	|	|	|	0.02
34.583	0.00	0.00	0.001	O	|	|	|	0.02
34.667	0.00	0.00	0.001	O	|	|	|	0.02
34.750	0.00	0.00	0.001	O	|	|	|	0.02
34.833	0.00	0.00	0.001	O	|	|	|	0.02
34.917	0.00	0.00	0.001	O	|	|	|	0.02
35.000	0.00	0.00	0.001	O	|	|	|	0.02
35.083	0.00	0.00	0.001	O	|	|	|	0.02
35.167	0.00	0.00	0.001	O	|	|	|	0.02
35.250	0.00	0.00	0.001	O	|	|	|	0.02
35.333	0.00	0.00	0.001	O	|	|	|	0.02
35.417	0.00	0.00	0.001	O	|	|	|	0.02
35.500	0.00	0.00	0.001	O	|	|	|	0.01
35.583	0.00	0.00	0.001	O	|	|	|	0.01
35.667	0.00	0.00	0.001	O	|	|	|	0.01
35.750	0.00	0.00	0.001	O	|	|	|	0.01
35.833	0.00	0.00	0.001	O	|	|	|	0.01
35.917	0.00	0.00	0.001	O	|	|	|	0.01
36.000	0.00	0.00	0.001	O	|	|	|	0.01
36.083	0.00	0.00	0.001	O	|	|	|	0.01
36.167	0.00	0.00	0.001	O	|	|	|	0.01
36.250	0.00	0.00	0.001	O	|	|	|	0.01
36.333	0.00	0.00	0.001	O	|	|	|	0.01
36.417	0.00	0.00	0.001	O	|	|	|	0.01
36.500	0.00	0.00	0.001	O	|	|	|	0.01
36.583	0.00	0.00	0.001	O	|	|	|	0.01
36.667	0.00	0.00	0.001	O	|	|	|	0.01
36.750	0.00	0.00	0.001	O	|	|	|	0.01
36.833	0.00	0.00	0.000	O	|	|	|	0.01
36.917	0.00	0.00	0.000	O	|	|	|	0.01
37.000	0.00	0.00	0.000	O	|	|	|	0.01
37.083	0.00	0.00	0.000	O	|	|	|	0.01
37.167	0.00	0.00	0.000	O	|	|	|	0.01
37.250	0.00	0.00	0.000	O	|	|	|	0.01
37.333	0.00	0.00	0.000	O	|	|	|	0.01
37.417	0.00	0.00	0.000	O	|	|	|	0.01
37.500	0.00	0.00	0.000	O	|	|	|	0.01
37.583	0.00	0.00	0.000	O	|	|	|	0.01
37.667	0.00	0.00	0.000	O	|	|	|	0.01
37.750	0.00	0.00	0.000	O	|	|	|	0.01
37.833	0.00	0.00	0.000	O	|	|	|	0.01
37.917	0.00	0.00	0.000	O	|	|	|	0.01
38.000	0.00	0.00	0.000	O	|	|	|	0.01
38.083	0.00	0.00	0.000	O	|	|	|	0.01
38.167	0.00	0.00	0.000	O	|	|	|	0.01
38.250	0.00	0.00	0.000	O	|	|	|	0.01
38.333	0.00	0.00	0.000	O	|	|	|	0.01
38.417	0.00	0.00	0.000	O	|	|	|	0.01
38.500	0.00	0.00	0.000	O	|	|	|	0.01
38.583	0.00	0.00	0.000	O	|	|	|	0.00
38.667	0.00	0.00	0.000	O	|	|	|	0.00
38.750	0.00	0.00	0.000	O	|	|	|	0.00
38.833	0.00	0.00	0.000	O	|	|	|	0.00

38.917	0.00	0.00	0.000	O	|	|	|	|	0.00
39.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 468
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 8.450 (CFS)
Total volume = 1.043 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
100-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 21.349 (CFS)
Total volume = 1.635 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 5.3 10.67 16.01 21.35	Depth (Ft.)
0.083	1.37	0.02	0.005	O I	0.08
0.167	2.37	0.07	0.017	O I	0.31
0.250	2.37	0.14	0.033	O I	0.60
0.333	2.63	0.21	0.049	O I	0.89
0.417	2.91	0.28	0.066	O I	1.21
0.500	3.29	0.35	0.085	O I	1.54
0.583	3.21	0.35	0.105	O I	1.79
0.667	3.34	0.35	0.125	O I	2.04
0.750	3.52	0.35	0.147	O I	2.30
0.833	3.25	0.35	0.168	O I	2.56
0.917	3.13	0.35	0.187	O I	2.80
1.000	3.37	0.35	0.207	O I	3.04
1.083	4.15	0.35	0.231	O I	3.33
1.167	4.62	0.35	0.258	O I	3.67
1.250	4.72	0.35	0.288	O I	4.04
1.333	4.40	0.35	0.317	O I	4.40
1.417	5.12	0.35	0.347	O I	4.77
1.500	5.93	0.35	0.383	O I	5.21
1.583	5.72	0.35	0.421	O I	5.68
1.667	5.87	0.35	0.458	O I	6.14
1.750	7.10	0.35	0.500	O I	6.66
1.833	7.56	0.35	0.549	O I	7.25
1.917	7.15	0.35	0.597	O I	7.85
2.000	7.03	0.43	0.643	O I	8.65
2.083	7.25	0.81	0.688	O I	9.38
2.167	9.15	1.56	0.736	O I	10.06
2.250	11.73	3.77	0.790	O I	10.64
2.333	10.55	5.66	0.834	O I	11.11
2.417	14.24	7.55	0.874	O I	11.46
2.500	18.54	10.03	0.926	O I	11.92
2.583	21.35	11.74	0.988	O I	12.39
2.667	18.86	13.02	1.042	O I	12.78
2.750	10.17	13.25	1.051	O I	12.85
2.833	4.76	12.36	1.014	O I	12.58
2.917	3.61	11.11	0.962	O I	12.20
3.000	2.31	9.37	0.912	O I	11.80
3.083	0.75	7.17	0.866	O I	11.39
3.167	0.09	5.27	0.826	O I	11.03
3.250	0.00	3.96	0.794	O I	10.69
3.333	0.00	2.97	0.770	O I	10.43
3.417	0.00	2.23	0.752	O I	10.24
3.500	0.00	1.68	0.739	O I	10.09
3.583	0.00	1.32	0.729	O I	9.97
3.667	0.00	1.21	0.720	O I	9.84
3.750	0.00	1.11	0.712	O I	9.73
3.833	0.00	1.02	0.705	O I	9.62

3.917	0.00	0.94	0.698	IO				9.53
4.000	0.00	0.86	0.692	IO				9.44
4.083	0.00	0.79	0.686	IO				9.36
4.167	0.00	0.73	0.681	IO				9.28
4.250	0.00	0.67	0.676	O				9.21
4.333	0.00	0.61	0.672	O				9.15
4.417	0.00	0.56	0.668	O				9.09
4.500	0.00	0.51	0.664	O				9.04
4.583	0.00	0.48	0.660	O				8.99
4.667	0.00	0.47	0.657	O				8.93
4.750	0.00	0.46	0.654	O				8.86
4.833	0.00	0.45	0.651	O				8.80
4.917	0.00	0.45	0.648	O				8.74
5.000	0.00	0.44	0.645	O				8.68
5.083	0.00	0.43	0.642	O				8.63
5.167	0.00	0.42	0.639	O				8.57
5.250	0.00	0.42	0.636	O				8.51
5.333	0.00	0.41	0.633	O				8.46
5.417	0.00	0.40	0.630	O				8.41
5.500	0.00	0.40	0.627	O				8.35
5.583	0.00	0.39	0.625	O				8.30
5.667	0.00	0.38	0.622	O				8.25
5.750	0.00	0.38	0.619	O				8.20
5.833	0.00	0.37	0.617	O				8.15
5.917	0.00	0.36	0.614	O				8.10
6.000	0.00	0.36	0.612	O				8.05
6.083	0.00	0.35	0.609	O				8.01
6.167	0.00	0.35	0.607	O				7.97
6.250	0.00	0.35	0.605	O				7.95
6.333	0.00	0.35	0.602	O				7.92
6.417	0.00	0.35	0.600	O				7.89
6.500	0.00	0.35	0.597	O				7.86
6.583	0.00	0.35	0.595	O				7.83
6.667	0.00	0.35	0.593	O				7.80
6.750	0.00	0.35	0.590	O				7.77
6.833	0.00	0.35	0.588	O				7.74
6.917	0.00	0.35	0.585	O				7.71
7.000	0.00	0.35	0.583	O				7.68
7.083	0.00	0.35	0.580	O				7.65
7.167	0.00	0.35	0.578	O				7.62
7.250	0.00	0.35	0.576	O				7.59
7.333	0.00	0.35	0.573	O				7.56
7.417	0.00	0.35	0.571	O				7.53
7.500	0.00	0.35	0.568	O				7.50
7.583	0.00	0.35	0.566	O				7.47
7.667	0.00	0.35	0.564	O				7.44
7.750	0.00	0.35	0.561	O				7.41
7.833	0.00	0.35	0.559	O				7.38
7.917	0.00	0.35	0.556	O				7.35
8.000	0.00	0.35	0.554	O				7.32
8.083	0.00	0.35	0.552	O				7.29
8.167	0.00	0.35	0.549	O				7.26
8.250	0.00	0.35	0.547	O				7.23
8.333	0.00	0.35	0.544	O				7.20
8.417	0.00	0.35	0.542	O				7.17
8.500	0.00	0.35	0.539	O				7.14
8.583	0.00	0.35	0.537	O				7.11
8.667	0.00	0.35	0.535	O				7.08
8.750	0.00	0.35	0.532	O				7.05
8.833	0.00	0.35	0.530	O				7.02

8.917	0.00	0.35	0.527	O	|	|	|	6.99
9.000	0.00	0.35	0.525	O	|	|	|	6.96
9.083	0.00	0.35	0.523	O	|	|	|	6.93
9.167	0.00	0.35	0.520	O	|	|	|	6.90
9.250	0.00	0.35	0.518	O	|	|	|	6.87
9.333	0.00	0.35	0.515	O	|	|	|	6.85
9.417	0.00	0.35	0.513	O	|	|	|	6.82
9.500	0.00	0.35	0.511	O	|	|	|	6.79
9.583	0.00	0.35	0.508	O	|	|	|	6.76
9.667	0.00	0.35	0.506	O	|	|	|	6.73
9.750	0.00	0.35	0.503	O	|	|	|	6.70
9.833	0.00	0.35	0.501	O	|	|	|	6.67
9.917	0.00	0.35	0.498	O	|	|	|	6.64
10.000	0.00	0.35	0.496	O	|	|	|	6.61
10.083	0.00	0.35	0.494	O	|	|	|	6.58
10.167	0.00	0.35	0.491	O	|	|	|	6.55
10.250	0.00	0.35	0.489	O	|	|	|	6.52
10.333	0.00	0.35	0.486	O	|	|	|	6.49
10.417	0.00	0.35	0.484	O	|	|	|	6.46
10.500	0.00	0.35	0.482	O	|	|	|	6.43
10.583	0.00	0.35	0.479	O	|	|	|	6.40
10.667	0.00	0.35	0.477	O	|	|	|	6.37
10.750	0.00	0.35	0.474	O	|	|	|	6.34
10.833	0.00	0.35	0.472	O	|	|	|	6.31
10.917	0.00	0.35	0.470	O	|	|	|	6.28
11.000	0.00	0.35	0.467	O	|	|	|	6.25
11.083	0.00	0.35	0.465	O	|	|	|	6.22
11.167	0.00	0.35	0.462	O	|	|	|	6.19
11.250	0.00	0.35	0.460	O	|	|	|	6.16
11.333	0.00	0.35	0.458	O	|	|	|	6.13
11.417	0.00	0.35	0.455	O	|	|	|	6.10
11.500	0.00	0.35	0.453	O	|	|	|	6.07
11.583	0.00	0.35	0.450	O	|	|	|	6.04
11.667	0.00	0.35	0.448	O	|	|	|	6.01
11.750	0.00	0.35	0.445	O	|	|	|	5.98
11.833	0.00	0.35	0.443	O	|	|	|	5.95
11.917	0.00	0.35	0.441	O	|	|	|	5.92
12.000	0.00	0.35	0.438	O	|	|	|	5.89
12.083	0.00	0.35	0.436	O	|	|	|	5.86
12.167	0.00	0.35	0.433	O	|	|	|	5.83
12.250	0.00	0.35	0.431	O	|	|	|	5.80
12.333	0.00	0.35	0.429	O	|	|	|	5.77
12.417	0.00	0.35	0.426	O	|	|	|	5.75
12.500	0.00	0.35	0.424	O	|	|	|	5.72
12.583	0.00	0.35	0.421	O	|	|	|	5.69
12.667	0.00	0.35	0.419	O	|	|	|	5.66
12.750	0.00	0.35	0.417	O	|	|	|	5.63
12.833	0.00	0.35	0.414	O	|	|	|	5.60
12.917	0.00	0.35	0.412	O	|	|	|	5.57
13.000	0.00	0.35	0.409	O	|	|	|	5.54
13.083	0.00	0.35	0.407	O	|	|	|	5.51
13.167	0.00	0.35	0.404	O	|	|	|	5.48
13.250	0.00	0.35	0.402	O	|	|	|	5.45
13.333	0.00	0.35	0.400	O	|	|	|	5.42
13.417	0.00	0.35	0.397	O	|	|	|	5.39
13.500	0.00	0.35	0.395	O	|	|	|	5.36
13.583	0.00	0.35	0.392	O	|	|	|	5.33
13.667	0.00	0.35	0.390	O	|	|	|	5.30
13.750	0.00	0.35	0.388	O	|	|	|	5.27
13.833	0.00	0.35	0.385	O	|	|	|	5.24

13.917	0.00	0.35	0.383	O					5.21
14.000	0.00	0.35	0.380	O					5.18
14.083	0.00	0.35	0.378	O					5.15
14.167	0.00	0.35	0.376	O					5.12
14.250	0.00	0.35	0.373	O					5.09
14.333	0.00	0.35	0.371	O					5.06
14.417	0.00	0.35	0.368	O					5.03
14.500	0.00	0.35	0.366	O					5.00
14.583	0.00	0.35	0.364	O					4.97
14.667	0.00	0.35	0.361	O					4.94
14.750	0.00	0.35	0.359	O					4.91
14.833	0.00	0.35	0.356	O					4.88
14.917	0.00	0.35	0.354	O					4.85
15.000	0.00	0.35	0.351	O					4.82
15.083	0.00	0.35	0.349	O					4.79
15.167	0.00	0.35	0.347	O					4.76
15.250	0.00	0.35	0.344	O					4.73
15.333	0.00	0.35	0.342	O					4.70
15.417	0.00	0.35	0.339	O					4.67
15.500	0.00	0.35	0.337	O					4.65
15.583	0.00	0.35	0.335	O					4.62
15.667	0.00	0.35	0.332	O					4.59
15.750	0.00	0.35	0.330	O					4.56
15.833	0.00	0.35	0.327	O					4.53
15.917	0.00	0.35	0.325	O					4.50
16.000	0.00	0.35	0.323	O					4.47
16.083	0.00	0.35	0.320	O					4.44
16.167	0.00	0.35	0.318	O					4.41
16.250	0.00	0.35	0.315	O					4.38
16.333	0.00	0.35	0.313	O					4.35
16.417	0.00	0.35	0.310	O					4.32
16.500	0.00	0.35	0.308	O					4.29
16.583	0.00	0.35	0.306	O					4.26
16.667	0.00	0.35	0.303	O					4.23
16.750	0.00	0.35	0.301	O					4.20
16.833	0.00	0.35	0.298	O					4.17
16.917	0.00	0.35	0.296	O					4.14
17.000	0.00	0.35	0.294	O					4.11
17.083	0.00	0.35	0.291	O					4.08
17.167	0.00	0.35	0.289	O					4.05
17.250	0.00	0.35	0.286	O					4.02
17.333	0.00	0.35	0.284	O					3.99
17.417	0.00	0.35	0.282	O					3.96
17.500	0.00	0.35	0.279	O					3.93
17.583	0.00	0.35	0.277	O					3.90
17.667	0.00	0.35	0.274	O					3.87
17.750	0.00	0.35	0.272	O					3.84
17.833	0.00	0.35	0.269	O					3.81
17.917	0.00	0.35	0.267	O					3.78
18.000	0.00	0.35	0.265	O					3.75
18.083	0.00	0.35	0.262	O					3.72
18.167	0.00	0.35	0.260	O					3.69
18.250	0.00	0.35	0.257	O					3.66
18.333	0.00	0.35	0.255	O					3.63
18.417	0.00	0.35	0.253	O					3.60
18.500	0.00	0.35	0.250	O					3.57
18.583	0.00	0.35	0.248	O					3.55
18.667	0.00	0.35	0.245	O					3.52
18.750	0.00	0.35	0.243	O					3.49
18.833	0.00	0.35	0.241	O					3.46

18.917	0.00	0.35	0.238	O					3.43
19.000	0.00	0.35	0.236	O					3.40
19.083	0.00	0.35	0.233	O					3.37
19.167	0.00	0.35	0.231	O					3.34
19.250	0.00	0.35	0.229	O					3.31
19.333	0.00	0.35	0.226	O					3.28
19.417	0.00	0.35	0.224	O					3.25
19.500	0.00	0.35	0.221	O					3.22
19.583	0.00	0.35	0.219	O					3.19
19.667	0.00	0.35	0.216	O					3.16
19.750	0.00	0.35	0.214	O					3.13
19.833	0.00	0.35	0.212	O					3.10
19.917	0.00	0.35	0.209	O					3.07
20.000	0.00	0.35	0.207	O					3.04
20.083	0.00	0.35	0.204	O					3.01
20.167	0.00	0.35	0.202	O					2.98
20.250	0.00	0.35	0.200	O					2.95
20.333	0.00	0.35	0.197	O					2.92
20.417	0.00	0.35	0.195	O					2.89
20.500	0.00	0.35	0.192	O					2.86
20.583	0.00	0.35	0.190	O					2.83
20.667	0.00	0.35	0.188	O					2.80
20.750	0.00	0.35	0.185	O					2.77
20.833	0.00	0.35	0.183	O					2.74
20.917	0.00	0.35	0.180	O					2.71
21.000	0.00	0.35	0.178	O					2.68
21.083	0.00	0.35	0.175	O					2.65
21.167	0.00	0.35	0.173	O					2.62
21.250	0.00	0.35	0.171	O					2.59
21.333	0.00	0.35	0.168	O					2.56
21.417	0.00	0.35	0.166	O					2.53
21.500	0.00	0.35	0.163	O					2.50
21.583	0.00	0.35	0.161	O					2.47
21.667	0.00	0.35	0.159	O					2.44
21.750	0.00	0.35	0.156	O					2.42
21.833	0.00	0.35	0.154	O					2.39
21.917	0.00	0.35	0.151	O					2.36
22.000	0.00	0.35	0.149	O					2.33
22.083	0.00	0.35	0.147	O					2.30
22.167	0.00	0.35	0.144	O					2.27
22.250	0.00	0.35	0.142	O					2.24
22.333	0.00	0.35	0.139	O					2.21
22.417	0.00	0.35	0.137	O					2.18
22.500	0.00	0.35	0.135	O					2.15
22.583	0.00	0.35	0.132	O					2.12
22.667	0.00	0.35	0.130	O					2.09
22.750	0.00	0.35	0.127	O					2.06
22.833	0.00	0.35	0.125	O					2.03
22.917	0.00	0.35	0.122	O					2.00
23.000	0.00	0.35	0.120	O					1.97
23.083	0.00	0.35	0.118	O					1.94
23.167	0.00	0.35	0.115	O					1.91
23.250	0.00	0.35	0.113	O					1.88
23.333	0.00	0.35	0.110	O					1.85
23.417	0.00	0.35	0.108	O					1.82
23.500	0.00	0.35	0.106	O					1.79
23.583	0.00	0.35	0.103	O					1.76
23.667	0.00	0.35	0.101	O					1.73
23.750	0.00	0.35	0.098	O					1.70
23.833	0.00	0.35	0.096	O					1.67

23.917	0.00	0.35	0.094	O				1.64
24.000	0.00	0.35	0.091	O				1.61
24.083	0.00	0.35	0.089	O				1.58
24.167	0.00	0.35	0.086	O				1.55
24.250	0.00	0.35	0.084	O				1.52
24.333	0.00	0.35	0.081	O				1.49
24.417	0.00	0.34	0.079	O				1.45
24.500	0.00	0.33	0.077	O				1.41
24.583	0.00	0.32	0.075	O				1.36
24.667	0.00	0.31	0.072	O				1.33
24.750	0.00	0.30	0.070	O				1.29
24.833	0.00	0.29	0.068	O				1.25
24.917	0.00	0.28	0.066	O				1.21
25.000	0.00	0.27	0.064	O				1.18
25.083	0.00	0.27	0.063	O				1.14
25.167	0.00	0.26	0.061	O				1.11
25.250	0.00	0.25	0.059	O				1.08
25.333	0.00	0.24	0.057	O				1.05
25.417	0.00	0.24	0.056	O				1.02
25.500	0.00	0.23	0.054	O				0.99
25.583	0.00	0.22	0.052	O				0.96
25.667	0.00	0.22	0.051	O				0.93
25.750	0.00	0.21	0.049	O				0.90
25.833	0.00	0.20	0.048	O				0.88
25.917	0.00	0.20	0.047	O				0.85
26.000	0.00	0.19	0.045	O				0.83
26.083	0.00	0.19	0.044	O				0.80
26.167	0.00	0.18	0.043	O				0.78
26.250	0.00	0.18	0.041	O				0.76
26.333	0.00	0.17	0.040	O				0.74
26.417	0.00	0.17	0.039	O				0.71
26.500	0.00	0.16	0.038	O				0.69
26.583	0.00	0.16	0.037	O				0.67
26.667	0.00	0.15	0.036	O				0.65
26.750	0.00	0.15	0.035	O				0.64
26.833	0.00	0.14	0.034	O				0.62
26.917	0.00	0.14	0.033	O				0.60
27.000	0.00	0.14	0.032	O				0.58
27.083	0.00	0.13	0.031	O				0.57
27.167	0.00	0.13	0.030	O				0.55
27.250	0.00	0.12	0.029	O				0.53
27.333	0.00	0.12	0.028	O				0.52
27.417	0.00	0.12	0.027	O				0.50
27.500	0.00	0.11	0.027	O				0.49
27.583	0.00	0.11	0.026	O				0.47
27.667	0.00	0.11	0.025	O				0.46
27.750	0.00	0.10	0.024	O				0.45
27.833	0.00	0.10	0.024	O				0.43
27.917	0.00	0.10	0.023	O				0.42
28.000	0.00	0.10	0.022	O				0.41
28.083	0.00	0.09	0.022	O				0.40
28.167	0.00	0.09	0.021	O				0.39
28.250	0.00	0.09	0.020	O				0.37
28.333	0.00	0.08	0.020	O				0.36
28.417	0.00	0.08	0.019	O				0.35
28.500	0.00	0.08	0.019	O				0.34
28.583	0.00	0.08	0.018	O				0.33
28.667	0.00	0.08	0.018	O				0.32
28.750	0.00	0.07	0.017	O				0.31
28.833	0.00	0.07	0.017	O				0.30

28.917	0.00	0.07	0.016	O	|	|	|	0.30
29.000	0.00	0.07	0.016	O	|	|	|	0.29
29.083	0.00	0.07	0.015	O	|	|	|	0.28
29.167	0.00	0.06	0.015	O	|	|	|	0.27
29.250	0.00	0.06	0.014	O	|	|	|	0.26
29.333	0.00	0.06	0.014	O	|	|	|	0.26
29.417	0.00	0.06	0.014	O	|	|	|	0.25
29.500	0.00	0.06	0.013	O	|	|	|	0.24
29.583	0.00	0.05	0.013	O	|	|	|	0.23
29.667	0.00	0.05	0.012	O	|	|	|	0.23
29.750	0.00	0.05	0.012	O	|	|	|	0.22
29.833	0.00	0.05	0.012	O	|	|	|	0.21
29.917	0.00	0.05	0.011	O	|	|	|	0.21
30.000	0.00	0.05	0.011	O	|	|	|	0.20
30.083	0.00	0.05	0.011	O	|	|	|	0.20
30.167	0.00	0.04	0.010	O	|	|	|	0.19
30.250	0.00	0.04	0.010	O	|	|	|	0.18
30.333	0.00	0.04	0.010	O	|	|	|	0.18
30.417	0.00	0.04	0.010	O	|	|	|	0.17
30.500	0.00	0.04	0.009	O	|	|	|	0.17
30.583	0.00	0.04	0.009	O	|	|	|	0.16
30.667	0.00	0.04	0.009	O	|	|	|	0.16
30.750	0.00	0.04	0.008	O	|	|	|	0.15
30.833	0.00	0.04	0.008	O	|	|	|	0.15
30.917	0.00	0.03	0.008	O	|	|	|	0.15
31.000	0.00	0.03	0.008	O	|	|	|	0.14
31.083	0.00	0.03	0.008	O	|	|	|	0.14
31.167	0.00	0.03	0.007	O	|	|	|	0.13
31.250	0.00	0.03	0.007	O	|	|	|	0.13
31.333	0.00	0.03	0.007	O	|	|	|	0.13
31.417	0.00	0.03	0.007	O	|	|	|	0.12
31.500	0.00	0.03	0.007	O	|	|	|	0.12
31.583	0.00	0.03	0.006	O	|	|	|	0.12
31.667	0.00	0.03	0.006	O	|	|	|	0.11
31.750	0.00	0.03	0.006	O	|	|	|	0.11
31.833	0.00	0.02	0.006	O	|	|	|	0.11
31.917	0.00	0.02	0.006	O	|	|	|	0.10
32.000	0.00	0.02	0.005	O	|	|	|	0.10
32.083	0.00	0.02	0.005	O	|	|	|	0.10
32.167	0.00	0.02	0.005	O	|	|	|	0.09
32.250	0.00	0.02	0.005	O	|	|	|	0.09
32.333	0.00	0.02	0.005	O	|	|	|	0.09
32.417	0.00	0.02	0.005	O	|	|	|	0.09
32.500	0.00	0.02	0.005	O	|	|	|	0.08
32.583	0.00	0.02	0.004	O	|	|	|	0.08
32.667	0.00	0.02	0.004	O	|	|	|	0.08
32.750	0.00	0.02	0.004	O	|	|	|	0.08
32.833	0.00	0.02	0.004	O	|	|	|	0.07
32.917	0.00	0.02	0.004	O	|	|	|	0.07
33.000	0.00	0.02	0.004	O	|	|	|	0.07
33.083	0.00	0.02	0.004	O	|	|	|	0.07
33.167	0.00	0.02	0.004	O	|	|	|	0.07
33.250	0.00	0.01	0.004	O	|	|	|	0.06
33.333	0.00	0.01	0.003	O	|	|	|	0.06
33.417	0.00	0.01	0.003	O	|	|	|	0.06
33.500	0.00	0.01	0.003	O	|	|	|	0.06
33.583	0.00	0.01	0.003	O	|	|	|	0.06
33.667	0.00	0.01	0.003	O	|	|	|	0.06
33.750	0.00	0.01	0.003	O	|	|	|	0.05
33.833	0.00	0.01	0.003	O	|	|	|	0.05

33.917	0.00	0.01	0.003	O				0.05
34.000	0.00	0.01	0.003	O				0.05
34.083	0.00	0.01	0.003	O				0.05
34.167	0.00	0.01	0.003	O				0.05
34.250	0.00	0.01	0.002	O				0.05
34.333	0.00	0.01	0.002	O				0.04
34.417	0.00	0.01	0.002	O				0.04
34.500	0.00	0.01	0.002	O				0.04
34.583	0.00	0.01	0.002	O				0.04
34.667	0.00	0.01	0.002	O				0.04
34.750	0.00	0.01	0.002	O				0.04
34.833	0.00	0.01	0.002	O				0.04
34.917	0.00	0.01	0.002	O				0.04
35.000	0.00	0.01	0.002	O				0.03
35.083	0.00	0.01	0.002	O				0.03
35.167	0.00	0.01	0.002	O				0.03
35.250	0.00	0.01	0.002	O				0.03
35.333	0.00	0.01	0.002	O				0.03
35.417	0.00	0.01	0.002	O				0.03
35.500	0.00	0.01	0.002	O				0.03
35.583	0.00	0.01	0.002	O				0.03
35.667	0.00	0.01	0.001	O				0.03
35.750	0.00	0.01	0.001	O				0.03
35.833	0.00	0.01	0.001	O				0.03
35.917	0.00	0.01	0.001	O				0.03
36.000	0.00	0.01	0.001	O				0.02
36.083	0.00	0.01	0.001	O				0.02
36.167	0.00	0.01	0.001	O				0.02
36.250	0.00	0.01	0.001	O				0.02
36.333	0.00	0.01	0.001	O				0.02
36.417	0.00	0.00	0.001	O				0.02
36.500	0.00	0.00	0.001	O				0.02
36.583	0.00	0.00	0.001	O				0.02
36.667	0.00	0.00	0.001	O				0.02
36.750	0.00	0.00	0.001	O				0.02
36.833	0.00	0.00	0.001	O				0.02
36.917	0.00	0.00	0.001	O				0.02
37.000	0.00	0.00	0.001	O				0.02
37.083	0.00	0.00	0.001	O				0.02
37.167	0.00	0.00	0.001	O				0.02
37.250	0.00	0.00	0.001	O				0.02
37.333	0.00	0.00	0.001	O				0.02
37.417	0.00	0.00	0.001	O				0.01
37.500	0.00	0.00	0.001	O				0.01
37.583	0.00	0.00	0.001	O				0.01
37.667	0.00	0.00	0.001	O				0.01
37.750	0.00	0.00	0.001	O				0.01
37.833	0.00	0.00	0.001	O				0.01
37.917	0.00	0.00	0.001	O				0.01
38.000	0.00	0.00	0.001	O				0.01
38.083	0.00	0.00	0.001	O				0.01
38.167	0.00	0.00	0.001	O				0.01
38.250	0.00	0.00	0.001	O				0.01
38.333	0.00	0.00	0.001	O				0.01
38.417	0.00	0.00	0.001	O				0.01
38.500	0.00	0.00	0.001	O				0.01
38.583	0.00	0.00	0.001	O				0.01
38.667	0.00	0.00	0.001	O				0.01
38.750	0.00	0.00	0.001	O				0.01
38.833	0.00	0.00	0.000	O				0.01

38.917	0.00	0.00	0.000	O	|	|	|	|	0.01
39.000	0.00	0.00	0.000	O	|	|	|	|	0.01
39.083	0.00	0.00	0.000	O	|	|	|	|	0.01
39.167	0.00	0.00	0.000	O	|	|	|	|	0.01
39.250	0.00	0.00	0.000	O	|	|	|	|	0.01
39.333	0.00	0.00	0.000	O	|	|	|	|	0.01
39.417	0.00	0.00	0.000	O	|	|	|	|	0.01
39.500	0.00	0.00	0.000	O	|	|	|	|	0.01
39.583	0.00	0.00	0.000	O	|	|	|	|	0.01
39.667	0.00	0.00	0.000	O	|	|	|	|	0.01
39.750	0.00	0.00	0.000	O	|	|	|	|	0.01
39.833	0.00	0.00	0.000	O	|	|	|	|	0.01
39.917	0.00	0.00	0.000	O	|	|	|	|	0.01
40.000	0.00	0.00	0.000	O	|	|	|	|	0.01
40.083	0.00	0.00	0.000	O	|	|	|	|	0.01
40.167	0.00	0.00	0.000	O	|	|	|	|	0.01
40.250	0.00	0.00	0.000	O	|	|	|	|	0.01
40.333	0.00	0.00	0.000	O	|	|	|	|	0.01
40.417	0.00	0.00	0.000	O	|	|	|	|	0.01
40.500	0.00	0.00	0.000	O	|	|	|	|	0.00
40.583	0.00	0.00	0.000	O	|	|	|	|	0.00
40.667	0.00	0.00	0.000	O	|	|	|	|	0.00
40.750	0.00	0.00	0.000	O	|	|	|	|	0.00
40.833	0.00	0.00	0.000	O	|	|	|	|	0.00
40.917	0.00	0.00	0.000	O	|	|	|	|	0.00
41.000	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 492
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.248 (CFS)
Total volume = 1.635 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
100-YR
6-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte

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

Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 19.712 (CFS)
Total volume = 2.196 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.9 9.86 14.78 19.71	Depth (Ft.)
0.083	0.74	0.01	0.002	OI | | | | |	0.05
0.167	1.42	0.04	0.010	O I | | | | |	0.18
0.250	1.64	0.08	0.020	O I | | | | |	0.36
0.333	1.67	0.13	0.031	O I | | | | |	0.56
0.417	1.67	0.17	0.041	O I | | | | |	0.75
0.500	1.81	0.22	0.052	O I | | | | |	0.94
0.583	1.92	0.27	0.063	O I | | | | |	1.15
0.667	1.94	0.32	0.074	O I | | | | |	1.35
0.750	1.94	0.35	0.085	O I | | | | |	1.54
0.833	1.94	0.35	0.096	O I | | | | |	1.67
0.917	1.94	0.35	0.107	O I | | | | |	1.81
1.000	2.09	0.35	0.119	O I | | | | |	1.95
1.083	2.20	0.35	0.131	O I | | | | |	2.10
1.167	2.22	0.35	0.144	O I | | | | |	2.26
1.250	2.22	0.35	0.157	O I | | | | |	2.42
1.333	2.22	0.35	0.169	O I | | | | |	2.58
1.417	2.22	0.35	0.182	O I | | | | |	2.74
1.500	2.22	0.35	0.195	O I | | | | |	2.90
1.583	2.22	0.35	0.208	O I | | | | |	3.06
1.667	2.22	0.35	0.221	O I | | | | |	3.21
1.750	2.22	0.35	0.234	O I | | | | |	3.37
1.833	2.22	0.35	0.247	O I | | | | |	3.53
1.917	2.22	0.35	0.260	O I | | | | |	3.69
2.000	2.37	0.35	0.273	O I | | | | |	3.86
2.083	2.33	0.35	0.287	O I | | | | |	4.03
2.167	2.39	0.35	0.301	O I | | | | |	4.20
2.250	2.48	0.35	0.315	O I | | | | |	4.37
2.333	2.50	0.35	0.330	O I | | | | |	4.55
2.417	2.50	0.35	0.344	O I | | | | |	4.74
2.500	2.50	0.35	0.359	O I | | | | |	4.92
2.583	2.50	0.35	0.374	O I | | | | |	5.10
2.667	2.50	0.35	0.389	O I | | | | |	5.28
2.750	2.65	0.35	0.404	O I | | | | |	5.47
2.833	2.75	0.35	0.420	O I | | | | |	5.67
2.917	2.78	0.35	0.437	O I | | | | |	5.88
3.000	2.78	0.35	0.454	O I | | | | |	6.08
3.083	2.78	0.35	0.470	O I | | | | |	6.29
3.167	2.92	0.35	0.488	O I | | | | |	6.50
3.250	3.03	0.35	0.506	O I | | | | |	6.73
3.333	3.05	0.35	0.524	O I | | | | |	6.95
3.417	3.20	0.35	0.543	O I | | | | |	7.19
3.500	3.46	0.35	0.564	O I | | | | |	7.44
3.583	3.79	0.35	0.586	O I | | | | |	7.72
3.667	3.96	0.35	0.611	O I | | | | |	8.03
3.750	4.22	0.42	0.636	O I | | | | |	8.52
3.833	4.38	0.50	0.663	O I | | | | |	9.02

3.917	4.64	0.83	0.689	O I				9.40
4.000	4.80	1.15	0.715	O I				9.77
4.083	5.06	1.68	0.739	O I				10.09
4.167	5.45	2.57	0.761	O I				10.32
4.250	5.87	3.34	0.779	O I				10.53
4.333	6.29	4.02	0.796	O I				10.71
4.417	6.71	4.63	0.811	O I				10.88
4.500	6.91	5.18	0.824	O I				11.02
4.583	7.16	5.70	0.835	O I				11.11
4.667	7.55	6.17	0.844	O I				11.20
4.750	7.97	6.61	0.854	O I				11.28
4.833	8.17	7.02	0.863	O I				11.36
4.917	8.42	7.38	0.870	O I				11.43
5.000	8.81	7.73	0.877	O I				11.49
5.083	10.12	8.22	0.888	O I				11.58
5.167	12.09	9.03	0.905	O I				11.73
5.250	13.75	10.12	0.928	O I				11.94
5.333	15.08	10.93	0.955	O I				12.14
5.417	16.78	11.69	0.986	O I				12.38
5.500	19.71	12.70	1.028	O I				12.68
5.583	13.10	13.26	1.052	O I				12.85
5.667	5.43	12.65	1.026	I O				12.67
5.750	2.34	11.31	0.971	I O				12.26
5.833	1.58	9.40	0.913	I O				11.80
5.917	1.12	7.14	0.865	I O				11.38
6.000	0.73	5.39	0.828	I O				11.06
6.083	0.28	4.15	0.799	I O				10.75
6.167	0.04	3.16	0.775	I O				10.48
6.250	0.00	2.38	0.756	I O				10.27
6.333	0.00	1.79	0.742	I O				10.12
6.417	0.00	1.35	0.731	I O				10.00
6.500	0.00	1.24	0.722	I O				9.87
6.583	0.00	1.14	0.714	IO				9.75
6.667	0.00	1.04	0.706	IO				9.65
6.750	0.00	0.96	0.699	IO				9.55
6.833	0.00	0.88	0.693	IO				9.46
6.917	0.00	0.81	0.687	IO				9.37
7.000	0.00	0.74	0.682	IO				9.30
7.083	0.00	0.68	0.677	IO				9.23
7.167	0.00	0.62	0.673	IO				9.16
7.250	0.00	0.57	0.668	O				9.11
7.333	0.00	0.53	0.665	O				9.05
7.417	0.00	0.48	0.661	O				9.00
7.500	0.00	0.47	0.658	O				8.94
7.583	0.00	0.46	0.655	O				8.88
7.667	0.00	0.46	0.651	O				8.82
7.750	0.00	0.45	0.648	O				8.76
7.833	0.00	0.44	0.645	O				8.70
7.917	0.00	0.43	0.642	O				8.64
8.000	0.00	0.43	0.639	O				8.58
8.083	0.00	0.42	0.636	O				8.53
8.167	0.00	0.41	0.634	O				8.47
8.250	0.00	0.40	0.631	O				8.42
8.333	0.00	0.40	0.628	O				8.37
8.417	0.00	0.39	0.625	O				8.31
8.500	0.00	0.38	0.623	O				8.26
8.583	0.00	0.38	0.620	O				8.21
8.667	0.00	0.37	0.617	O				8.16
8.750	0.00	0.36	0.615	O				8.11
8.833	0.00	0.36	0.612	O				8.07

8.917	0.00	0.35	0.610	O					8.02
9.000	0.00	0.35	0.608	O					7.98
9.083	0.00	0.35	0.605	O					7.95
9.167	0.00	0.35	0.603	O					7.92
9.250	0.00	0.35	0.600	O					7.89
9.333	0.00	0.35	0.598	O					7.86
9.417	0.00	0.35	0.595	O					7.83
9.500	0.00	0.35	0.593	O					7.80
9.583	0.00	0.35	0.591	O					7.77
9.667	0.00	0.35	0.588	O					7.74
9.750	0.00	0.35	0.586	O					7.71
9.833	0.00	0.35	0.583	O					7.68
9.917	0.00	0.35	0.581	O					7.65
10.000	0.00	0.35	0.579	O					7.63
10.083	0.00	0.35	0.576	O					7.60
10.167	0.00	0.35	0.574	O					7.57
10.250	0.00	0.35	0.571	O					7.54
10.333	0.00	0.35	0.569	O					7.51
10.417	0.00	0.35	0.567	O					7.48
10.500	0.00	0.35	0.564	O					7.45
10.583	0.00	0.35	0.562	O					7.42
10.667	0.00	0.35	0.559	O					7.39
10.750	0.00	0.35	0.557	O					7.36
10.833	0.00	0.35	0.555	O					7.33
10.917	0.00	0.35	0.552	O					7.30
11.000	0.00	0.35	0.550	O					7.27
11.083	0.00	0.35	0.547	O					7.24
11.167	0.00	0.35	0.545	O					7.21
11.250	0.00	0.35	0.542	O					7.18
11.333	0.00	0.35	0.540	O					7.15
11.417	0.00	0.35	0.538	O					7.12
11.500	0.00	0.35	0.535	O					7.09
11.583	0.00	0.35	0.533	O					7.06
11.667	0.00	0.35	0.530	O					7.03
11.750	0.00	0.35	0.528	O					7.00
11.833	0.00	0.35	0.526	O					6.97
11.917	0.00	0.35	0.523	O					6.94
12.000	0.00	0.35	0.521	O					6.91
12.083	0.00	0.35	0.518	O					6.88
12.167	0.00	0.35	0.516	O					6.85
12.250	0.00	0.35	0.514	O					6.82
12.333	0.00	0.35	0.511	O					6.79
12.417	0.00	0.35	0.509	O					6.76
12.500	0.00	0.35	0.506	O					6.73
12.583	0.00	0.35	0.504	O					6.70
12.667	0.00	0.35	0.501	O					6.67
12.750	0.00	0.35	0.499	O					6.64
12.833	0.00	0.35	0.497	O					6.61
12.917	0.00	0.35	0.494	O					6.58
13.000	0.00	0.35	0.492	O					6.55
13.083	0.00	0.35	0.489	O					6.53
13.167	0.00	0.35	0.487	O					6.50
13.250	0.00	0.35	0.485	O					6.47
13.333	0.00	0.35	0.482	O					6.44
13.417	0.00	0.35	0.480	O					6.41
13.500	0.00	0.35	0.477	O					6.38
13.583	0.00	0.35	0.475	O					6.35
13.667	0.00	0.35	0.473	O					6.32
13.750	0.00	0.35	0.470	O					6.29
13.833	0.00	0.35	0.468	O					6.26

13.917	0.00	0.35	0.465	O					6.23
14.000	0.00	0.35	0.463	O					6.20
14.083	0.00	0.35	0.460	O					6.17
14.167	0.00	0.35	0.458	O					6.14
14.250	0.00	0.35	0.456	O					6.11
14.333	0.00	0.35	0.453	O					6.08
14.417	0.00	0.35	0.451	O					6.05
14.500	0.00	0.35	0.448	O					6.02
14.583	0.00	0.35	0.446	O					5.99
14.667	0.00	0.35	0.444	O					5.96
14.750	0.00	0.35	0.441	O					5.93
14.833	0.00	0.35	0.439	O					5.90
14.917	0.00	0.35	0.436	O					5.87
15.000	0.00	0.35	0.434	O					5.84
15.083	0.00	0.35	0.432	O					5.81
15.167	0.00	0.35	0.429	O					5.78
15.250	0.00	0.35	0.427	O					5.75
15.333	0.00	0.35	0.424	O					5.72
15.417	0.00	0.35	0.422	O					5.69
15.500	0.00	0.35	0.420	O					5.66
15.583	0.00	0.35	0.417	O					5.63
15.667	0.00	0.35	0.415	O					5.60
15.750	0.00	0.35	0.412	O					5.57
15.833	0.00	0.35	0.410	O					5.54
15.917	0.00	0.35	0.407	O					5.51
16.000	0.00	0.35	0.405	O					5.48
16.083	0.00	0.35	0.403	O					5.45
16.167	0.00	0.35	0.400	O					5.43
16.250	0.00	0.35	0.398	O					5.40
16.333	0.00	0.35	0.395	O					5.37
16.417	0.00	0.35	0.393	O					5.34
16.500	0.00	0.35	0.391	O					5.31
16.583	0.00	0.35	0.388	O					5.28
16.667	0.00	0.35	0.386	O					5.25
16.750	0.00	0.35	0.383	O					5.22
16.833	0.00	0.35	0.381	O					5.19
16.917	0.00	0.35	0.379	O					5.16
17.000	0.00	0.35	0.376	O					5.13
17.083	0.00	0.35	0.374	O					5.10
17.167	0.00	0.35	0.371	O					5.07
17.250	0.00	0.35	0.369	O					5.04
17.333	0.00	0.35	0.366	O					5.01
17.417	0.00	0.35	0.364	O					4.98
17.500	0.00	0.35	0.362	O					4.95
17.583	0.00	0.35	0.359	O					4.92
17.667	0.00	0.35	0.357	O					4.89
17.750	0.00	0.35	0.354	O					4.86
17.833	0.00	0.35	0.352	O					4.83
17.917	0.00	0.35	0.350	O					4.80
18.000	0.00	0.35	0.347	O					4.77
18.083	0.00	0.35	0.345	O					4.74
18.167	0.00	0.35	0.342	O					4.71
18.250	0.00	0.35	0.340	O					4.68
18.333	0.00	0.35	0.338	O					4.65
18.417	0.00	0.35	0.335	O					4.62
18.500	0.00	0.35	0.333	O					4.59
18.583	0.00	0.35	0.330	O					4.56
18.667	0.00	0.35	0.328	O					4.53
18.750	0.00	0.35	0.326	O					4.50
18.833	0.00	0.35	0.323	O					4.47

18.917	0.00	0.35	0.321	O					4.44
19.000	0.00	0.35	0.318	O					4.41
19.083	0.00	0.35	0.316	O					4.38
19.167	0.00	0.35	0.313	O					4.35
19.250	0.00	0.35	0.311	O					4.33
19.333	0.00	0.35	0.309	O					4.30
19.417	0.00	0.35	0.306	O					4.27
19.500	0.00	0.35	0.304	O					4.24
19.583	0.00	0.35	0.301	O					4.21
19.667	0.00	0.35	0.299	O					4.18
19.750	0.00	0.35	0.297	O					4.15
19.833	0.00	0.35	0.294	O					4.12
19.917	0.00	0.35	0.292	O					4.09
20.000	0.00	0.35	0.289	O					4.06
20.083	0.00	0.35	0.287	O					4.03
20.167	0.00	0.35	0.285	O					4.00
20.250	0.00	0.35	0.282	O					3.97
20.333	0.00	0.35	0.280	O					3.94
20.417	0.00	0.35	0.277	O					3.91
20.500	0.00	0.35	0.275	O					3.88
20.583	0.00	0.35	0.272	O					3.85
20.667	0.00	0.35	0.270	O					3.82
20.750	0.00	0.35	0.268	O					3.79
20.833	0.00	0.35	0.265	O					3.76
20.917	0.00	0.35	0.263	O					3.73
21.000	0.00	0.35	0.260	O					3.70
21.083	0.00	0.35	0.258	O					3.67
21.167	0.00	0.35	0.256	O					3.64
21.250	0.00	0.35	0.253	O					3.61
21.333	0.00	0.35	0.251	O					3.58
21.417	0.00	0.35	0.248	O					3.55
21.500	0.00	0.35	0.246	O					3.52
21.583	0.00	0.35	0.244	O					3.49
21.667	0.00	0.35	0.241	O					3.46
21.750	0.00	0.35	0.239	O					3.43
21.833	0.00	0.35	0.236	O					3.40
21.917	0.00	0.35	0.234	O					3.37
22.000	0.00	0.35	0.232	O					3.34
22.083	0.00	0.35	0.229	O					3.31
22.167	0.00	0.35	0.227	O					3.28
22.250	0.00	0.35	0.224	O					3.25
22.333	0.00	0.35	0.222	O					3.23
22.417	0.00	0.35	0.219	O					3.20
22.500	0.00	0.35	0.217	O					3.17
22.583	0.00	0.35	0.215	O					3.14
22.667	0.00	0.35	0.212	O					3.11
22.750	0.00	0.35	0.210	O					3.08
22.833	0.00	0.35	0.207	O					3.05
22.917	0.00	0.35	0.205	O					3.02
23.000	0.00	0.35	0.203	O					2.99
23.083	0.00	0.35	0.200	O					2.96
23.167	0.00	0.35	0.198	O					2.93
23.250	0.00	0.35	0.195	O					2.90
23.333	0.00	0.35	0.193	O					2.87
23.417	0.00	0.35	0.191	O					2.84
23.500	0.00	0.35	0.188	O					2.81
23.583	0.00	0.35	0.186	O					2.78
23.667	0.00	0.35	0.183	O					2.75
23.750	0.00	0.35	0.181	O					2.72
23.833	0.00	0.35	0.178	O					2.69

23.917	0.00	0.35	0.176	O					2.66
24.000	0.00	0.35	0.174	O					2.63
24.083	0.00	0.35	0.171	O					2.60
24.167	0.00	0.35	0.169	O					2.57
24.250	0.00	0.35	0.166	O					2.54
24.333	0.00	0.35	0.164	O					2.51
24.417	0.00	0.35	0.162	O					2.48
24.500	0.00	0.35	0.159	O					2.45
24.583	0.00	0.35	0.157	O					2.42
24.667	0.00	0.35	0.154	O					2.39
24.750	0.00	0.35	0.152	O					2.36
24.833	0.00	0.35	0.150	O					2.33
24.917	0.00	0.35	0.147	O					2.30
25.000	0.00	0.35	0.145	O					2.27
25.083	0.00	0.35	0.142	O					2.24
25.167	0.00	0.35	0.140	O					2.21
25.250	0.00	0.35	0.137	O					2.18
25.333	0.00	0.35	0.135	O					2.15
25.417	0.00	0.35	0.133	O					2.12
25.500	0.00	0.35	0.130	O					2.10
25.583	0.00	0.35	0.128	O					2.07
25.667	0.00	0.35	0.125	O					2.04
25.750	0.00	0.35	0.123	O					2.01
25.833	0.00	0.35	0.121	O					1.98
25.917	0.00	0.35	0.118	O					1.95
26.000	0.00	0.35	0.116	O					1.92
26.083	0.00	0.35	0.113	O					1.89
26.167	0.00	0.35	0.111	O					1.86
26.250	0.00	0.35	0.109	O					1.83
26.333	0.00	0.35	0.106	O					1.80
26.417	0.00	0.35	0.104	O					1.77
26.500	0.00	0.35	0.101	O					1.74
26.583	0.00	0.35	0.099	O					1.71
26.667	0.00	0.35	0.097	O					1.68
26.750	0.00	0.35	0.094	O					1.65
26.833	0.00	0.35	0.092	O					1.62
26.917	0.00	0.35	0.089	O					1.59
27.000	0.00	0.35	0.087	O					1.56
27.083	0.00	0.35	0.084	O					1.53
27.167	0.00	0.35	0.082	O					1.50
27.250	0.00	0.34	0.080	O					1.46
27.333	0.00	0.33	0.077	O					1.42
27.417	0.00	0.32	0.075	O					1.37
27.500	0.00	0.31	0.073	O					1.33
27.583	0.00	0.30	0.071	O					1.30
27.667	0.00	0.29	0.069	O					1.26
27.750	0.00	0.29	0.067	O					1.22
27.833	0.00	0.28	0.065	O					1.19
27.917	0.00	0.27	0.063	O					1.15
28.000	0.00	0.26	0.061	O					1.12
28.083	0.00	0.25	0.059	O					1.09
28.167	0.00	0.25	0.058	O					1.05
28.250	0.00	0.24	0.056	O					1.02
28.333	0.00	0.23	0.054	O					0.99
28.417	0.00	0.23	0.053	O					0.97
28.500	0.00	0.22	0.051	O					0.94
28.583	0.00	0.21	0.050	O					0.91
28.667	0.00	0.21	0.048	O					0.88
28.750	0.00	0.20	0.047	O					0.86
28.833	0.00	0.19	0.046	O					0.83

28.917	0.00	0.19	0.044	O					0.81
29.000	0.00	0.18	0.043	O					0.79
29.083	0.00	0.18	0.042	O					0.76
29.167	0.00	0.17	0.041	O					0.74
29.250	0.00	0.17	0.039	O					0.72
29.333	0.00	0.16	0.038	O					0.70
29.417	0.00	0.16	0.037	O					0.68
29.500	0.00	0.15	0.036	O					0.66
29.583	0.00	0.15	0.035	O					0.64
29.667	0.00	0.14	0.034	O					0.62
29.750	0.00	0.14	0.033	O					0.60
29.833	0.00	0.14	0.032	O					0.59
29.917	0.00	0.13	0.031	O					0.57
30.000	0.00	0.13	0.030	O					0.55
30.083	0.00	0.13	0.029	O					0.54
30.167	0.00	0.12	0.028	O					0.52
30.250	0.00	0.12	0.028	O					0.51
30.333	0.00	0.11	0.027	O					0.49
30.417	0.00	0.11	0.026	O					0.48
30.500	0.00	0.11	0.025	O					0.46
30.583	0.00	0.10	0.025	O					0.45
30.667	0.00	0.10	0.024	O					0.44
30.750	0.00	0.10	0.023	O					0.42
30.833	0.00	0.10	0.023	O					0.41
30.917	0.00	0.09	0.022	O					0.40
31.000	0.00	0.09	0.021	O					0.39
31.083	0.00	0.09	0.021	O					0.38
31.167	0.00	0.09	0.020	O					0.37
31.250	0.00	0.08	0.019	O					0.36
31.333	0.00	0.08	0.019	O					0.35
31.417	0.00	0.08	0.018	O					0.34
31.500	0.00	0.08	0.018	O					0.33
31.583	0.00	0.07	0.017	O					0.32
31.667	0.00	0.07	0.017	O					0.31
31.750	0.00	0.07	0.016	O					0.30
31.833	0.00	0.07	0.016	O					0.29
31.917	0.00	0.07	0.015	O					0.28
32.000	0.00	0.06	0.015	O					0.27
32.083	0.00	0.06	0.014	O					0.26
32.167	0.00	0.06	0.014	O					0.26
32.250	0.00	0.06	0.014	O					0.25
32.333	0.00	0.06	0.013	O					0.24
32.417	0.00	0.05	0.013	O					0.24
32.500	0.00	0.05	0.013	O					0.23
32.583	0.00	0.05	0.012	O					0.22
32.667	0.00	0.05	0.012	O					0.22
32.750	0.00	0.05	0.011	O					0.21
32.833	0.00	0.05	0.011	O					0.20
32.917	0.00	0.05	0.011	O					0.20
33.000	0.00	0.04	0.010	O					0.19
33.083	0.00	0.04	0.010	O					0.19
33.167	0.00	0.04	0.010	O					0.18
33.250	0.00	0.04	0.010	O					0.18
33.333	0.00	0.04	0.009	O					0.17
33.417	0.00	0.04	0.009	O					0.17
33.500	0.00	0.04	0.009	O					0.16
33.583	0.00	0.04	0.009	O					0.16
33.667	0.00	0.04	0.008	O					0.15
33.750	0.00	0.03	0.008	O					0.15
33.833	0.00	0.03	0.008	O					0.14

33.917	0.00	0.03	0.008	O	|	|	|	0.14
34.000	0.00	0.03	0.007	O	|	|	|	0.13
34.083	0.00	0.03	0.007	O	|	|	|	0.13
34.167	0.00	0.03	0.007	O	|	|	|	0.13
34.250	0.00	0.03	0.007	O	|	|	|	0.12
34.333	0.00	0.03	0.007	O	|	|	|	0.12
34.417	0.00	0.03	0.006	O	|	|	|	0.12
34.500	0.00	0.03	0.006	O	|	|	|	0.11
34.583	0.00	0.03	0.006	O	|	|	|	0.11
34.667	0.00	0.02	0.006	O	|	|	|	0.11
34.750	0.00	0.02	0.006	O	|	|	|	0.10
34.833	0.00	0.02	0.005	O	|	|	|	0.10
34.917	0.00	0.02	0.005	O	|	|	|	0.10
35.000	0.00	0.02	0.005	O	|	|	|	0.09
35.083	0.00	0.02	0.005	O	|	|	|	0.09
35.167	0.00	0.02	0.005	O	|	|	|	0.09
35.250	0.00	0.02	0.005	O	|	|	|	0.09
35.333	0.00	0.02	0.005	O	|	|	|	0.08
35.417	0.00	0.02	0.004	O	|	|	|	0.08
35.500	0.00	0.02	0.004	O	|	|	|	0.08
35.583	0.00	0.02	0.004	O	|	|	|	0.08
35.667	0.00	0.02	0.004	O	|	|	|	0.07
35.750	0.00	0.02	0.004	O	|	|	|	0.07
35.833	0.00	0.02	0.004	O	|	|	|	0.07
35.917	0.00	0.02	0.004	O	|	|	|	0.07
36.000	0.00	0.02	0.004	O	|	|	|	0.07
36.083	0.00	0.02	0.004	O	|	|	|	0.06
36.167	0.00	0.01	0.003	O	|	|	|	0.06
36.250	0.00	0.01	0.003	O	|	|	|	0.06
36.333	0.00	0.01	0.003	O	|	|	|	0.06
36.417	0.00	0.01	0.003	O	|	|	|	0.06
36.500	0.00	0.01	0.003	O	|	|	|	0.06
36.583	0.00	0.01	0.003	O	|	|	|	0.05
36.667	0.00	0.01	0.003	O	|	|	|	0.05
36.750	0.00	0.01	0.003	O	|	|	|	0.05
36.833	0.00	0.01	0.003	O	|	|	|	0.05
36.917	0.00	0.01	0.003	O	|	|	|	0.05
37.000	0.00	0.01	0.003	O	|	|	|	0.05
37.083	0.00	0.01	0.002	O	|	|	|	0.05
37.167	0.00	0.01	0.002	O	|	|	|	0.04
37.250	0.00	0.01	0.002	O	|	|	|	0.04
37.333	0.00	0.01	0.002	O	|	|	|	0.04
37.417	0.00	0.01	0.002	O	|	|	|	0.04
37.500	0.00	0.01	0.002	O	|	|	|	0.04
37.583	0.00	0.01	0.002	O	|	|	|	0.04
37.667	0.00	0.01	0.002	O	|	|	|	0.04
37.750	0.00	0.01	0.002	O	|	|	|	0.04
37.833	0.00	0.01	0.002	O	|	|	|	0.03
37.917	0.00	0.01	0.002	O	|	|	|	0.03
38.000	0.00	0.01	0.002	O	|	|	|	0.03
38.083	0.00	0.01	0.002	O	|	|	|	0.03
38.167	0.00	0.01	0.002	O	|	|	|	0.03
38.250	0.00	0.01	0.002	O	|	|	|	0.03
38.333	0.00	0.01	0.002	O	|	|	|	0.03
38.417	0.00	0.01	0.002	O	|	|	|	0.03
38.500	0.00	0.01	0.002	O	|	|	|	0.03
38.583	0.00	0.01	0.001	O	|	|	|	0.03
38.667	0.00	0.01	0.001	O	|	|	|	0.03
38.750	0.00	0.01	0.001	O	|	|	|	0.03
38.833	0.00	0.01	0.001	O	|	|	|	0.02

38.917	0.00	0.01	0.001	O	|	|	|	0.02
39.000	0.00	0.01	0.001	O	|	|	|	0.02
39.083	0.00	0.01	0.001	O	|	|	|	0.02
39.167	0.00	0.01	0.001	O	|	|	|	0.02
39.250	0.00	0.00	0.001	O	|	|	|	0.02
39.333	0.00	0.00	0.001	O	|	|	|	0.02
39.417	0.00	0.00	0.001	O	|	|	|	0.02
39.500	0.00	0.00	0.001	O	|	|	|	0.02
39.583	0.00	0.00	0.001	O	|	|	|	0.02
39.667	0.00	0.00	0.001	O	|	|	|	0.02
39.750	0.00	0.00	0.001	O	|	|	|	0.02
39.833	0.00	0.00	0.001	O	|	|	|	0.02
39.917	0.00	0.00	0.001	O	|	|	|	0.02
40.000	0.00	0.00	0.001	O	|	|	|	0.02
40.083	0.00	0.00	0.001	O	|	|	|	0.02
40.167	0.00	0.00	0.001	O	|	|	|	0.02
40.250	0.00	0.00	0.001	O	|	|	|	0.01
40.333	0.00	0.00	0.001	O	|	|	|	0.01
40.417	0.00	0.00	0.001	O	|	|	|	0.01
40.500	0.00	0.00	0.001	O	|	|	|	0.01
40.583	0.00	0.00	0.001	O	|	|	|	0.01
40.667	0.00	0.00	0.001	O	|	|	|	0.01
40.750	0.00	0.00	0.001	O	|	|	|	0.01
40.833	0.00	0.00	0.001	O	|	|	|	0.01
40.917	0.00	0.00	0.001	O	|	|	|	0.01
41.000	0.00	0.00	0.001	O	|	|	|	0.01
41.083	0.00	0.00	0.001	O	|	|	|	0.01
41.167	0.00	0.00	0.001	O	|	|	|	0.01
41.250	0.00	0.00	0.001	O	|	|	|	0.01
41.333	0.00	0.00	0.001	O	|	|	|	0.01
41.417	0.00	0.00	0.001	O	|	|	|	0.01
41.500	0.00	0.00	0.001	O	|	|	|	0.01
41.583	0.00	0.00	0.001	O	|	|	|	0.01
41.667	0.00	0.00	0.000	O	|	|	|	0.01
41.750	0.00	0.00	0.000	O	|	|	|	0.01
41.833	0.00	0.00	0.000	O	|	|	|	0.01
41.917	0.00	0.00	0.000	O	|	|	|	0.01
42.000	0.00	0.00	0.000	O	|	|	|	0.01
42.083	0.00	0.00	0.000	O	|	|	|	0.01
42.167	0.00	0.00	0.000	O	|	|	|	0.01
42.250	0.00	0.00	0.000	O	|	|	|	0.01
42.333	0.00	0.00	0.000	O	|	|	|	0.01
42.417	0.00	0.00	0.000	O	|	|	|	0.01
42.500	0.00	0.00	0.000	O	|	|	|	0.01
42.583	0.00	0.00	0.000	O	|	|	|	0.01
42.667	0.00	0.00	0.000	O	|	|	|	0.01
42.750	0.00	0.00	0.000	O	|	|	|	0.01
42.833	0.00	0.00	0.000	O	|	|	|	0.01
42.917	0.00	0.00	0.000	O	|	|	|	0.01
43.000	0.00	0.00	0.000	O	|	|	|	0.01
43.083	0.00	0.00	0.000	O	|	|	|	0.01
43.167	0.00	0.00	0.000	O	|	|	|	0.01
43.250	0.00	0.00	0.000	O	|	|	|	0.01
43.333	0.00	0.00	0.000	O	|	|	|	0.01
43.417	0.00	0.00	0.000	O	|	|	|	0.00
43.500	0.00	0.00	0.000	O	|	|	|	0.00
43.583	0.00	0.00	0.000	O	|	|	|	0.00
43.667	0.00	0.00	0.000	O	|	|	|	0.00
43.750	0.00	0.00	0.000	O	|	|	|	0.00
43.833	0.00	0.00	0.000	O	|	|	|	0.00

```
**************************HYDROGRAPH DATA**************************
           Number of intervals =   526
           Time interval =    5.0 (Min.)
           Maximum/Peak flow rate =       13.263 (CFS)
           Total volume =       2.196 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA B
100-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEB.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.545 (CFS)
Total volume = 3.451 (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 22.000 to Point/Station 22.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.082	0.350	0.081	0.083
8.000	0.609	0.350	0.608	0.610
9.000	0.661	0.480	0.659	0.663

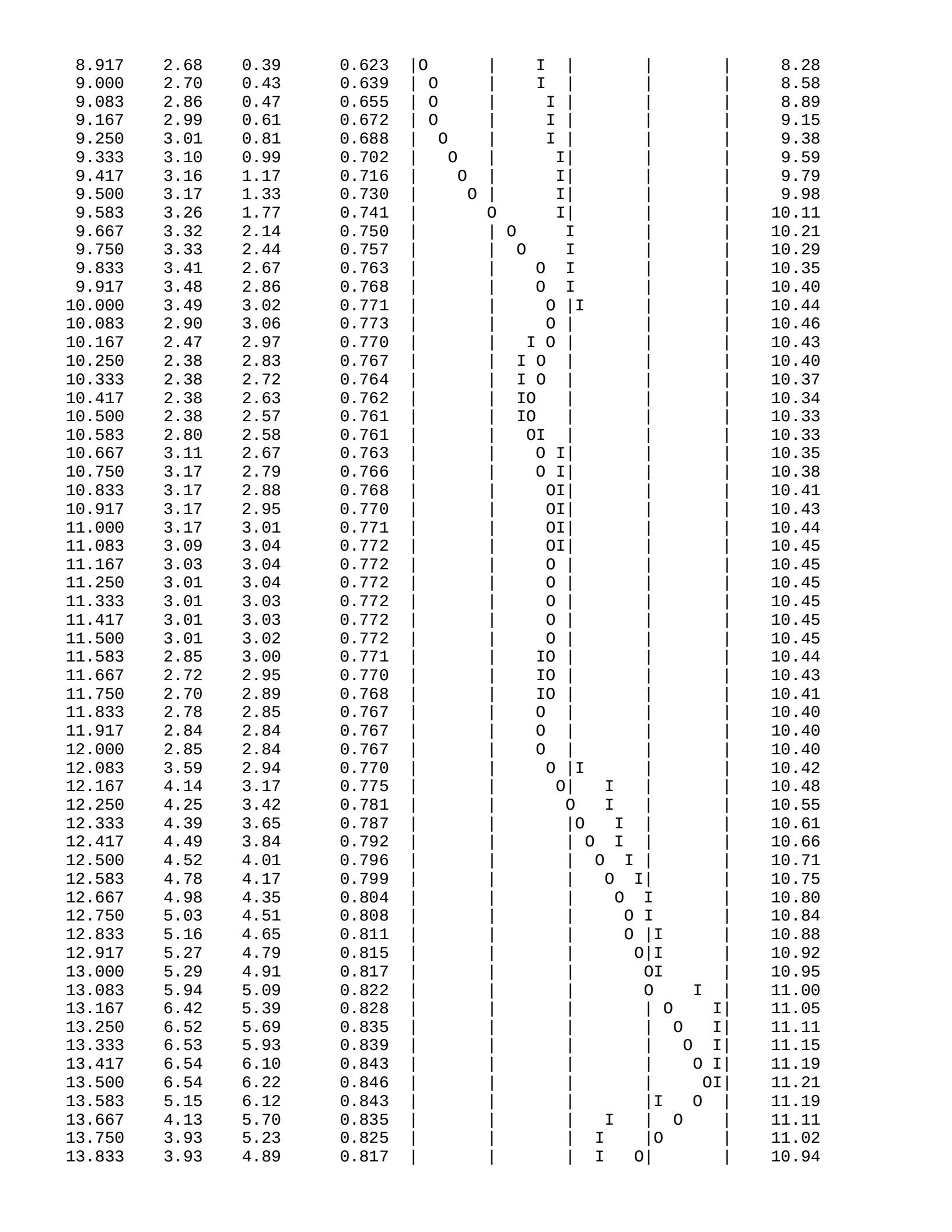
10.000	0.731	1.350	0.726	0.736
11.000	0.822	5.100	0.804	0.840
12.000	0.935	10.460	0.899	0.971
13.000	1.072	13.750	1.025	1.119
14.000	1.234	16.320	1.178	1.290
14.500	1.326	17.460	1.266	1.386

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.6 3.27 4.91 6.54	Depth (Ft.)
0.083	0.17	0.00	0.001	O | | | |	0.01
0.167	0.29	0.01	0.002	OI | | | |	0.04
0.250	0.32	0.02	0.004	OI | | | |	0.08
0.333	0.40	0.03	0.006	OI | | | |	0.12
0.417	0.46	0.04	0.009	O I | | | |	0.17
0.500	0.48	0.05	0.012	O I | | | |	0.22
0.583	0.48	0.06	0.015	O I | | | |	0.27
0.667	0.48	0.08	0.018	O I | | | |	0.33
0.750	0.48	0.09	0.020	O I | | | |	0.37
0.833	0.56	0.10	0.023	O I | | | |	0.43
0.917	0.62	0.11	0.027	O I | | | |	0.49
1.000	0.63	0.13	0.030	O I | | | |	0.55
1.083	0.55	0.14	0.033	O I | | | |	0.61
1.167	0.49	0.15	0.036	O I | | | |	0.66
1.250	0.48	0.16	0.038	O I | | | |	0.70
1.333	0.48	0.17	0.040	O I | | | |	0.74
1.417	0.48	0.18	0.042	O I | | | |	0.77
1.500	0.48	0.19	0.044	O I | | | |	0.81
1.583	0.48	0.20	0.046	O I | | | |	0.85
1.667	0.48	0.21	0.048	|OI | | | |	0.88
1.750	0.48	0.21	0.050	|OI | | | |	0.92
1.833	0.56	0.22	0.052	|OI | | | |	0.95
1.917	0.62	0.23	0.055	|O I | | | |	1.00
2.000	0.63	0.24	0.057	|O I | | | |	1.05
2.083	0.63	0.26	0.060	|O I | | | |	1.10
2.167	0.63	0.27	0.062	|O I | | | |	1.14
2.250	0.63	0.28	0.065	|O I | | | |	1.19
2.333	0.63	0.29	0.067	|O I | | | |	1.23
2.417	0.63	0.30	0.070	|O I | | | |	1.28
2.500	0.63	0.31	0.072	|O I | | | |	1.32
2.583	0.72	0.32	0.075	|O I | | | |	1.36
2.667	0.78	0.33	0.077	|O I | | | |	1.42
2.750	0.79	0.34	0.081	|O I | | | |	1.47
2.833	0.79	0.35	0.084	|O I | | | |	1.52
2.917	0.79	0.35	0.087	|O I | | | |	1.56
3.000	0.79	0.35	0.090	|O I | | | |	1.60
3.083	0.79	0.35	0.093	|O I | | | |	1.63
3.167	0.79	0.35	0.096	|O I | | | |	1.67
3.250	0.79	0.35	0.099	|O I | | | |	1.71
3.333	0.79	0.35	0.102	|O I | | | |	1.75
3.417	0.79	0.35	0.105	|O I | | | |	1.78
3.500	0.79	0.35	0.108	|O I | | | |	1.82
3.583	0.79	0.35	0.111	|O I | | | |	1.86
3.667	0.79	0.35	0.114	|O I | | | |	1.90
3.750	0.79	0.35	0.117	|O I | | | |	1.93
3.833	0.88	0.35	0.121	|O I | | | |	1.98

3.917	0.94	0.35	0.124	O	I				2.02
4.000	0.95	0.35	0.128	O	I				2.07
4.083	0.95	0.35	0.133	O	I				2.12
4.167	0.95	0.35	0.137	O	I				2.18
4.250	0.95	0.35	0.141	O	I				2.23
4.333	1.04	0.35	0.145	O	I				2.28
4.417	1.10	0.35	0.150	O	I				2.34
4.500	1.11	0.35	0.155	O	I				2.41
4.583	1.11	0.35	0.161	O	I				2.47
4.667	1.11	0.35	0.166	O	I				2.54
4.750	1.11	0.35	0.171	O	I				2.60
4.833	1.19	0.35	0.177	O	I				2.67
4.917	1.26	0.35	0.183	O	I				2.74
5.000	1.27	0.35	0.189	O	I				2.82
5.083	1.10	0.35	0.195	O	I				2.89
5.167	0.98	0.35	0.200	O	I				2.95
5.250	0.95	0.35	0.204	O	I				3.00
5.333	1.04	0.35	0.208	O	I				3.06
5.417	1.10	0.35	0.213	O	I				3.12
5.500	1.11	0.35	0.218	O	I				3.18
5.583	1.19	0.35	0.224	O	I				3.25
5.667	1.26	0.35	0.230	O	I				3.32
5.750	1.27	0.35	0.236	O	I				3.40
5.833	1.27	0.35	0.242	O	I				3.48
5.917	1.27	0.35	0.249	O	I				3.56
6.000	1.27	0.35	0.255	O	I				3.64
6.083	1.35	0.35	0.262	O	I				3.72
6.167	1.41	0.35	0.269	O	I				3.80
6.250	1.43	0.35	0.276	O	I				3.90
6.333	1.43	0.35	0.284	O	I				3.99
6.417	1.43	0.35	0.291	O	I				4.08
6.500	1.43	0.35	0.298	O	I				4.17
6.583	1.51	0.35	0.306	O	I				4.27
6.667	1.57	0.35	0.314	O	I				4.37
6.750	1.59	0.35	0.323	O	I				4.47
6.833	1.59	0.35	0.331	O	I				4.58
6.917	1.59	0.35	0.340	O	I				4.68
7.000	1.59	0.35	0.348	O	I				4.79
7.083	1.59	0.35	0.357	O	I				4.89
7.167	1.59	0.35	0.365	O	I				5.00
7.250	1.59	0.35	0.374	O	I				5.10
7.333	1.67	0.35	0.383	O	I				5.21
7.417	1.73	0.35	0.392	O	I				5.32
7.500	1.74	0.35	0.402	O	I				5.44
7.583	1.83	0.35	0.412	O	I				5.56
7.667	1.89	0.35	0.422	O	I				5.69
7.750	1.90	0.35	0.433	O	I				5.82
7.833	1.99	0.35	0.444	O	I				5.96
7.917	2.05	0.35	0.455	O	I				6.10
8.000	2.06	0.35	0.467	O	I				6.25
8.083	2.23	0.35	0.479	O	I				6.40
8.167	2.35	0.35	0.493	O	I				6.56
8.250	2.38	0.35	0.506	O	I				6.73
8.333	2.38	0.35	0.520	O	I				6.91
8.417	2.38	0.35	0.534	O	I				7.08
8.500	2.38	0.35	0.548	O	I				7.25
8.583	2.46	0.35	0.563	O	I				7.43
8.667	2.52	0.35	0.577	O	I				7.61
8.750	2.54	0.35	0.592	O	I				7.80
8.833	2.62	0.35	0.608	O	I				7.98



13.917	3.94	4.66	0.811	|	|	| I O |	|	10.88
14.000	3.95	4.48	0.807	|	|	| I O |	|	10.83
14.083	4.47	4.41	0.805	|	|	| O |	|	10.82
14.167	4.85	4.47	0.807	|	|	| O I|	|	10.83
14.250	4.94	4.58	0.809	|	|	| O I	|	10.86
14.333	4.82	4.65	0.811	|	|	| OI|	|	10.88
14.417	4.73	4.68	0.812	|	|	| OI|	|	10.89
14.500	4.72	4.69	0.812	|	|	| OI|	|	10.89
14.583	4.73	4.70	0.812	|	|	| OI|	|	10.89
14.667	4.73	4.71	0.812	|	|	| O|	|	10.90
14.750	4.74	4.72	0.813	|	|	| O|	|	10.90
14.833	4.62	4.71	0.812	|	|	| IO|	|	10.90
14.917	4.54	4.68	0.812	|	|	| O |	|	10.89
15.000	4.53	4.64	0.811	|	|	| O |	|	10.88
15.083	4.41	4.60	0.810	|	|	| IO |	|	10.87
15.167	4.32	4.54	0.808	|	|	| IO |	|	10.85
15.250	4.31	4.48	0.807	|	|	| O |	|	10.84
15.333	4.19	4.42	0.806	|	|	| IO |	|	10.82
15.417	4.10	4.35	0.804	|	|	| IO |	|	10.80
15.500	4.09	4.29	0.802	|	|	| IO |	|	10.78
15.583	3.59	4.18	0.800	|	|	I O |	|	10.75
15.667	3.22	3.99	0.795	|	| I	O |	|	10.70
15.750	3.15	3.79	0.790	|	| I	O |	|	10.65
15.833	3.16	3.63	0.786	|	| I	O |	|	10.61
15.917	3.16	3.51	0.783	|	| I	O |	|	10.58
16.000	3.17	3.43	0.781	|	| IO	|	|	10.55
16.083	1.83	3.20	0.776	|	I	O |	|	|	10.49
16.167	0.84	2.73	0.765	| I |	| O |	|	|	|	10.37
16.250	0.63	2.24	0.753	| I |	O |	|	|	|	10.24
16.333	0.63	1.84	0.743	| I	O |	|	|	|	10.13
16.417	0.63	1.54	0.736	| I	O |	|	|	|	10.05
16.500	0.63	1.34	0.730	| I O |	|	|	|	|	9.99
16.583	0.55	1.28	0.725	| I	O |	|	|	|	9.92
16.667	0.49	1.21	0.720	| I O |	|	|	|	|	9.84
16.750	0.48	1.15	0.715	| I O |	|	|	|	|	9.78
16.833	0.48	1.10	0.711	| I O |	|	|	|	|	9.71
16.917	0.48	1.05	0.707	| I O |	|	|	|	|	9.65
17.000	0.48	1.00	0.703	| I O	|	|	|	|	9.60
17.083	0.64	0.96	0.700	| IO	|	|	|	|	9.56
17.167	0.77	0.94	0.698	| IO	|	|	|	|	9.53
17.250	0.79	0.93	0.697	| IO	|	|	|	|	9.52
17.333	0.79	0.92	0.696	| IO	|	|	|	|	9.50
17.417	0.79	0.91	0.695	| IO	|	|	|	|	9.49
17.500	0.79	0.90	0.695	| IO	|	|	|	|	9.48
17.583	0.79	0.89	0.694	| IO	|	|	|	|	9.47
17.667	0.79	0.88	0.693	| IO	|	|	|	|	9.46
17.750	0.79	0.87	0.693	| IO	|	|	|	|	9.45
17.833	0.71	0.86	0.692	| IO	|	|	|	|	9.44
17.917	0.65	0.85	0.691	| IO	|	|	|	|	9.42
18.000	0.63	0.83	0.689	| IO	|	|	|	|	9.40
18.083	0.63	0.82	0.688	| O	|	|	|	|	9.39
18.167	0.63	0.80	0.687	| O	|	|	|	|	9.37
18.250	0.63	0.79	0.686	| O	|	|	|	|	9.35
18.333	0.63	0.77	0.685	| O	|	|	|	|	9.34
18.417	0.63	0.76	0.684	| O	|	|	|	|	9.33
18.500	0.63	0.75	0.683	| O	|	|	|	|	9.31
18.583	0.55	0.74	0.682	| IO	|	|	|	|	9.30
18.667	0.49	0.72	0.680	| IO	|	|	|	|	9.28
18.750	0.48	0.70	0.679	| IO	|	|	|	|	9.26
18.833	0.39	0.68	0.677	|I O	|	|	|	|	9.23

18.917	0.33	0.65	0.675	I O				9.20
19.000	0.32	0.63	0.673	I O				9.17
19.083	0.40	0.60	0.671	IO				9.14
19.167	0.46	0.59	0.670	O				9.13
19.250	0.48	0.58	0.669	O				9.12
19.333	0.56	0.58	0.669	O				9.11
19.417	0.62	0.58	0.669	OI				9.11
19.500	0.63	0.58	0.669	OI				9.12
19.583	0.55	0.58	0.669	O				9.12
19.667	0.49	0.58	0.669	O				9.11
19.750	0.48	0.57	0.668	O				9.10
19.833	0.39	0.56	0.667	IO				9.09
19.917	0.33	0.54	0.666	IO				9.07
20.000	0.32	0.52	0.665	IO				9.05
20.083	0.40	0.51	0.663	IO				9.03
20.167	0.46	0.50	0.663	O				9.03
20.250	0.48	0.50	0.663	O				9.02
20.333	0.48	0.50	0.663	O				9.02
20.417	0.48	0.50	0.662	O				9.02
20.500	0.48	0.50	0.662	O				9.02
20.583	0.48	0.49	0.662	O				9.02
20.667	0.48	0.49	0.662	O				9.01
20.750	0.48	0.49	0.662	O				9.01
20.833	0.39	0.49	0.661	IO				9.01
20.917	0.33	0.48	0.661	IO				8.99
21.000	0.32	0.48	0.660	IO				8.97
21.083	0.40	0.47	0.659	IO				8.96
21.167	0.46	0.47	0.659	O				8.95
21.250	0.48	0.47	0.658	O				8.95
21.333	0.39	0.47	0.658	IO				8.95
21.417	0.33	0.47	0.657	IO				8.93
21.500	0.32	0.47	0.656	IO				8.91
21.583	0.40	0.47	0.656	IO				8.90
21.667	0.46	0.47	0.655	O				8.89
21.750	0.48	0.47	0.655	O				8.89
21.833	0.39	0.47	0.655	IO				8.89
21.917	0.33	0.46	0.655	IO				8.88
22.000	0.32	0.46	0.654	IO				8.86
22.083	0.40	0.46	0.653	IO				8.84
22.167	0.46	0.46	0.653	O				8.84
22.250	0.48	0.46	0.653	O				8.84
22.333	0.39	0.46	0.653	IO				8.84
22.417	0.33	0.46	0.652	IO				8.83
22.500	0.32	0.46	0.651	IO				8.81
22.583	0.32	0.45	0.650	IO				8.79
22.667	0.32	0.45	0.649	IO				8.77
22.750	0.32	0.45	0.648	IO				8.75
22.833	0.32	0.45	0.647	IO				8.74
22.917	0.32	0.44	0.646	IO				8.72
23.000	0.32	0.44	0.646	IO				8.70
23.083	0.32	0.44	0.645	IO				8.69
23.167	0.32	0.44	0.644	IO				8.67
23.250	0.32	0.44	0.643	IO				8.66
23.333	0.32	0.43	0.642	IO				8.64
23.417	0.32	0.43	0.641	IO				8.62
23.500	0.32	0.43	0.641	IO				8.61
23.583	0.32	0.43	0.640	IO				8.60
23.667	0.32	0.43	0.639	IO				8.58
23.750	0.32	0.42	0.638	IO				8.57
23.833	0.32	0.42	0.638	IO				8.55

23.917	0.32	0.42	0.637	|IO	|	|	|	8.54
24.000	0.32	0.42	0.636	|IO	|	|	|	8.53
24.083	0.15	0.42	0.635	I O	|	|	|	8.50
24.167	0.03	0.41	0.633	I O	|	|	|	8.46
24.250	0.00	0.40	0.630	IO	|	|	|	8.41
24.333	0.00	0.40	0.627	IO	|	|	|	8.35
24.417	0.00	0.39	0.625	IO	|	|	|	8.30
24.500	0.00	0.38	0.622	IO	|	|	|	8.25
24.583	0.00	0.38	0.619	IO	|	|	|	8.20
24.667	0.00	0.37	0.617	IO	|	|	|	8.15
24.750	0.00	0.36	0.614	IO	|	|	|	8.10
24.833	0.00	0.36	0.612	IO	|	|	|	8.05
24.917	0.00	0.35	0.609	IO	|	|	|	8.01
25.000	0.00	0.35	0.607	IO	|	|	|	7.97
25.083	0.00	0.35	0.605	IO	|	|	|	7.95
25.167	0.00	0.35	0.602	IO	|	|	|	7.92
25.250	0.00	0.35	0.600	IO	|	|	|	7.89
25.333	0.00	0.35	0.597	IO	|	|	|	7.86
25.417	0.00	0.35	0.595	IO	|	|	|	7.83
25.500	0.00	0.35	0.592	IO	|	|	|	7.80
25.583	0.00	0.35	0.590	IO	|	|	|	7.77
25.667	0.00	0.35	0.588	IO	|	|	|	7.74
25.750	0.00	0.35	0.585	IO	|	|	|	7.71
25.833	0.00	0.35	0.583	IO	|	|	|	7.68
25.917	0.00	0.35	0.580	IO	|	|	|	7.65
26.000	0.00	0.35	0.578	IO	|	|	|	7.62
26.083	0.00	0.35	0.576	IO	|	|	|	7.59
26.167	0.00	0.35	0.573	IO	|	|	|	7.56
26.250	0.00	0.35	0.571	IO	|	|	|	7.53
26.333	0.00	0.35	0.568	IO	|	|	|	7.50
26.417	0.00	0.35	0.566	IO	|	|	|	7.47
26.500	0.00	0.35	0.564	IO	|	|	|	7.44
26.583	0.00	0.35	0.561	IO	|	|	|	7.41
26.667	0.00	0.35	0.559	IO	|	|	|	7.38
26.750	0.00	0.35	0.556	IO	|	|	|	7.35
26.833	0.00	0.35	0.554	IO	|	|	|	7.32
26.917	0.00	0.35	0.552	IO	|	|	|	7.29
27.000	0.00	0.35	0.549	IO	|	|	|	7.26
27.083	0.00	0.35	0.547	IO	|	|	|	7.23
27.167	0.00	0.35	0.544	IO	|	|	|	7.20
27.250	0.00	0.35	0.542	IO	|	|	|	7.17
27.333	0.00	0.35	0.539	IO	|	|	|	7.14
27.417	0.00	0.35	0.537	IO	|	|	|	7.11
27.500	0.00	0.35	0.535	IO	|	|	|	7.08
27.583	0.00	0.35	0.532	IO	|	|	|	7.05
27.667	0.00	0.35	0.530	IO	|	|	|	7.02
27.750	0.00	0.35	0.527	IO	|	|	|	6.99
27.833	0.00	0.35	0.525	IO	|	|	|	6.96
27.917	0.00	0.35	0.523	IO	|	|	|	6.93
28.000	0.00	0.35	0.520	IO	|	|	|	6.90
28.083	0.00	0.35	0.518	IO	|	|	|	6.87
28.167	0.00	0.35	0.515	IO	|	|	|	6.84
28.250	0.00	0.35	0.513	IO	|	|	|	6.82
28.333	0.00	0.35	0.511	IO	|	|	|	6.79
28.417	0.00	0.35	0.508	IO	|	|	|	6.76
28.500	0.00	0.35	0.506	IO	|	|	|	6.73
28.583	0.00	0.35	0.503	IO	|	|	|	6.70
28.667	0.00	0.35	0.501	IO	|	|	|	6.67
28.750	0.00	0.35	0.498	IO	|	|	|	6.64
28.833	0.00	0.35	0.496	IO	|	|	|	6.61

28.917	0.00	0.35	0.494	IO				6.58
29.000	0.00	0.35	0.491	IO				6.55
29.083	0.00	0.35	0.489	IO				6.52
29.167	0.00	0.35	0.486	IO				6.49
29.250	0.00	0.35	0.484	IO				6.46
29.333	0.00	0.35	0.482	IO				6.43
29.417	0.00	0.35	0.479	IO				6.40
29.500	0.00	0.35	0.477	IO				6.37
29.583	0.00	0.35	0.474	IO				6.34
29.667	0.00	0.35	0.472	IO				6.31
29.750	0.00	0.35	0.470	IO				6.28
29.833	0.00	0.35	0.467	IO				6.25
29.917	0.00	0.35	0.465	IO				6.22
30.000	0.00	0.35	0.462	IO				6.19
30.083	0.00	0.35	0.460	IO				6.16
30.167	0.00	0.35	0.458	IO				6.13
30.250	0.00	0.35	0.455	IO				6.10
30.333	0.00	0.35	0.453	IO				6.07
30.417	0.00	0.35	0.450	IO				6.04
30.500	0.00	0.35	0.448	IO				6.01
30.583	0.00	0.35	0.445	IO				5.98
30.667	0.00	0.35	0.443	IO				5.95
30.750	0.00	0.35	0.441	IO				5.92
30.833	0.00	0.35	0.438	IO				5.89
30.917	0.00	0.35	0.436	IO				5.86
31.000	0.00	0.35	0.433	IO				5.83
31.083	0.00	0.35	0.431	IO				5.80
31.167	0.00	0.35	0.429	IO				5.77
31.250	0.00	0.35	0.426	IO				5.74
31.333	0.00	0.35	0.424	IO				5.72
31.417	0.00	0.35	0.421	IO				5.69
31.500	0.00	0.35	0.419	IO				5.66
31.583	0.00	0.35	0.417	IO				5.63
31.667	0.00	0.35	0.414	IO				5.60
31.750	0.00	0.35	0.412	IO				5.57
31.833	0.00	0.35	0.409	IO				5.54
31.917	0.00	0.35	0.407	IO				5.51
32.000	0.00	0.35	0.404	IO				5.48
32.083	0.00	0.35	0.402	IO				5.45
32.167	0.00	0.35	0.400	IO				5.42
32.250	0.00	0.35	0.397	IO				5.39
32.333	0.00	0.35	0.395	IO				5.36
32.417	0.00	0.35	0.392	IO				5.33
32.500	0.00	0.35	0.390	IO				5.30
32.583	0.00	0.35	0.388	IO				5.27
32.667	0.00	0.35	0.385	IO				5.24
32.750	0.00	0.35	0.383	IO				5.21
32.833	0.00	0.35	0.380	IO				5.18
32.917	0.00	0.35	0.378	IO				5.15
33.000	0.00	0.35	0.376	IO				5.12
33.083	0.00	0.35	0.373	IO				5.09
33.167	0.00	0.35	0.371	IO				5.06
33.250	0.00	0.35	0.368	IO				5.03
33.333	0.00	0.35	0.366	IO				5.00
33.417	0.00	0.35	0.363	IO				4.97
33.500	0.00	0.35	0.361	IO				4.94
33.583	0.00	0.35	0.359	IO				4.91
33.667	0.00	0.35	0.356	IO				4.88
33.750	0.00	0.35	0.354	IO				4.85
33.833	0.00	0.35	0.351	IO				4.82

33.917	0.00	0.35	0.349	IO				4.79
34.000	0.00	0.35	0.347	IO				4.76
34.083	0.00	0.35	0.344	IO				4.73
34.167	0.00	0.35	0.342	IO				4.70
34.250	0.00	0.35	0.339	IO				4.67
34.333	0.00	0.35	0.337	IO				4.64
34.417	0.00	0.35	0.335	IO				4.62
34.500	0.00	0.35	0.332	IO				4.59
34.583	0.00	0.35	0.330	IO				4.56
34.667	0.00	0.35	0.327	IO				4.53
34.750	0.00	0.35	0.325	IO				4.50
34.833	0.00	0.35	0.323	IO				4.47
34.917	0.00	0.35	0.320	IO				4.44
35.000	0.00	0.35	0.318	IO				4.41
35.083	0.00	0.35	0.315	IO				4.38
35.167	0.00	0.35	0.313	IO				4.35
35.250	0.00	0.35	0.310	IO				4.32
35.333	0.00	0.35	0.308	IO				4.29
35.417	0.00	0.35	0.306	IO				4.26
35.500	0.00	0.35	0.303	IO				4.23
35.583	0.00	0.35	0.301	IO				4.20
35.667	0.00	0.35	0.298	IO				4.17
35.750	0.00	0.35	0.296	IO				4.14
35.833	0.00	0.35	0.294	IO				4.11
35.917	0.00	0.35	0.291	IO				4.08
36.000	0.00	0.35	0.289	IO				4.05
36.083	0.00	0.35	0.286	IO				4.02
36.167	0.00	0.35	0.284	IO				3.99
36.250	0.00	0.35	0.282	IO				3.96
36.333	0.00	0.35	0.279	IO				3.93
36.417	0.00	0.35	0.277	IO				3.90
36.500	0.00	0.35	0.274	IO				3.87
36.583	0.00	0.35	0.272	IO				3.84
36.667	0.00	0.35	0.269	IO				3.81
36.750	0.00	0.35	0.267	IO				3.78
36.833	0.00	0.35	0.265	IO				3.75
36.917	0.00	0.35	0.262	IO				3.72
37.000	0.00	0.35	0.260	IO				3.69
37.083	0.00	0.35	0.257	IO				3.66
37.167	0.00	0.35	0.255	IO				3.63
37.250	0.00	0.35	0.253	IO				3.60
37.333	0.00	0.35	0.250	IO				3.57
37.417	0.00	0.35	0.248	IO				3.54
37.500	0.00	0.35	0.245	IO				3.52
37.583	0.00	0.35	0.243	IO				3.49
37.667	0.00	0.35	0.241	IO				3.46
37.750	0.00	0.35	0.238	IO				3.43
37.833	0.00	0.35	0.236	IO				3.40
37.917	0.00	0.35	0.233	IO				3.37
38.000	0.00	0.35	0.231	IO				3.34
38.083	0.00	0.35	0.229	IO				3.31
38.167	0.00	0.35	0.226	IO				3.28
38.250	0.00	0.35	0.224	IO				3.25
38.333	0.00	0.35	0.221	IO				3.22
38.417	0.00	0.35	0.219	IO				3.19
38.500	0.00	0.35	0.216	IO				3.16
38.583	0.00	0.35	0.214	IO				3.13
38.667	0.00	0.35	0.212	IO				3.10
38.750	0.00	0.35	0.209	IO				3.07
38.833	0.00	0.35	0.207	IO				3.04

38.917	0.00	0.35	0.204	IO				3.01
39.000	0.00	0.35	0.202	IO				2.98
39.083	0.00	0.35	0.200	IO				2.95
39.167	0.00	0.35	0.197	IO				2.92
39.250	0.00	0.35	0.195	IO				2.89
39.333	0.00	0.35	0.192	IO				2.86
39.417	0.00	0.35	0.190	IO				2.83
39.500	0.00	0.35	0.188	IO				2.80
39.583	0.00	0.35	0.185	IO				2.77
39.667	0.00	0.35	0.183	IO				2.74
39.750	0.00	0.35	0.180	IO				2.71
39.833	0.00	0.35	0.178	IO				2.68
39.917	0.00	0.35	0.175	IO				2.65
40.000	0.00	0.35	0.173	IO				2.62
40.083	0.00	0.35	0.171	IO				2.59
40.167	0.00	0.35	0.168	IO				2.56
40.250	0.00	0.35	0.166	IO				2.53
40.333	0.00	0.35	0.163	IO				2.50
40.417	0.00	0.35	0.161	IO				2.47
40.500	0.00	0.35	0.159	IO				2.44
40.583	0.00	0.35	0.156	IO				2.42
40.667	0.00	0.35	0.154	IO				2.39
40.750	0.00	0.35	0.151	IO				2.36
40.833	0.00	0.35	0.149	IO				2.33
40.917	0.00	0.35	0.147	IO				2.30
41.000	0.00	0.35	0.144	IO				2.27
41.083	0.00	0.35	0.142	IO				2.24
41.167	0.00	0.35	0.139	IO				2.21
41.250	0.00	0.35	0.137	IO				2.18
41.333	0.00	0.35	0.135	IO				2.15
41.417	0.00	0.35	0.132	IO				2.12
41.500	0.00	0.35	0.130	IO				2.09
41.583	0.00	0.35	0.127	IO				2.06
41.667	0.00	0.35	0.125	IO				2.03
41.750	0.00	0.35	0.122	IO				2.00
41.833	0.00	0.35	0.120	IO				1.97
41.917	0.00	0.35	0.118	IO				1.94
42.000	0.00	0.35	0.115	IO				1.91
42.083	0.00	0.35	0.113	IO				1.88
42.167	0.00	0.35	0.110	IO				1.85
42.250	0.00	0.35	0.108	IO				1.82
42.333	0.00	0.35	0.106	IO				1.79
42.417	0.00	0.35	0.103	IO				1.76
42.500	0.00	0.35	0.101	IO				1.73
42.583	0.00	0.35	0.098	IO				1.70
42.667	0.00	0.35	0.096	IO				1.67
42.750	0.00	0.35	0.094	IO				1.64
42.833	0.00	0.35	0.091	IO				1.61
42.917	0.00	0.35	0.089	IO				1.58
43.000	0.00	0.35	0.086	IO				1.55
43.083	0.00	0.35	0.084	IO				1.52
43.167	0.00	0.35	0.081	IO				1.49
43.250	0.00	0.34	0.079	IO				1.45
43.333	0.00	0.33	0.077	IO				1.41
43.417	0.00	0.32	0.075	IO				1.36
43.500	0.00	0.31	0.072	IO				1.33
43.583	0.00	0.30	0.070	IO				1.29
43.667	0.00	0.29	0.068	IO				1.25
43.750	0.00	0.28	0.066	IO				1.21
43.833	0.00	0.27	0.064	IO				1.18

43.917	0.00	0.27	0.063	IO				1.14
44.000	0.00	0.26	0.061	IO				1.11
44.083	0.00	0.25	0.059	IO				1.08
44.167	0.00	0.24	0.057	IO				1.05
44.250	0.00	0.24	0.056	IO				1.02
44.333	0.00	0.23	0.054	IO				0.99
44.417	0.00	0.22	0.052	IO				0.96
44.500	0.00	0.22	0.051	IO				0.93
44.583	0.00	0.21	0.049	IO				0.90
44.667	0.00	0.20	0.048	IO				0.88
44.750	0.00	0.20	0.047	O				0.85
44.833	0.00	0.19	0.045	O				0.83
44.917	0.00	0.19	0.044	O				0.80
45.000	0.00	0.18	0.043	O				0.78
45.083	0.00	0.18	0.041	O				0.76
45.167	0.00	0.17	0.040	O				0.74
45.250	0.00	0.17	0.039	O				0.71
45.333	0.00	0.16	0.038	O				0.69
45.417	0.00	0.16	0.037	O				0.67
45.500	0.00	0.15	0.036	O				0.65
45.583	0.00	0.15	0.035	O				0.64
45.667	0.00	0.14	0.034	O				0.62
45.750	0.00	0.14	0.033	O				0.60
45.833	0.00	0.14	0.032	O				0.58
45.917	0.00	0.13	0.031	O				0.56
46.000	0.00	0.13	0.030	O				0.55
46.083	0.00	0.12	0.029	O				0.53
46.167	0.00	0.12	0.028	O				0.52
46.250	0.00	0.12	0.027	O				0.50
46.333	0.00	0.11	0.027	O				0.49
46.417	0.00	0.11	0.026	O				0.47
46.500	0.00	0.11	0.025	O				0.46
46.583	0.00	0.10	0.024	O				0.45
46.667	0.00	0.10	0.024	O				0.43
46.750	0.00	0.10	0.023	O				0.42
46.833	0.00	0.10	0.022	O				0.41
46.917	0.00	0.09	0.022	O				0.40
47.000	0.00	0.09	0.021	O				0.39
47.083	0.00	0.09	0.020	O				0.37
47.167	0.00	0.08	0.020	O				0.36
47.250	0.00	0.08	0.019	O				0.35
47.333	0.00	0.08	0.019	O				0.34
47.417	0.00	0.08	0.018	O				0.33
47.500	0.00	0.08	0.018	O				0.32
47.583	0.00	0.07	0.017	O				0.31
47.667	0.00	0.07	0.017	O				0.30
47.750	0.00	0.07	0.016	O				0.30
47.833	0.00	0.07	0.016	O				0.29
47.917	0.00	0.07	0.015	O				0.28
48.000	0.00	0.06	0.015	O				0.27
48.083	0.00	0.06	0.014	O				0.26
48.167	0.00	0.06	0.014	O				0.26
48.250	0.00	0.06	0.014	O				0.25
48.333	0.00	0.06	0.013	O				0.24
48.417	0.00	0.05	0.013	O				0.23
48.500	0.00	0.05	0.012	O				0.23
48.583	0.00	0.05	0.012	O				0.22
48.667	0.00	0.05	0.012	O				0.21
48.750	0.00	0.05	0.011	O				0.21
48.833	0.00	0.05	0.011	O				0.20

48.917	0.00	0.05	0.011	O	|	|	|	0.20
49.000	0.00	0.04	0.010	O	|	|	|	0.19
49.083	0.00	0.04	0.010	O	|	|	|	0.18
49.167	0.00	0.04	0.010	O	|	|	|	0.18
49.250	0.00	0.04	0.010	O	|	|	|	0.17
49.333	0.00	0.04	0.009	O	|	|	|	0.17
49.417	0.00	0.04	0.009	O	|	|	|	0.16
49.500	0.00	0.04	0.009	O	|	|	|	0.16
49.583	0.00	0.04	0.008	O	|	|	|	0.15
49.667	0.00	0.04	0.008	O	|	|	|	0.15
49.750	0.00	0.03	0.008	O	|	|	|	0.15
49.833	0.00	0.03	0.008	O	|	|	|	0.14
49.917	0.00	0.03	0.008	O	|	|	|	0.14
50.000	0.00	0.03	0.007	O	|	|	|	0.13
50.083	0.00	0.03	0.007	O	|	|	|	0.13
50.167	0.00	0.03	0.007	O	|	|	|	0.13
50.250	0.00	0.03	0.007	O	|	|	|	0.12
50.333	0.00	0.03	0.007	O	|	|	|	0.12
50.417	0.00	0.03	0.006	O	|	|	|	0.12
50.500	0.00	0.03	0.006	O	|	|	|	0.11
50.583	0.00	0.03	0.006	O	|	|	|	0.11
50.667	0.00	0.02	0.006	O	|	|	|	0.11
50.750	0.00	0.02	0.006	O	|	|	|	0.10
50.833	0.00	0.02	0.005	O	|	|	|	0.10
50.917	0.00	0.02	0.005	O	|	|	|	0.10
51.000	0.00	0.02	0.005	O	|	|	|	0.09
51.083	0.00	0.02	0.005	O	|	|	|	0.09
51.167	0.00	0.02	0.005	O	|	|	|	0.09
51.250	0.00	0.02	0.005	O	|	|	|	0.09
51.333	0.00	0.02	0.005	O	|	|	|	0.08
51.417	0.00	0.02	0.004	O	|	|	|	0.08
51.500	0.00	0.02	0.004	O	|	|	|	0.08
51.583	0.00	0.02	0.004	O	|	|	|	0.08
51.667	0.00	0.02	0.004	O	|	|	|	0.07
51.750	0.00	0.02	0.004	O	|	|	|	0.07
51.833	0.00	0.02	0.004	O	|	|	|	0.07
51.917	0.00	0.02	0.004	O	|	|	|	0.07
52.000	0.00	0.02	0.004	O	|	|	|	0.07
52.083	0.00	0.01	0.004	O	|	|	|	0.06
52.167	0.00	0.01	0.003	O	|	|	|	0.06
52.250	0.00	0.01	0.003	O	|	|	|	0.06
52.333	0.00	0.01	0.003	O	|	|	|	0.06
52.417	0.00	0.01	0.003	O	|	|	|	0.06
52.500	0.00	0.01	0.003	O	|	|	|	0.06
52.583	0.00	0.01	0.003	O	|	|	|	0.05
52.667	0.00	0.01	0.003	O	|	|	|	0.05
52.750	0.00	0.01	0.003	O	|	|	|	0.05
52.833	0.00	0.01	0.003	O	|	|	|	0.05
52.917	0.00	0.01	0.003	O	|	|	|	0.05
53.000	0.00	0.01	0.003	O	|	|	|	0.05
53.083	0.00	0.01	0.002	O	|	|	|	0.05
53.167	0.00	0.01	0.002	O	|	|	|	0.04
53.250	0.00	0.01	0.002	O	|	|	|	0.04
53.333	0.00	0.01	0.002	O	|	|	|	0.04
53.417	0.00	0.01	0.002	O	|	|	|	0.04
53.500	0.00	0.01	0.002	O	|	|	|	0.04
53.583	0.00	0.01	0.002	O	|	|	|	0.04
53.667	0.00	0.01	0.002	O	|	|	|	0.04
53.750	0.00	0.01	0.002	O	|	|	|	0.04
53.833	0.00	0.01	0.002	O	|	|	|	0.03

53.917	0.00	0.01	0.002	O	|	|	|	0.03
54.000	0.00	0.01	0.002	O	|	|	|	0.03
54.083	0.00	0.01	0.002	O	|	|	|	0.03
54.167	0.00	0.01	0.002	O	|	|	|	0.03
54.250	0.00	0.01	0.002	O	|	|	|	0.03
54.333	0.00	0.01	0.002	O	|	|	|	0.03
54.417	0.00	0.01	0.002	O	|	|	|	0.03
54.500	0.00	0.01	0.001	O	|	|	|	0.03
54.583	0.00	0.01	0.001	O	|	|	|	0.03
54.667	0.00	0.01	0.001	O	|	|	|	0.03
54.750	0.00	0.01	0.001	O	|	|	|	0.03
54.833	0.00	0.01	0.001	O	|	|	|	0.02
54.917	0.00	0.01	0.001	O	|	|	|	0.02
55.000	0.00	0.01	0.001	O	|	|	|	0.02
55.083	0.00	0.01	0.001	O	|	|	|	0.02
55.167	0.00	0.01	0.001	O	|	|	|	0.02
55.250	0.00	0.00	0.001	O	|	|	|	0.02
55.333	0.00	0.00	0.001	O	|	|	|	0.02
55.417	0.00	0.00	0.001	O	|	|	|	0.02
55.500	0.00	0.00	0.001	O	|	|	|	0.02
55.583	0.00	0.00	0.001	O	|	|	|	0.02
55.667	0.00	0.00	0.001	O	|	|	|	0.02
55.750	0.00	0.00	0.001	O	|	|	|	0.02
55.833	0.00	0.00	0.001	O	|	|	|	0.02
55.917	0.00	0.00	0.001	O	|	|	|	0.02
56.000	0.00	0.00	0.001	O	|	|	|	0.02
56.083	0.00	0.00	0.001	O	|	|	|	0.02
56.167	0.00	0.00	0.001	O	|	|	|	0.02
56.250	0.00	0.00	0.001	O	|	|	|	0.01
56.333	0.00	0.00	0.001	O	|	|	|	0.01
56.417	0.00	0.00	0.001	O	|	|	|	0.01
56.500	0.00	0.00	0.001	O	|	|	|	0.01
56.583	0.00	0.00	0.001	O	|	|	|	0.01
56.667	0.00	0.00	0.001	O	|	|	|	0.01
56.750	0.00	0.00	0.001	O	|	|	|	0.01
56.833	0.00	0.00	0.001	O	|	|	|	0.01
56.917	0.00	0.00	0.001	O	|	|	|	0.01
57.000	0.00	0.00	0.001	O	|	|	|	0.01
57.083	0.00	0.00	0.001	O	|	|	|	0.01
57.167	0.00	0.00	0.001	O	|	|	|	0.01
57.250	0.00	0.00	0.001	O	|	|	|	0.01
57.333	0.00	0.00	0.001	O	|	|	|	0.01
57.417	0.00	0.00	0.001	O	|	|	|	0.01
57.500	0.00	0.00	0.001	O	|	|	|	0.01
57.583	0.00	0.00	0.001	O	|	|	|	0.01
57.667	0.00	0.00	0.000	O	|	|	|	0.01
57.750	0.00	0.00	0.000	O	|	|	|	0.01
57.833	0.00	0.00	0.000	O	|	|	|	0.01
57.917	0.00	0.00	0.000	O	|	|	|	0.01
58.000	0.00	0.00	0.000	O	|	|	|	0.01
58.083	0.00	0.00	0.000	O	|	|	|	0.01
58.167	0.00	0.00	0.000	O	|	|	|	0.01
58.250	0.00	0.00	0.000	O	|	|	|	0.01
58.333	0.00	0.00	0.000	O	|	|	|	0.01
58.417	0.00	0.00	0.000	O	|	|	|	0.01
58.500	0.00	0.00	0.000	O	|	|	|	0.01
58.583	0.00	0.00	0.000	O	|	|	|	0.01
58.667	0.00	0.00	0.000	O	|	|	|	0.01
58.750	0.00	0.00	0.000	O	|	|	|	0.01
58.833	0.00	0.00	0.000	O	|	|	|	0.01

58.917	0.00	0.00	0.000	O	|	|	|	|	0.01
59.000	0.00	0.00	0.000	O	|	|	|	|	0.01
59.083	0.00	0.00	0.000	O	|	|	|	|	0.01
59.167	0.00	0.00	0.000	O	|	|	|	|	0.01
59.250	0.00	0.00	0.000	O	|	|	|	|	0.01
59.333	0.00	0.00	0.000	O	|	|	|	|	0.00
59.417	0.00	0.00	0.000	O	|	|	|	|	0.00
59.500	0.00	0.00	0.000	O	|	|	|	|	0.00
59.583	0.00	0.00	0.000	O	|	|	|	|	0.00
59.667	0.00	0.00	0.000	O	|	|	|	|	0.00
59.750	0.00	0.00	0.000	O	|	|	|	|	0.00
59.833	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 718
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.222 (CFS)
Total volume = 3.451 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
100-YR
1-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 23.680 (CFS)
Total volume = 0.740 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 14
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 5.9 11.84 17.76 23.68	Depth (Ft.)
0.083	2.38	0.05	0.008	O I | | | |	0.12
0.167	3.91	0.18	0.029	O I | | | |	0.42
0.250	4.83	0.36	0.057	O I | | | |	0.84
0.333	5.24	0.56	0.089	O I| | | |	1.30
0.417	5.51	0.64	0.121	O I| | | |	1.70
0.500	6.16	0.64	0.157	O I | | |	2.08
0.583	7.60	0.64	0.200	O | I | | |	2.53
0.667	9.20	0.64	0.254	O | I | | |	3.09
0.750	12.55	0.64	0.324	O | | I | |	3.82
0.833	23.68	0.64	0.444	O | | | | I	5.08
0.917	16.67	0.64	0.579	O | | | I |	6.49
1.000	7.36	0.64	0.657	O | I | | |	7.31
1.083	2.12	0.64	0.686	O I | | | |	7.60
1.167	0.24	0.64	0.689	O | | | |	7.64
1.250	0.00	0.64	0.686	O | | | |	7.61
1.333	0.00	0.64	0.681	O | | | |	7.56
1.417	0.00	0.64	0.677	O | | | |	7.51
1.500	0.00	0.64	0.672	O | | | |	7.47
1.583	0.00	0.64	0.668	O | | | |	7.42
1.667	0.00	0.64	0.664	O | | | |	7.38
1.750	0.00	0.64	0.659	O | | | |	7.33
1.833	0.00	0.64	0.655	O | | | |	7.28
1.917	0.00	0.64	0.650	O | | | |	7.24
2.000	0.00	0.64	0.646	O | | | |	7.19
2.083	0.00	0.64	0.642	O | | | |	7.14
2.167	0.00	0.64	0.637	O | | | |	7.10
2.250	0.00	0.64	0.633	O | | | |	7.05
2.333	0.00	0.64	0.628	O | | | |	7.01
2.417	0.00	0.64	0.624	O | | | |	6.96
2.500	0.00	0.64	0.620	O | | | |	6.91
2.583	0.00	0.64	0.615	O | | | |	6.87
2.667	0.00	0.64	0.611	O | | | |	6.82
2.750	0.00	0.64	0.606	O | | | |	6.78
2.833	0.00	0.64	0.602	O | | | |	6.73
2.917	0.00	0.64	0.598	O | | | |	6.68
3.000	0.00	0.64	0.593	O | | | |	6.64
3.083	0.00	0.64	0.589	O | | | |	6.59
3.167	0.00	0.64	0.584	O | | | |	6.55
3.250	0.00	0.64	0.580	O | | | |	6.50
3.333	0.00	0.64	0.576	O | | | |	6.45
3.417	0.00	0.64	0.571	O | | | |	6.41
3.500	0.00	0.64	0.567	O | | | |	6.36
3.583	0.00	0.64	0.562	O | | | |	6.31
3.667	0.00	0.64	0.558	O | | | |	6.27
3.750	0.00	0.64	0.553	O | | | |	6.22
3.833	0.00	0.64	0.549	O | | | |	6.18

3.917	0.00	0.64	0.545	O				6.13
4.000	0.00	0.64	0.540	O				6.08
4.083	0.00	0.64	0.536	O				6.04
4.167	0.00	0.64	0.531	O				5.99
4.250	0.00	0.64	0.527	O				5.95
4.333	0.00	0.64	0.523	O				5.90
4.417	0.00	0.64	0.518	O				5.85
4.500	0.00	0.64	0.514	O				5.81
4.583	0.00	0.64	0.509	O				5.76
4.667	0.00	0.64	0.505	O				5.72
4.750	0.00	0.64	0.501	O				5.67
4.833	0.00	0.64	0.496	O				5.62
4.917	0.00	0.64	0.492	O				5.58
5.000	0.00	0.64	0.487	O				5.53
5.083	0.00	0.64	0.483	O				5.48
5.167	0.00	0.64	0.479	O				5.44
5.250	0.00	0.64	0.474	O				5.39
5.333	0.00	0.64	0.470	O				5.35
5.417	0.00	0.64	0.465	O				5.30
5.500	0.00	0.64	0.461	O				5.25
5.583	0.00	0.64	0.457	O				5.21
5.667	0.00	0.64	0.452	O				5.16
5.750	0.00	0.64	0.448	O				5.12
5.833	0.00	0.64	0.443	O				5.07
5.917	0.00	0.64	0.439	O				5.02
6.000	0.00	0.64	0.434	O				4.98
6.083	0.00	0.64	0.430	O				4.93
6.167	0.00	0.64	0.426	O				4.89
6.250	0.00	0.64	0.421	O				4.84
6.333	0.00	0.64	0.417	O				4.79
6.417	0.00	0.64	0.412	O				4.75
6.500	0.00	0.64	0.408	O				4.70
6.583	0.00	0.64	0.404	O				4.65
6.667	0.00	0.64	0.399	O				4.61
6.750	0.00	0.64	0.395	O				4.56
6.833	0.00	0.64	0.390	O				4.52
6.917	0.00	0.64	0.386	O				4.47
7.000	0.00	0.64	0.382	O				4.42
7.083	0.00	0.64	0.377	O				4.38
7.167	0.00	0.64	0.373	O				4.33
7.250	0.00	0.64	0.368	O				4.29
7.333	0.00	0.64	0.364	O				4.24
7.417	0.00	0.64	0.360	O				4.19
7.500	0.00	0.64	0.355	O				4.15
7.583	0.00	0.64	0.351	O				4.10
7.667	0.00	0.64	0.346	O				4.06
7.750	0.00	0.64	0.342	O				4.01
7.833	0.00	0.64	0.337	O				3.96
7.917	0.00	0.64	0.333	O				3.92
8.000	0.00	0.64	0.329	O				3.87
8.083	0.00	0.64	0.324	O				3.82
8.167	0.00	0.64	0.320	O				3.78
8.250	0.00	0.64	0.315	O				3.73
8.333	0.00	0.64	0.311	O				3.69
8.417	0.00	0.64	0.307	O				3.64
8.500	0.00	0.64	0.302	O				3.59
8.583	0.00	0.64	0.298	O				3.55
8.667	0.00	0.64	0.293	O				3.50
8.750	0.00	0.64	0.289	O				3.46
8.833	0.00	0.64	0.285	O				3.41

8.917	0.00	0.64	0.280	O					3.36
9.000	0.00	0.64	0.276	O					3.32
9.083	0.00	0.64	0.271	O					3.27
9.167	0.00	0.64	0.267	O					3.23
9.250	0.00	0.64	0.263	O					3.18
9.333	0.00	0.64	0.258	O					3.13
9.417	0.00	0.64	0.254	O					3.09
9.500	0.00	0.64	0.249	O					3.04
9.583	0.00	0.64	0.245	O					3.00
9.667	0.00	0.64	0.241	O					2.95
9.750	0.00	0.64	0.236	O					2.90
9.833	0.00	0.64	0.232	O					2.86
9.917	0.00	0.64	0.227	O					2.81
10.000	0.00	0.64	0.223	O					2.76
10.083	0.00	0.64	0.218	O					2.72
10.167	0.00	0.64	0.214	O					2.67
10.250	0.00	0.64	0.210	O					2.63
10.333	0.00	0.64	0.205	O					2.58
10.417	0.00	0.64	0.201	O					2.53
10.500	0.00	0.64	0.196	O					2.49
10.583	0.00	0.64	0.192	O					2.44
10.667	0.00	0.64	0.188	O					2.40
10.750	0.00	0.64	0.183	O					2.35
10.833	0.00	0.64	0.179	O					2.30
10.917	0.00	0.64	0.174	O					2.26
11.000	0.00	0.64	0.170	O					2.21
11.083	0.00	0.64	0.166	O					2.17
11.167	0.00	0.64	0.161	O					2.12
11.250	0.00	0.64	0.157	O					2.07
11.333	0.00	0.64	0.152	O					2.03
11.417	0.00	0.64	0.148	O					1.98
11.500	0.00	0.64	0.144	O					1.93
11.583	0.00	0.64	0.139	O					1.89
11.667	0.00	0.64	0.135	O					1.84
11.750	0.00	0.64	0.130	O					1.80
11.833	0.00	0.64	0.126	O					1.75
11.917	0.00	0.64	0.122	O					1.70
12.000	0.00	0.64	0.117	O					1.66
12.083	0.00	0.64	0.113	O					1.61
12.167	0.00	0.64	0.108	O					1.57
12.250	0.00	0.64	0.104	O					1.52
12.333	0.00	0.62	0.100	O					1.46
12.417	0.00	0.60	0.095	O					1.40
12.500	0.00	0.57	0.091	O					1.34
12.583	0.00	0.55	0.087	O					1.29
12.667	0.00	0.53	0.084	O					1.23
12.750	0.00	0.50	0.080	O					1.18
12.833	0.00	0.48	0.077	O					1.13
12.917	0.00	0.46	0.074	O					1.08
13.000	0.00	0.44	0.070	O					1.04
13.083	0.00	0.42	0.067	O					0.99
13.167	0.00	0.41	0.065	O					0.95
13.250	0.00	0.39	0.062	O					0.91
13.333	0.00	0.37	0.059	O					0.87
13.417	0.00	0.36	0.057	O					0.83
13.500	0.00	0.34	0.054	O					0.80
13.583	0.00	0.33	0.052	O					0.77
13.667	0.00	0.31	0.050	O					0.73
13.750	0.00	0.30	0.048	O					0.70
13.833	0.00	0.29	0.046	O					0.67

13.917	0.00	0.27	0.044	O					0.64
14.000	0.00	0.26	0.042	O					0.62
14.083	0.00	0.25	0.040	O					0.59
14.167	0.00	0.24	0.038	O					0.57
14.250	0.00	0.23	0.037	O					0.54
14.333	0.00	0.22	0.035	O					0.52
14.417	0.00	0.21	0.034	O					0.50
14.500	0.00	0.20	0.032	O					0.48
14.583	0.00	0.19	0.031	O					0.46
14.667	0.00	0.19	0.030	O					0.44
14.750	0.00	0.18	0.028	O					0.42
14.833	0.00	0.17	0.027	O					0.40
14.917	0.00	0.16	0.026	O					0.38
15.000	0.00	0.16	0.025	O					0.37
15.083	0.00	0.15	0.024	O					0.35
15.167	0.00	0.14	0.023	O					0.34
15.250	0.00	0.14	0.022	O					0.32
15.333	0.00	0.13	0.021	O					0.31
15.417	0.00	0.13	0.020	O					0.30
15.500	0.00	0.12	0.019	O					0.28
15.583	0.00	0.12	0.018	O					0.27
15.667	0.00	0.11	0.018	O					0.26
15.750	0.00	0.11	0.017	O					0.25
15.833	0.00	0.10	0.016	O					0.24
15.917	0.00	0.10	0.016	O					0.23
16.000	0.00	0.09	0.015	O					0.22
16.083	0.00	0.09	0.014	O					0.21
16.167	0.00	0.09	0.014	O					0.20
16.250	0.00	0.08	0.013	O					0.19
16.333	0.00	0.08	0.013	O					0.18
16.417	0.00	0.08	0.012	O					0.18
16.500	0.00	0.07	0.011	O					0.17
16.583	0.00	0.07	0.011	O					0.16
16.667	0.00	0.07	0.011	O					0.15
16.750	0.00	0.06	0.010	O					0.15
16.833	0.00	0.06	0.010	O					0.14
16.917	0.00	0.06	0.009	O					0.14
17.000	0.00	0.06	0.009	O					0.13
17.083	0.00	0.05	0.008	O					0.12
17.167	0.00	0.05	0.008	O					0.12
17.250	0.00	0.05	0.008	O					0.11
17.333	0.00	0.05	0.007	O					0.11
17.417	0.00	0.04	0.007	O					0.10
17.500	0.00	0.04	0.007	O					0.10
17.583	0.00	0.04	0.007	O					0.10
17.667	0.00	0.04	0.006	O					0.09
17.750	0.00	0.04	0.006	O					0.09
17.833	0.00	0.04	0.006	O					0.08
17.917	0.00	0.03	0.005	O					0.08
18.000	0.00	0.03	0.005	O					0.08
18.083	0.00	0.03	0.005	O					0.07
18.167	0.00	0.03	0.005	O					0.07
18.250	0.00	0.03	0.005	O					0.07
18.333	0.00	0.03	0.004	O					0.07
18.417	0.00	0.03	0.004	O					0.06
18.500	0.00	0.03	0.004	O					0.06
18.583	0.00	0.02	0.004	O					0.06
18.667	0.00	0.02	0.004	O					0.05
18.750	0.00	0.02	0.004	O					0.05
18.833	0.00	0.02	0.003	O					0.05

18.917	0.00	0.02	0.003	O	|	|	|	0.05
19.000	0.00	0.02	0.003	O	|	|	|	0.05
19.083	0.00	0.02	0.003	O	|	|	|	0.04
19.167	0.00	0.02	0.003	O	|	|	|	0.04
19.250	0.00	0.02	0.003	O	|	|	|	0.04
19.333	0.00	0.02	0.003	O	|	|	|	0.04
19.417	0.00	0.02	0.003	O	|	|	|	0.04
19.500	0.00	0.02	0.002	O	|	|	|	0.04
19.583	0.00	0.01	0.002	O	|	|	|	0.03
19.667	0.00	0.01	0.002	O	|	|	|	0.03
19.750	0.00	0.01	0.002	O	|	|	|	0.03
19.833	0.00	0.01	0.002	O	|	|	|	0.03
19.917	0.00	0.01	0.002	O	|	|	|	0.03
20.000	0.00	0.01	0.002	O	|	|	|	0.03
20.083	0.00	0.01	0.002	O	|	|	|	0.03
20.167	0.00	0.01	0.002	O	|	|	|	0.03
20.250	0.00	0.01	0.002	O	|	|	|	0.02
20.333	0.00	0.01	0.002	O	|	|	|	0.02
20.417	0.00	0.01	0.002	O	|	|	|	0.02
20.500	0.00	0.01	0.001	O	|	|	|	0.02
20.583	0.00	0.01	0.001	O	|	|	|	0.02
20.667	0.00	0.01	0.001	O	|	|	|	0.02
20.750	0.00	0.01	0.001	O	|	|	|	0.02
20.833	0.00	0.01	0.001	O	|	|	|	0.02
20.917	0.00	0.01	0.001	O	|	|	|	0.02
21.000	0.00	0.01	0.001	O	|	|	|	0.02
21.083	0.00	0.01	0.001	O	|	|	|	0.02
21.167	0.00	0.01	0.001	O	|	|	|	0.01
21.250	0.00	0.01	0.001	O	|	|	|	0.01
21.333	0.00	0.01	0.001	O	|	|	|	0.01
21.417	0.00	0.01	0.001	O	|	|	|	0.01
21.500	0.00	0.01	0.001	O	|	|	|	0.01
21.583	0.00	0.01	0.001	O	|	|	|	0.01
21.667	0.00	0.00	0.001	O	|	|	|	0.01
21.750	0.00	0.00	0.001	O	|	|	|	0.01
21.833	0.00	0.00	0.001	O	|	|	|	0.01
21.917	0.00	0.00	0.001	O	|	|	|	0.01
22.000	0.00	0.00	0.001	O	|	|	|	0.01
22.083	0.00	0.00	0.001	O	|	|	|	0.01
22.167	0.00	0.00	0.001	O	|	|	|	0.01
22.250	0.00	0.00	0.001	O	|	|	|	0.01
22.333	0.00	0.00	0.001	O	|	|	|	0.01
22.417	0.00	0.00	0.001	O	|	|	|	0.01
22.500	0.00	0.00	0.001	O	|	|	|	0.01
22.583	0.00	0.00	0.000	O	|	|	|	0.01
22.667	0.00	0.00	0.000	O	|	|	|	0.01
22.750	0.00	0.00	0.000	O	|	|	|	0.01
22.833	0.00	0.00	0.000	O	|	|	|	0.01
22.917	0.00	0.00	0.000	O	|	|	|	0.01
23.000	0.00	0.00	0.000	O	|	|	|	0.01
23.083	0.00	0.00	0.000	O	|	|	|	0.01
23.167	0.00	0.00	0.000	O	|	|	|	0.01
23.250	0.00	0.00	0.000	O	|	|	|	0.01
23.333	0.00	0.00	0.000	O	|	|	|	0.00
23.417	0.00	0.00	0.000	O	|	|	|	0.00
23.500	0.00	0.00	0.000	O	|	|	|	0.00
23.583	0.00	0.00	0.000	O	|	|	|	0.00
23.667	0.00	0.00	0.000	O	|	|	|	0.00
23.750	0.00	0.00	0.000	O	|	|	|	0.00
23.833	0.00	0.00	0.000	O	|	|	|	0.00

23.917	0.00	0.00	0.000	O	|	|	|	0.00
24.000	0.00	0.00	0.000	O	|	|	|	0.00
24.083	0.00	0.00	0.000	O	|	|	|	0.00
24.167	0.00	0.00	0.000	O	|	|	|	0.00
24.250	0.00	0.00	0.000	O	|	|	|	0.00
24.333	0.00	0.00	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
24.583	0.00	0.00	0.000	O	|	|	|	0.00
24.667	0.00	0.00	0.000	O	|	|	|	0.00
24.750	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 297
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 0.740 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
100-YR
3-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 15.341 (CFS)
Total volume = 1.148 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 38
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.8 7.67 11.51 15.34	Depth (Ft.)
0.083	1.04	0.02	0.003	O I	0.05
0.167	1.67	0.08	0.012	O I	0.18
0.250	1.60	0.14	0.023	O I	0.34
0.333	1.82	0.21	0.034	O I	0.49
0.417	2.00	0.28	0.045	O I	0.66
0.500	2.27	0.36	0.058	O I	0.85
0.583	2.18	0.44	0.070	O I	1.03
0.667	2.29	0.52	0.082	O I	1.21
0.750	2.42	0.59	0.095	O I	1.39
0.833	2.20	0.64	0.106	O I	1.54
0.917	2.13	0.64	0.117	O I	1.65
1.000	2.32	0.64	0.128	O I	1.77
1.083	2.93	0.64	0.141	O I	1.91
1.167	3.24	0.64	0.158	O I	2.09
1.250	3.29	0.64	0.176	O I	2.28
1.333	3.04	0.64	0.194	O I	2.46
1.417	3.64	0.64	0.212	O I	2.65
1.500	4.21	0.64	0.235	O I	2.89
1.583	3.97	0.64	0.259	O I	3.14
1.667	4.13	0.64	0.282	O I	3.38
1.750	5.09	0.64	0.310	O I	3.67
1.833	5.33	0.64	0.341	O I	4.00
1.917	4.99	0.64	0.372	O I	4.33
2.000	4.94	0.64	0.402	O I	4.64
2.083	5.13	0.64	0.432	O I	4.95
2.167	6.61	0.64	0.468	O I	5.33
2.250	8.48	0.64	0.516	O I	5.83
2.333	7.32	0.64	0.566	O I	6.35
2.417	10.43	0.64	0.623	O I	6.94
2.500	13.45	0.64	0.700	O I	7.76
2.583	15.34	0.64	0.795	O I	8.75
2.667	13.18	0.64	0.889	O I	10.53
2.750	6.57	0.64	0.952	O I	11.42
2.833	3.05	0.64	0.981	O I	11.75
2.917	2.46	0.64	0.996	O I	11.91
3.000	1.48	0.64	1.005	O I	12.00
3.083	0.42	0.64	1.007	IO	12.03
3.167	0.04	0.64	1.004	IO	12.00
3.250	0.00	0.64	1.000	IO	11.95
3.333	0.00	0.64	0.996	IO	11.90
3.417	0.00	0.64	0.991	IO	11.86
3.500	0.00	0.64	0.987	IO	11.81
3.583	0.00	0.64	0.982	IO	11.76
3.667	0.00	0.64	0.978	IO	11.71
3.750	0.00	0.64	0.973	IO	11.67
3.833	0.00	0.64	0.969	IO	11.62

3.917	0.00	0.64	0.965	IO				11.57
4.000	0.00	0.64	0.960	IO				11.52
4.083	0.00	0.64	0.956	IO				11.47
4.167	0.00	0.64	0.951	IO				11.41
4.250	0.00	0.64	0.947	IO				11.35
4.333	0.00	0.64	0.943	IO				11.28
4.417	0.00	0.64	0.938	IO				11.22
4.500	0.00	0.64	0.934	IO				11.16
4.583	0.00	0.64	0.929	IO				11.10
4.667	0.00	0.64	0.925	IO				11.04
4.750	0.00	0.64	0.921	IO				10.97
4.833	0.00	0.64	0.916	IO				10.91
4.917	0.00	0.64	0.912	IO				10.85
5.000	0.00	0.64	0.907	IO				10.79
5.083	0.00	0.64	0.903	IO				10.73
5.167	0.00	0.64	0.899	IO				10.66
5.250	0.00	0.64	0.894	IO				10.60
5.333	0.00	0.64	0.890	IO				10.54
5.417	0.00	0.64	0.885	IO				10.47
5.500	0.00	0.64	0.881	IO				10.38
5.583	0.00	0.64	0.877	IO				10.29
5.667	0.00	0.64	0.872	IO				10.20
5.750	0.00	0.64	0.868	IO				10.11
5.833	0.00	0.64	0.863	IO				10.03
5.917	0.00	0.64	0.859	IO				9.94
6.000	0.00	0.64	0.854	IO				9.85
6.083	0.00	0.64	0.850	IO				9.76
6.167	0.00	0.64	0.846	IO				9.67
6.250	0.00	0.64	0.841	IO				9.59
6.333	0.00	0.64	0.837	IO				9.50
6.417	0.00	0.64	0.832	IO				9.37
6.500	0.00	0.64	0.828	IO				9.25
6.583	0.00	0.64	0.824	IO				9.13
6.667	0.00	0.64	0.819	IO				9.01
6.750	0.00	0.64	0.815	IO				8.96
6.833	0.00	0.64	0.810	IO				8.91
6.917	0.00	0.64	0.806	IO				8.86
7.000	0.00	0.64	0.802	IO				8.82
7.083	0.00	0.64	0.797	IO				8.77
7.167	0.00	0.64	0.793	IO				8.73
7.250	0.00	0.64	0.788	IO				8.68
7.333	0.00	0.64	0.784	IO				8.63
7.417	0.00	0.64	0.780	IO				8.59
7.500	0.00	0.64	0.775	IO				8.54
7.583	0.00	0.64	0.771	IO				8.50
7.667	0.00	0.64	0.766	IO				8.45
7.750	0.00	0.64	0.762	IO				8.40
7.833	0.00	0.64	0.758	IO				8.36
7.917	0.00	0.64	0.753	IO				8.31
8.000	0.00	0.64	0.749	IO				8.26
8.083	0.00	0.64	0.744	IO				8.22
8.167	0.00	0.64	0.740	IO				8.17
8.250	0.00	0.64	0.735	IO				8.13
8.333	0.00	0.64	0.731	IO				8.08
8.417	0.00	0.64	0.727	IO				8.03
8.500	0.00	0.64	0.722	IO				7.99
8.583	0.00	0.64	0.718	IO				7.94
8.667	0.00	0.64	0.713	IO				7.90
8.750	0.00	0.64	0.709	IO				7.85
8.833	0.00	0.64	0.705	IO				7.80

8.917	0.00	0.64	0.700	IO				7.76
9.000	0.00	0.64	0.696	IO				7.71
9.083	0.00	0.64	0.691	IO				7.67
9.167	0.00	0.64	0.687	IO				7.62
9.250	0.00	0.64	0.683	IO				7.57
9.333	0.00	0.64	0.678	IO				7.53
9.417	0.00	0.64	0.674	IO				7.48
9.500	0.00	0.64	0.669	IO				7.43
9.583	0.00	0.64	0.665	IO				7.39
9.667	0.00	0.64	0.661	IO				7.34
9.750	0.00	0.64	0.656	IO				7.30
9.833	0.00	0.64	0.652	IO				7.25
9.917	0.00	0.64	0.647	IO				7.20
10.000	0.00	0.64	0.643	IO				7.16
10.083	0.00	0.64	0.639	IO				7.11
10.167	0.00	0.64	0.634	IO				7.07
10.250	0.00	0.64	0.630	IO				7.02
10.333	0.00	0.64	0.625	IO				6.97
10.417	0.00	0.64	0.621	IO				6.93
10.500	0.00	0.64	0.616	IO				6.88
10.583	0.00	0.64	0.612	IO				6.84
10.667	0.00	0.64	0.608	IO				6.79
10.750	0.00	0.64	0.603	IO				6.74
10.833	0.00	0.64	0.599	IO				6.70
10.917	0.00	0.64	0.594	IO				6.65
11.000	0.00	0.64	0.590	IO				6.60
11.083	0.00	0.64	0.586	IO				6.56
11.167	0.00	0.64	0.581	IO				6.51
11.250	0.00	0.64	0.577	IO				6.47
11.333	0.00	0.64	0.572	IO				6.42
11.417	0.00	0.64	0.568	IO				6.37
11.500	0.00	0.64	0.564	IO				6.33
11.583	0.00	0.64	0.559	IO				6.28
11.667	0.00	0.64	0.555	IO				6.24
11.750	0.00	0.64	0.550	IO				6.19
11.833	0.00	0.64	0.546	IO				6.14
11.917	0.00	0.64	0.542	IO				6.10
12.000	0.00	0.64	0.537	IO				6.05
12.083	0.00	0.64	0.533	IO				6.01
12.167	0.00	0.64	0.528	IO				5.96
12.250	0.00	0.64	0.524	IO				5.91
12.333	0.00	0.64	0.520	IO				5.87
12.417	0.00	0.64	0.515	IO				5.82
12.500	0.00	0.64	0.511	IO				5.77
12.583	0.00	0.64	0.506	IO				5.73
12.667	0.00	0.64	0.502	IO				5.68
12.750	0.00	0.64	0.497	IO				5.64
12.833	0.00	0.64	0.493	IO				5.59
12.917	0.00	0.64	0.489	IO				5.54
13.000	0.00	0.64	0.484	IO				5.50
13.083	0.00	0.64	0.480	IO				5.45
13.167	0.00	0.64	0.475	IO				5.41
13.250	0.00	0.64	0.471	IO				5.36
13.333	0.00	0.64	0.467	IO				5.31
13.417	0.00	0.64	0.462	IO				5.27
13.500	0.00	0.64	0.458	IO				5.22
13.583	0.00	0.64	0.453	IO				5.18
13.667	0.00	0.64	0.449	IO				5.13
13.750	0.00	0.64	0.445	IO				5.08
13.833	0.00	0.64	0.440	IO				5.04

13.917	0.00	0.64	0.436	IO					4.99
14.000	0.00	0.64	0.431	IO					4.95
14.083	0.00	0.64	0.427	IO					4.90
14.167	0.00	0.64	0.423	IO					4.85
14.250	0.00	0.64	0.418	IO					4.81
14.333	0.00	0.64	0.414	IO					4.76
14.417	0.00	0.64	0.409	IO					4.71
14.500	0.00	0.64	0.405	IO					4.67
14.583	0.00	0.64	0.400	IO					4.62
14.667	0.00	0.64	0.396	IO					4.58
14.750	0.00	0.64	0.392	IO					4.53
14.833	0.00	0.64	0.387	IO					4.48
14.917	0.00	0.64	0.383	IO					4.44
15.000	0.00	0.64	0.378	IO					4.39
15.083	0.00	0.64	0.374	IO					4.35
15.167	0.00	0.64	0.370	IO					4.30
15.250	0.00	0.64	0.365	IO					4.25
15.333	0.00	0.64	0.361	IO					4.21
15.417	0.00	0.64	0.356	IO					4.16
15.500	0.00	0.64	0.352	IO					4.12
15.583	0.00	0.64	0.348	IO					4.07
15.667	0.00	0.64	0.343	IO					4.02
15.750	0.00	0.64	0.339	IO					3.98
15.833	0.00	0.64	0.334	IO					3.93
15.917	0.00	0.64	0.330	IO					3.88
16.000	0.00	0.64	0.326	IO					3.84
16.083	0.00	0.64	0.321	IO					3.79
16.167	0.00	0.64	0.317	IO					3.75
16.250	0.00	0.64	0.312	IO					3.70
16.333	0.00	0.64	0.308	IO					3.65
16.417	0.00	0.64	0.304	IO					3.61
16.500	0.00	0.64	0.299	IO					3.56
16.583	0.00	0.64	0.295	IO					3.52
16.667	0.00	0.64	0.290	IO					3.47
16.750	0.00	0.64	0.286	IO					3.42
16.833	0.00	0.64	0.281	IO					3.38
16.917	0.00	0.64	0.277	IO					3.33
17.000	0.00	0.64	0.273	IO					3.29
17.083	0.00	0.64	0.268	IO					3.24
17.167	0.00	0.64	0.264	IO					3.19
17.250	0.00	0.64	0.259	IO					3.15
17.333	0.00	0.64	0.255	IO					3.10
17.417	0.00	0.64	0.251	IO					3.05
17.500	0.00	0.64	0.246	IO					3.01
17.583	0.00	0.64	0.242	IO					2.96
17.667	0.00	0.64	0.237	IO					2.92
17.750	0.00	0.64	0.233	IO					2.87
17.833	0.00	0.64	0.229	IO					2.82
17.917	0.00	0.64	0.224	IO					2.78
18.000	0.00	0.64	0.220	IO					2.73
18.083	0.00	0.64	0.215	IO					2.69
18.167	0.00	0.64	0.211	IO					2.64
18.250	0.00	0.64	0.207	IO					2.59
18.333	0.00	0.64	0.202	IO					2.55
18.417	0.00	0.64	0.198	IO					2.50
18.500	0.00	0.64	0.193	IO					2.46
18.583	0.00	0.64	0.189	IO					2.41
18.667	0.00	0.64	0.185	IO					2.36
18.750	0.00	0.64	0.180	IO					2.32
18.833	0.00	0.64	0.176	IO					2.27

18.917	0.00	0.64	0.171	IO				2.22
19.000	0.00	0.64	0.167	IO				2.18
19.083	0.00	0.64	0.162	IO				2.13
19.167	0.00	0.64	0.158	IO				2.09
19.250	0.00	0.64	0.154	IO				2.04
19.333	0.00	0.64	0.149	IO				1.99
19.417	0.00	0.64	0.145	IO				1.95
19.500	0.00	0.64	0.140	IO				1.90
19.583	0.00	0.64	0.136	IO				1.86
19.667	0.00	0.64	0.132	IO				1.81
19.750	0.00	0.64	0.127	IO				1.76
19.833	0.00	0.64	0.123	IO				1.72
19.917	0.00	0.64	0.118	IO				1.67
20.000	0.00	0.64	0.114	IO				1.63
20.083	0.00	0.64	0.110	IO				1.58
20.167	0.00	0.64	0.105	IO				1.53
20.250	0.00	0.63	0.101	IO				1.48
20.333	0.00	0.61	0.097	IO				1.42
20.417	0.00	0.58	0.092	IO				1.36
20.500	0.00	0.56	0.089	IO				1.30
20.583	0.00	0.53	0.085	IO				1.25
20.667	0.00	0.51	0.081	IO				1.19
20.750	0.00	0.49	0.078	IO				1.14
20.833	0.00	0.47	0.074	O				1.10
20.917	0.00	0.45	0.071	O				1.05
21.000	0.00	0.43	0.068	O				1.00
21.083	0.00	0.41	0.065	O				0.96
21.167	0.00	0.39	0.063	O				0.92
21.250	0.00	0.38	0.060	O				0.88
21.333	0.00	0.36	0.057	O				0.85
21.417	0.00	0.35	0.055	O				0.81
21.500	0.00	0.33	0.053	O				0.78
21.583	0.00	0.32	0.050	O				0.74
21.667	0.00	0.30	0.048	O				0.71
21.750	0.00	0.29	0.046	O				0.68
21.833	0.00	0.28	0.044	O				0.65
21.917	0.00	0.27	0.042	O				0.62
22.000	0.00	0.26	0.041	O				0.60
22.083	0.00	0.24	0.039	O				0.57
22.167	0.00	0.23	0.037	O				0.55
22.250	0.00	0.22	0.036	O				0.53
22.333	0.00	0.21	0.034	O				0.50
22.417	0.00	0.21	0.033	O				0.48
22.500	0.00	0.20	0.031	O				0.46
22.583	0.00	0.19	0.030	O				0.44
22.667	0.00	0.18	0.029	O				0.42
22.750	0.00	0.17	0.028	O				0.41
22.833	0.00	0.17	0.026	O				0.39
22.917	0.00	0.16	0.025	O				0.37
23.000	0.00	0.15	0.024	O				0.36
23.083	0.00	0.15	0.023	O				0.34
23.167	0.00	0.14	0.022	O				0.33
23.250	0.00	0.13	0.021	O				0.31
23.333	0.00	0.13	0.020	O				0.30
23.417	0.00	0.12	0.020	O				0.29
23.500	0.00	0.12	0.019	O				0.27
23.583	0.00	0.11	0.018	O				0.26
23.667	0.00	0.11	0.017	O				0.25
23.750	0.00	0.10	0.016	O				0.24
23.833	0.00	0.10	0.016	O				0.23

23.917	0.00	0.09	0.015	O	|	|	|	0.22
24.000	0.00	0.09	0.014	O	|	|	|	0.21
24.083	0.00	0.09	0.014	O	|	|	|	0.20
24.167	0.00	0.08	0.013	O	|	|	|	0.19
24.250	0.00	0.08	0.013	O	|	|	|	0.19
24.333	0.00	0.08	0.012	O	|	|	|	0.18
24.417	0.00	0.07	0.012	O	|	|	|	0.17
24.500	0.00	0.07	0.011	O	|	|	|	0.16
24.583	0.00	0.07	0.011	O	|	|	|	0.16
24.667	0.00	0.06	0.010	O	|	|	|	0.15
24.750	0.00	0.06	0.010	O	|	|	|	0.14
24.833	0.00	0.06	0.009	O	|	|	|	0.14
24.917	0.00	0.06	0.009	O	|	|	|	0.13
25.000	0.00	0.05	0.009	O	|	|	|	0.13
25.083	0.00	0.05	0.008	O	|	|	|	0.12
25.167	0.00	0.05	0.008	O	|	|	|	0.12
25.250	0.00	0.05	0.008	O	|	|	|	0.11
25.333	0.00	0.05	0.007	O	|	|	|	0.11
25.417	0.00	0.04	0.007	O	|	|	|	0.10
25.500	0.00	0.04	0.007	O	|	|	|	0.10
25.583	0.00	0.04	0.006	O	|	|	|	0.09
25.667	0.00	0.04	0.006	O	|	|	|	0.09
25.750	0.00	0.04	0.006	O	|	|	|	0.09
25.833	0.00	0.03	0.006	O	|	|	|	0.08
25.917	0.00	0.03	0.005	O	|	|	|	0.08
26.000	0.00	0.03	0.005	O	|	|	|	0.08
26.083	0.00	0.03	0.005	O	|	|	|	0.07
26.167	0.00	0.03	0.005	O	|	|	|	0.07
26.250	0.00	0.03	0.004	O	|	|	|	0.07
26.333	0.00	0.03	0.004	O	|	|	|	0.06
26.417	0.00	0.03	0.004	O	|	|	|	0.06
26.500	0.00	0.02	0.004	O	|	|	|	0.06
26.583	0.00	0.02	0.004	O	|	|	|	0.06
26.667	0.00	0.02	0.004	O	|	|	|	0.05
26.750	0.00	0.02	0.003	O	|	|	|	0.05
26.833	0.00	0.02	0.003	O	|	|	|	0.05
26.917	0.00	0.02	0.003	O	|	|	|	0.05
27.000	0.00	0.02	0.003	O	|	|	|	0.04
27.083	0.00	0.02	0.003	O	|	|	|	0.04
27.167	0.00	0.02	0.003	O	|	|	|	0.04
27.250	0.00	0.02	0.003	O	|	|	|	0.04
27.333	0.00	0.02	0.003	O	|	|	|	0.04
27.417	0.00	0.02	0.002	O	|	|	|	0.04
27.500	0.00	0.01	0.002	O	|	|	|	0.03
27.583	0.00	0.01	0.002	O	|	|	|	0.03
27.667	0.00	0.01	0.002	O	|	|	|	0.03
27.750	0.00	0.01	0.002	O	|	|	|	0.03
27.833	0.00	0.01	0.002	O	|	|	|	0.03
27.917	0.00	0.01	0.002	O	|	|	|	0.03
28.000	0.00	0.01	0.002	O	|	|	|	0.03
28.083	0.00	0.01	0.002	O	|	|	|	0.03
28.167	0.00	0.01	0.002	O	|	|	|	0.02
28.250	0.00	0.01	0.002	O	|	|	|	0.02
28.333	0.00	0.01	0.002	O	|	|	|	0.02
28.417	0.00	0.01	0.001	O	|	|	|	0.02
28.500	0.00	0.01	0.001	O	|	|	|	0.02
28.583	0.00	0.01	0.001	O	|	|	|	0.02
28.667	0.00	0.01	0.001	O	|	|	|	0.02
28.750	0.00	0.01	0.001	O	|	|	|	0.02
28.833	0.00	0.01	0.001	O	|	|	|	0.02

28.917	0.00	0.01	0.001	O	|	|	|	|	0.02
29.000	0.00	0.01	0.001	O	|	|	|	|	0.02
29.083	0.00	0.01	0.001	O	|	|	|	|	0.02
29.167	0.00	0.01	0.001	O	|	|	|	|	0.01
29.250	0.00	0.01	0.001	O	|	|	|	|	0.01
29.333	0.00	0.01	0.001	O	|	|	|	|	0.01
29.417	0.00	0.01	0.001	O	|	|	|	|	0.01
29.500	0.00	0.01	0.001	O	|	|	|	|	0.01
29.583	0.00	0.00	0.001	O	|	|	|	|	0.01
29.667	0.00	0.00	0.001	O	|	|	|	|	0.01
29.750	0.00	0.00	0.001	O	|	|	|	|	0.01
29.833	0.00	0.00	0.001	O	|	|	|	|	0.01
29.917	0.00	0.00	0.001	O	|	|	|	|	0.01
30.000	0.00	0.00	0.001	O	|	|	|	|	0.01
30.083	0.00	0.00	0.001	O	|	|	|	|	0.01
30.167	0.00	0.00	0.001	O	|	|	|	|	0.01
30.250	0.00	0.00	0.001	O	|	|	|	|	0.01
30.333	0.00	0.00	0.001	O	|	|	|	|	0.01
30.417	0.00	0.00	0.001	O	|	|	|	|	0.01
30.500	0.00	0.00	0.000	O	|	|	|	|	0.01
30.583	0.00	0.00	0.000	O	|	|	|	|	0.01
30.667	0.00	0.00	0.000	O	|	|	|	|	0.01
30.750	0.00	0.00	0.000	O	|	|	|	|	0.01
30.833	0.00	0.00	0.000	O	|	|	|	|	0.01
30.917	0.00	0.00	0.000	O	|	|	|	|	0.01
31.000	0.00	0.00	0.000	O	|	|	|	|	0.01
31.083	0.00	0.00	0.000	O	|	|	|	|	0.01
31.167	0.00	0.00	0.000	O	|	|	|	|	0.01
31.250	0.00	0.00	0.000	O	|	|	|	|	0.00
31.333	0.00	0.00	0.000	O	|	|	|	|	0.00
31.417	0.00	0.00	0.000	O	|	|	|	|	0.00
31.500	0.00	0.00	0.000	O	|	|	|	|	0.00
31.583	0.00	0.00	0.000	O	|	|	|	|	0.00
31.667	0.00	0.00	0.000	O	|	|	|	|	0.00
31.750	0.00	0.00	0.000	O	|	|	|	|	0.00
31.833	0.00	0.00	0.000	O	|	|	|	|	0.00
31.917	0.00	0.00	0.000	O	|	|	|	|	0.00
32.000	0.00	0.00	0.000	O	|	|	|	|	0.00
32.083	0.00	0.00	0.000	O	|	|	|	|	0.00
32.167	0.00	0.00	0.000	O	|	|	|	|	0.00
32.250	0.00	0.00	0.000	O	|	|	|	|	0.00
32.333	0.00	0.00	0.000	O	|	|	|	|	0.00
32.417	0.00	0.00	0.000	O	|	|	|	|	0.00
32.500	0.00	0.00	0.000	O	|	|	|	|	0.00
32.583	0.00	0.00	0.000	O	|	|	|	|	0.00
32.667	0.00	0.00	0.000	O	|	|	|	|	0.00
32.750	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 393
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 1.148 (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
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
100-YR
6-hr

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 14.226 (CFS)
Total volume = 1.534 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 74
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 3.6 7.11 10.67 14.23	Depth (Ft.)
0.083	0.56	0.01	0.002	OI | | | |	0.03
0.167	1.01	0.04	0.007	O I | | | |	0.10
0.250	1.13	0.09	0.014	O I | | | |	0.21
0.333	1.14	0.13	0.021	O I | | | |	0.31
0.417	1.14	0.17	0.028	O I | | | |	0.41
0.500	1.25	0.22	0.035	O I | | | |	0.51
0.583	1.32	0.26	0.042	O I | | | |	0.62
0.667	1.33	0.31	0.049	O I | | | |	0.72
0.750	1.33	0.35	0.056	O I | | | |	0.82
0.833	1.33	0.39	0.062	O I | | | |	0.92
0.917	1.33	0.43	0.069	O I | | | |	1.01
1.000	1.44	0.47	0.075	|O I | | |	1.11
1.083	1.51	0.51	0.082	|O I | | |	1.21
1.167	1.52	0.56	0.089	|O I | | |	1.30
1.250	1.52	0.60	0.095	|O I | | |	1.40
1.333	1.52	0.64	0.101	|O I | | |	1.49
1.417	1.52	0.64	0.107	|O I | | |	1.56
1.500	1.52	0.64	0.113	|O I | | |	1.62
1.583	1.52	0.64	0.120	|O I | | |	1.68
1.667	1.52	0.64	0.126	|O I | | |	1.75
1.750	1.52	0.64	0.132	|O I | | |	1.81
1.833	1.52	0.64	0.138	|O I | | |	1.87
1.917	1.52	0.64	0.144	|O I | | |	1.94
2.000	1.63	0.64	0.150	|O I | | |	2.00
2.083	1.59	0.64	0.157	|O I | | |	2.07
2.167	1.64	0.64	0.163	|O I | | |	2.14
2.250	1.70	0.64	0.171	|O I | | |	2.22
2.333	1.71	0.64	0.178	|O I | | |	2.29
2.417	1.71	0.64	0.185	|O I | | |	2.37
2.500	1.71	0.64	0.193	|O I | | |	2.45
2.583	1.71	0.64	0.200	|O I | | |	2.52
2.667	1.71	0.64	0.207	|O I | | |	2.60
2.750	1.82	0.64	0.215	|O I | | |	2.68
2.833	1.89	0.64	0.223	|O I | | |	2.77
2.917	1.90	0.64	0.232	|O I | | |	2.86
3.000	1.90	0.64	0.241	|O I | | |	2.95
3.083	1.90	0.64	0.249	|O I | | |	3.04
3.167	2.01	0.64	0.258	|O I | | |	3.14
3.250	2.08	0.64	0.268	|O I | | |	3.24
3.333	2.09	0.64	0.278	|O I | | |	3.34
3.417	2.20	0.64	0.288	|O I | | |	3.45
3.500	2.38	0.64	0.300	|O I | | |	3.57
3.583	2.64	0.64	0.313	|O I | | |	3.70
3.667	2.76	0.64	0.327	|O I | | |	3.85
3.750	2.95	0.64	0.342	|O I | | |	4.01
3.833	3.06	0.64	0.358	|O I | | |	4.18

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3.917    3.25    0.64      0.376  |O     I|       |       |       |     4.36
4.000    3.36    0.64      0.394  |O     I|       |       |       |     4.55
4.083    3.55    0.64      0.413  |O     I|       |       |       |     4.76
4.167    3.84    0.64      0.434  |O      I       |       |       |     4.98
4.250    4.14    0.64      0.457  |O      |I      |       |       |     5.22
4.333    4.44    0.64      0.483  |O      |I      |       |       |     5.48
4.417    4.74    0.64      0.510  |O      | I     |       |       |     5.77
4.500    4.87    0.64      0.538  |O      | I     |       |       |     6.07
4.583    5.06    0.64      0.568  |O      |  I    |       |       |     6.38
4.667    5.34    0.64      0.600  |O      |   I   |       |       |     6.71
4.750    5.64    0.64      0.633  |O      |   I   |       |       |     7.05
4.833    5.77    0.64      0.668  |O      |   I   |       |       |     7.42
4.917    5.96    0.64      0.704  |O      |    I  |       |       |     7.80
5.000    6.25    0.64      0.742  |O      |     I |       |       |     8.19
5.083    7.26    0.64      0.784  |O      |       I       |       |     8.63
5.167    8.70    0.64      0.834  |O      |       |  I    |       |     9.42
5.250    9.85    0.64      0.894  |O      |       |     I |       |    10.59
5.333   10.79    0.64      0.960  |O      |       |       I       |    11.52
5.417   12.04    0.64      1.035  |O      |       |       |  I    |    12.32
5.500   14.23    0.64      1.121  |O      |       |       |       I   13.09
5.583    8.72    0.64      1.195  |O      |       |  I    |       |    13.69
5.667    3.35    0.64      1.232  |O     I|       |       |       |    13.95
5.750    1.51    0.64      1.245  |O I    |       |       |       |    14.04
5.833    1.06    0.64      1.249  |OI     |       |       |       |    14.07
5.917    0.74    0.64      1.251  |O      |       |       |       |    14.08
6.000    0.48    0.64      1.251  |O      |       |       |       |    14.08
6.083    0.17    0.64      1.248  IO      |       |       |       |    14.06
6.167    0.02    0.64      1.245  IO      |       |       |       |    14.04
6.250    0.00    0.64      1.240  IO      |       |       |       |    14.01
6.333    0.00    0.64      1.236  IO      |       |       |       |    13.97
6.417    0.00    0.64      1.231  IO      |       |       |       |    13.94
6.500    0.00    0.64      1.227  IO      |       |       |       |    13.91
6.583    0.00    0.64      1.223  IO      |       |       |       |    13.88
6.667    0.00    0.64      1.218  IO      |       |       |       |    13.85
6.750    0.00    0.64      1.214  IO      |       |       |       |    13.82
6.833    0.00    0.64      1.209  IO      |       |       |       |    13.79
6.917    0.00    0.64      1.205  IO      |       |       |       |    13.76
7.000    0.00    0.64      1.201  IO      |       |       |       |    13.73
7.083    0.00    0.64      1.196  IO      |       |       |       |    13.70
7.167    0.00    0.64      1.192  IO      |       |       |       |    13.67
7.250    0.00    0.64      1.187  IO      |       |       |       |    13.64
7.333    0.00    0.64      1.183  IO      |       |       |       |    13.60
7.417    0.00    0.64      1.179  IO      |       |       |       |    13.57
7.500    0.00    0.64      1.174  IO      |       |       |       |    13.54
7.583    0.00    0.64      1.170  IO      |       |       |       |    13.51
7.667    0.00    0.64      1.165  IO      |       |       |       |    13.48
7.750    0.00    0.64      1.161  IO      |       |       |       |    13.44
7.833    0.00    0.64      1.157  IO      |       |       |       |    13.40
7.917    0.00    0.64      1.152  IO      |       |       |       |    13.36
8.000    0.00    0.64      1.148  IO      |       |       |       |    13.33
8.083    0.00    0.64      1.143  IO      |       |       |       |    13.29
8.167    0.00    0.64      1.139  IO      |       |       |       |    13.25
8.250    0.00    0.64      1.134  IO      |       |       |       |    13.21
8.333    0.00    0.64      1.130  IO      |       |       |       |    13.18
8.417    0.00    0.64      1.126  IO      |       |       |       |    13.14
8.500    0.00    0.64      1.121  IO      |       |       |       |    13.10
8.583    0.00    0.64      1.117  IO      |       |       |       |    13.06
8.667    0.00    0.64      1.112  IO      |       |       |       |    13.03
8.750    0.00    0.64      1.108  IO      |       |       |       |    12.99
8.833    0.00    0.64      1.104  IO      |       |       |       |    12.95
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8.917	0.00	0.64	1.099	IO				12.91
9.000	0.00	0.64	1.095	IO				12.87
9.083	0.00	0.64	1.090	IO				12.84
9.167	0.00	0.64	1.086	IO				12.80
9.250	0.00	0.64	1.082	IO				12.76
9.333	0.00	0.64	1.077	IO				12.72
9.417	0.00	0.64	1.073	IO				12.69
9.500	0.00	0.64	1.068	IO				12.65
9.583	0.00	0.64	1.064	IO				12.61
9.667	0.00	0.64	1.060	IO				12.57
9.750	0.00	0.64	1.055	IO				12.54
9.833	0.00	0.64	1.051	IO				12.50
9.917	0.00	0.64	1.046	IO				12.45
10.000	0.00	0.64	1.042	IO				12.40
10.083	0.00	0.64	1.038	IO				12.35
10.167	0.00	0.64	1.033	IO				12.31
10.250	0.00	0.64	1.029	IO				12.26
10.333	0.00	0.64	1.024	IO				12.21
10.417	0.00	0.64	1.020	IO				12.17
10.500	0.00	0.64	1.015	IO				12.12
10.583	0.00	0.64	1.011	IO				12.07
10.667	0.00	0.64	1.007	IO				12.02
10.750	0.00	0.64	1.002	IO				11.98
10.833	0.00	0.64	0.998	IO				11.93
10.917	0.00	0.64	0.993	IO				11.88
11.000	0.00	0.64	0.989	IO				11.83
11.083	0.00	0.64	0.985	IO				11.79
11.167	0.00	0.64	0.980	IO				11.74
11.250	0.00	0.64	0.976	IO				11.69
11.333	0.00	0.64	0.971	IO				11.64
11.417	0.00	0.64	0.967	IO				11.60
11.500	0.00	0.64	0.963	IO				11.55
11.583	0.00	0.64	0.958	IO				11.50
11.667	0.00	0.64	0.954	IO				11.44
11.750	0.00	0.64	0.949	IO				11.38
11.833	0.00	0.64	0.945	IO				11.32
11.917	0.00	0.64	0.941	IO				11.25
12.000	0.00	0.64	0.936	IO				11.19
12.083	0.00	0.64	0.932	IO				11.13
12.167	0.00	0.64	0.927	IO				11.07
12.250	0.00	0.64	0.923	IO				11.01
12.333	0.00	0.64	0.918	IO				10.94
12.417	0.00	0.64	0.914	IO				10.88
12.500	0.00	0.64	0.910	IO				10.82
12.583	0.00	0.64	0.905	IO				10.76
12.667	0.00	0.64	0.901	IO				10.70
12.750	0.00	0.64	0.896	IO				10.63
12.833	0.00	0.64	0.892	IO				10.57
12.917	0.00	0.64	0.888	IO				10.51
13.000	0.00	0.64	0.883	IO				10.42
13.083	0.00	0.64	0.879	IO				10.34
13.167	0.00	0.64	0.874	IO				10.25
13.250	0.00	0.64	0.870	IO				10.16
13.333	0.00	0.64	0.866	IO				10.07
13.417	0.00	0.64	0.861	IO				9.98
13.500	0.00	0.64	0.857	IO				9.90
13.583	0.00	0.64	0.852	IO				9.81
13.667	0.00	0.64	0.848	IO				9.72
13.750	0.00	0.64	0.844	IO				9.63
13.833	0.00	0.64	0.839	IO				9.54

13.917	0.00	0.64	0.835	IO				9.44
14.000	0.00	0.64	0.830	IO				9.32
14.083	0.00	0.64	0.826	IO				9.19
14.167	0.00	0.64	0.822	IO				9.07
14.250	0.00	0.64	0.817	IO				8.98
14.333	0.00	0.64	0.813	IO				8.93
14.417	0.00	0.64	0.808	IO				8.89
14.500	0.00	0.64	0.804	IO				8.84
14.583	0.00	0.64	0.799	IO				8.80
14.667	0.00	0.64	0.795	IO				8.75
14.750	0.00	0.64	0.791	IO				8.70
14.833	0.00	0.64	0.786	IO				8.66
14.917	0.00	0.64	0.782	IO				8.61
15.000	0.00	0.64	0.777	IO				8.57
15.083	0.00	0.64	0.773	IO				8.52
15.167	0.00	0.64	0.769	IO				8.47
15.250	0.00	0.64	0.764	IO				8.43
15.333	0.00	0.64	0.760	IO				8.38
15.417	0.00	0.64	0.755	IO				8.33
15.500	0.00	0.64	0.751	IO				8.29
15.583	0.00	0.64	0.747	IO				8.24
15.667	0.00	0.64	0.742	IO				8.20
15.750	0.00	0.64	0.738	IO				8.15
15.833	0.00	0.64	0.733	IO				8.10
15.917	0.00	0.64	0.729	IO				8.06
16.000	0.00	0.64	0.725	IO				8.01
16.083	0.00	0.64	0.720	IO				7.97
16.167	0.00	0.64	0.716	IO				7.92
16.250	0.00	0.64	0.711	IO				7.87
16.333	0.00	0.64	0.707	IO				7.83
16.417	0.00	0.64	0.703	IO				7.78
16.500	0.00	0.64	0.698	IO				7.74
16.583	0.00	0.64	0.694	IO				7.69
16.667	0.00	0.64	0.689	IO				7.64
16.750	0.00	0.64	0.685	IO				7.60
16.833	0.00	0.64	0.680	IO				7.55
16.917	0.00	0.64	0.676	IO				7.50
17.000	0.00	0.64	0.672	IO				7.46
17.083	0.00	0.64	0.667	IO				7.41
17.167	0.00	0.64	0.663	IO				7.37
17.250	0.00	0.64	0.658	IO				7.32
17.333	0.00	0.64	0.654	IO				7.27
17.417	0.00	0.64	0.650	IO				7.23
17.500	0.00	0.64	0.645	IO				7.18
17.583	0.00	0.64	0.641	IO				7.14
17.667	0.00	0.64	0.636	IO				7.09
17.750	0.00	0.64	0.632	IO				7.04
17.833	0.00	0.64	0.628	IO				7.00
17.917	0.00	0.64	0.623	IO				6.95
18.000	0.00	0.64	0.619	IO				6.91
18.083	0.00	0.64	0.614	IO				6.86
18.167	0.00	0.64	0.610	IO				6.81
18.250	0.00	0.64	0.606	IO				6.77
18.333	0.00	0.64	0.601	IO				6.72
18.417	0.00	0.64	0.597	IO				6.68
18.500	0.00	0.64	0.592	IO				6.63
18.583	0.00	0.64	0.588	IO				6.58
18.667	0.00	0.64	0.584	IO				6.54
18.750	0.00	0.64	0.579	IO				6.49
18.833	0.00	0.64	0.575	IO				6.44

18.917	0.00	0.64	0.570	IO				6.40
19.000	0.00	0.64	0.566	IO				6.35
19.083	0.00	0.64	0.561	IO				6.31
19.167	0.00	0.64	0.557	IO				6.26
19.250	0.00	0.64	0.553	IO				6.21
19.333	0.00	0.64	0.548	IO				6.17
19.417	0.00	0.64	0.544	IO				6.12
19.500	0.00	0.64	0.539	IO				6.08
19.583	0.00	0.64	0.535	IO				6.03
19.667	0.00	0.64	0.531	IO				5.98
19.750	0.00	0.64	0.526	IO				5.94
19.833	0.00	0.64	0.522	IO				5.89
19.917	0.00	0.64	0.517	IO				5.85
20.000	0.00	0.64	0.513	IO				5.80
20.083	0.00	0.64	0.509	IO				5.75
20.167	0.00	0.64	0.504	IO				5.71
20.250	0.00	0.64	0.500	IO				5.66
20.333	0.00	0.64	0.495	IO				5.61
20.417	0.00	0.64	0.491	IO				5.57
20.500	0.00	0.64	0.487	IO				5.52
20.583	0.00	0.64	0.482	IO				5.48
20.667	0.00	0.64	0.478	IO				5.43
20.750	0.00	0.64	0.473	IO				5.38
20.833	0.00	0.64	0.469	IO				5.34
20.917	0.00	0.64	0.465	IO				5.29
21.000	0.00	0.64	0.460	IO				5.25
21.083	0.00	0.64	0.456	IO				5.20
21.167	0.00	0.64	0.451	IO				5.15
21.250	0.00	0.64	0.447	IO				5.11
21.333	0.00	0.64	0.442	IO				5.06
21.417	0.00	0.64	0.438	IO				5.02
21.500	0.00	0.64	0.434	IO				4.97
21.583	0.00	0.64	0.429	IO				4.92
21.667	0.00	0.64	0.425	IO				4.88
21.750	0.00	0.64	0.420	IO				4.83
21.833	0.00	0.64	0.416	IO				4.78
21.917	0.00	0.64	0.412	IO				4.74
22.000	0.00	0.64	0.407	IO				4.69
22.083	0.00	0.64	0.403	IO				4.65
22.167	0.00	0.64	0.398	IO				4.60
22.250	0.00	0.64	0.394	IO				4.55
22.333	0.00	0.64	0.390	IO				4.51
22.417	0.00	0.64	0.385	IO				4.46
22.500	0.00	0.64	0.381	IO				4.42
22.583	0.00	0.64	0.376	IO				4.37
22.667	0.00	0.64	0.372	IO				4.32
22.750	0.00	0.64	0.368	IO				4.28
22.833	0.00	0.64	0.363	IO				4.23
22.917	0.00	0.64	0.359	IO				4.19
23.000	0.00	0.64	0.354	IO				4.14
23.083	0.00	0.64	0.350	IO				4.09
23.167	0.00	0.64	0.345	IO				4.05
23.250	0.00	0.64	0.341	IO				4.00
23.333	0.00	0.64	0.337	IO				3.95
23.417	0.00	0.64	0.332	IO				3.91
23.500	0.00	0.64	0.328	IO				3.86
23.583	0.00	0.64	0.323	IO				3.82
23.667	0.00	0.64	0.319	IO				3.77
23.750	0.00	0.64	0.315	IO				3.72
23.833	0.00	0.64	0.310	IO				3.68

23.917	0.00	0.64	0.306	IO				3.63
24.000	0.00	0.64	0.301	IO				3.59
24.083	0.00	0.64	0.297	IO				3.54
24.167	0.00	0.64	0.293	IO				3.49
24.250	0.00	0.64	0.288	IO				3.45
24.333	0.00	0.64	0.284	IO				3.40
24.417	0.00	0.64	0.279	IO				3.36
24.500	0.00	0.64	0.275	IO				3.31
24.583	0.00	0.64	0.271	IO				3.26
24.667	0.00	0.64	0.266	IO				3.22
24.750	0.00	0.64	0.262	IO				3.17
24.833	0.00	0.64	0.257	IO				3.12
24.917	0.00	0.64	0.253	IO				3.08
25.000	0.00	0.64	0.249	IO				3.03
25.083	0.00	0.64	0.244	IO				2.99
25.167	0.00	0.64	0.240	IO				2.94
25.250	0.00	0.64	0.235	IO				2.89
25.333	0.00	0.64	0.231	IO				2.85
25.417	0.00	0.64	0.226	IO				2.80
25.500	0.00	0.64	0.222	IO				2.76
25.583	0.00	0.64	0.218	IO				2.71
25.667	0.00	0.64	0.213	IO				2.66
25.750	0.00	0.64	0.209	IO				2.62
25.833	0.00	0.64	0.204	IO				2.57
25.917	0.00	0.64	0.200	IO				2.53
26.000	0.00	0.64	0.196	IO				2.48
26.083	0.00	0.64	0.191	IO				2.43
26.167	0.00	0.64	0.187	IO				2.39
26.250	0.00	0.64	0.182	IO				2.34
26.333	0.00	0.64	0.178	IO				2.29
26.417	0.00	0.64	0.174	IO				2.25
26.500	0.00	0.64	0.169	IO				2.20
26.583	0.00	0.64	0.165	IO				2.16
26.667	0.00	0.64	0.160	IO				2.11
26.750	0.00	0.64	0.156	IO				2.06
26.833	0.00	0.64	0.152	IO				2.02
26.917	0.00	0.64	0.147	IO				1.97
27.000	0.00	0.64	0.143	IO				1.93
27.083	0.00	0.64	0.138	IO				1.88
27.167	0.00	0.64	0.134	IO				1.83
27.250	0.00	0.64	0.130	IO				1.79
27.333	0.00	0.64	0.125	IO				1.74
27.417	0.00	0.64	0.121	IO				1.70
27.500	0.00	0.64	0.116	IO				1.65
27.583	0.00	0.64	0.112	IO				1.60
27.667	0.00	0.64	0.107	IO				1.56
27.750	0.00	0.64	0.103	IO				1.51
27.833	0.00	0.62	0.099	IO				1.45
27.917	0.00	0.59	0.095	IO				1.39
28.000	0.00	0.57	0.091	IO				1.33
28.083	0.00	0.54	0.087	IO				1.28
28.167	0.00	0.52	0.083	IO				1.22
28.250	0.00	0.50	0.080	IO				1.17
28.333	0.00	0.48	0.076	IO				1.12
28.417	0.00	0.46	0.073	IO				1.07
28.500	0.00	0.44	0.070	O				1.03
28.583	0.00	0.42	0.067	O				0.98
28.667	0.00	0.40	0.064	O				0.94
28.750	0.00	0.39	0.061	O				0.90
28.833	0.00	0.37	0.059	O				0.86

28.917	0.00	0.35	0.056	O	|	|	|	0.83
29.000	0.00	0.34	0.054	O	|	|	|	0.79
29.083	0.00	0.32	0.052	O	|	|	|	0.76
29.167	0.00	0.31	0.049	O	|	|	|	0.73
29.250	0.00	0.30	0.047	O	|	|	|	0.70
29.333	0.00	0.28	0.045	O	|	|	|	0.67
29.417	0.00	0.27	0.043	O	|	|	|	0.64
29.500	0.00	0.26	0.042	O	|	|	|	0.61
29.583	0.00	0.25	0.040	O	|	|	|	0.59
29.667	0.00	0.24	0.038	O	|	|	|	0.56
29.750	0.00	0.23	0.037	O	|	|	|	0.54
29.833	0.00	0.22	0.035	O	|	|	|	0.51
29.917	0.00	0.21	0.034	O	|	|	|	0.49
30.000	0.00	0.20	0.032	O	|	|	|	0.47
30.083	0.00	0.19	0.031	O	|	|	|	0.45
30.167	0.00	0.18	0.029	O	|	|	|	0.43
30.250	0.00	0.18	0.028	O	|	|	|	0.41
30.333	0.00	0.17	0.027	O	|	|	|	0.40
30.417	0.00	0.16	0.026	O	|	|	|	0.38
30.500	0.00	0.16	0.025	O	|	|	|	0.36
30.583	0.00	0.15	0.024	O	|	|	|	0.35
30.667	0.00	0.14	0.023	O	|	|	|	0.33
30.750	0.00	0.14	0.022	O	|	|	|	0.32
30.833	0.00	0.13	0.021	O	|	|	|	0.31
30.917	0.00	0.13	0.020	O	|	|	|	0.29
31.000	0.00	0.12	0.019	O	|	|	|	0.28
31.083	0.00	0.11	0.018	O	|	|	|	0.27
31.167	0.00	0.11	0.018	O	|	|	|	0.26
31.250	0.00	0.11	0.017	O	|	|	|	0.25
31.333	0.00	0.10	0.016	O	|	|	|	0.24
31.417	0.00	0.10	0.015	O	|	|	|	0.23
31.500	0.00	0.09	0.015	O	|	|	|	0.22
31.583	0.00	0.09	0.014	O	|	|	|	0.21
31.667	0.00	0.08	0.014	O	|	|	|	0.20
31.750	0.00	0.08	0.013	O	|	|	|	0.19
31.833	0.00	0.08	0.012	O	|	|	|	0.18
31.917	0.00	0.07	0.012	O	|	|	|	0.17
32.000	0.00	0.07	0.011	O	|	|	|	0.17
32.083	0.00	0.07	0.011	O	|	|	|	0.16
32.167	0.00	0.07	0.010	O	|	|	|	0.15
32.250	0.00	0.06	0.010	O	|	|	|	0.15
32.333	0.00	0.06	0.010	O	|	|	|	0.14
32.417	0.00	0.06	0.009	O	|	|	|	0.13
32.500	0.00	0.06	0.009	O	|	|	|	0.13
32.583	0.00	0.05	0.008	O	|	|	|	0.12
32.667	0.00	0.05	0.008	O	|	|	|	0.12
32.750	0.00	0.05	0.008	O	|	|	|	0.11
32.833	0.00	0.05	0.007	O	|	|	|	0.11
32.917	0.00	0.04	0.007	O	|	|	|	0.10
33.000	0.00	0.04	0.007	O	|	|	|	0.10
33.083	0.00	0.04	0.006	O	|	|	|	0.10
33.167	0.00	0.04	0.006	O	|	|	|	0.09
33.250	0.00	0.04	0.006	O	|	|	|	0.09
33.333	0.00	0.04	0.006	O	|	|	|	0.08
33.417	0.00	0.03	0.005	O	|	|	|	0.08
33.500	0.00	0.03	0.005	O	|	|	|	0.08
33.583	0.00	0.03	0.005	O	|	|	|	0.07
33.667	0.00	0.03	0.005	O	|	|	|	0.07
33.750	0.00	0.03	0.005	O	|	|	|	0.07
33.833	0.00	0.03	0.004	O	|	|	|	0.06

33.917	0.00	0.03	0.004	O	|	|	|	0.06
34.000	0.00	0.03	0.004	O	|	|	|	0.06
34.083	0.00	0.02	0.004	O	|	|	|	0.06
34.167	0.00	0.02	0.004	O	|	|	|	0.05
34.250	0.00	0.02	0.004	O	|	|	|	0.05
34.333	0.00	0.02	0.003	O	|	|	|	0.05
34.417	0.00	0.02	0.003	O	|	|	|	0.05
34.500	0.00	0.02	0.003	O	|	|	|	0.05
34.583	0.00	0.02	0.003	O	|	|	|	0.04
34.667	0.00	0.02	0.003	O	|	|	|	0.04
34.750	0.00	0.02	0.003	O	|	|	|	0.04
34.833	0.00	0.02	0.003	O	|	|	|	0.04
34.917	0.00	0.02	0.003	O	|	|	|	0.04
35.000	0.00	0.02	0.002	O	|	|	|	0.04
35.083	0.00	0.01	0.002	O	|	|	|	0.03
35.167	0.00	0.01	0.002	O	|	|	|	0.03
35.250	0.00	0.01	0.002	O	|	|	|	0.03
35.333	0.00	0.01	0.002	O	|	|	|	0.03
35.417	0.00	0.01	0.002	O	|	|	|	0.03
35.500	0.00	0.01	0.002	O	|	|	|	0.03
35.583	0.00	0.01	0.002	O	|	|	|	0.03
35.667	0.00	0.01	0.002	O	|	|	|	0.02
35.750	0.00	0.01	0.002	O	|	|	|	0.02
35.833	0.00	0.01	0.002	O	|	|	|	0.02
35.917	0.00	0.01	0.001	O	|	|	|	0.02
36.000	0.00	0.01	0.001	O	|	|	|	0.02
36.083	0.00	0.01	0.001	O	|	|	|	0.02
36.167	0.00	0.01	0.001	O	|	|	|	0.02
36.250	0.00	0.01	0.001	O	|	|	|	0.02
36.333	0.00	0.01	0.001	O	|	|	|	0.02
36.417	0.00	0.01	0.001	O	|	|	|	0.02
36.500	0.00	0.01	0.001	O	|	|	|	0.02
36.583	0.00	0.01	0.001	O	|	|	|	0.02
36.667	0.00	0.01	0.001	O	|	|	|	0.01
36.750	0.00	0.01	0.001	O	|	|	|	0.01
36.833	0.00	0.01	0.001	O	|	|	|	0.01
36.917	0.00	0.01	0.001	O	|	|	|	0.01
37.000	0.00	0.01	0.001	O	|	|	|	0.01
37.083	0.00	0.01	0.001	O	|	|	|	0.01
37.167	0.00	0.00	0.001	O	|	|	|	0.01
37.250	0.00	0.00	0.001	O	|	|	|	0.01
37.333	0.00	0.00	0.001	O	|	|	|	0.01
37.417	0.00	0.00	0.001	O	|	|	|	0.01
37.500	0.00	0.00	0.001	O	|	|	|	0.01
37.583	0.00	0.00	0.001	O	|	|	|	0.01
37.667	0.00	0.00	0.001	O	|	|	|	0.01
37.750	0.00	0.00	0.001	O	|	|	|	0.01
37.833	0.00	0.00	0.001	O	|	|	|	0.01
37.917	0.00	0.00	0.001	O	|	|	|	0.01
38.000	0.00	0.00	0.001	O	|	|	|	0.01
38.083	0.00	0.00	0.000	O	|	|	|	0.01
38.167	0.00	0.00	0.000	O	|	|	|	0.01
38.250	0.00	0.00	0.000	O	|	|	|	0.01
38.333	0.00	0.00	0.000	O	|	|	|	0.01
38.417	0.00	0.00	0.000	O	|	|	|	0.01
38.500	0.00	0.00	0.000	O	|	|	|	0.01
38.583	0.00	0.00	0.000	O	|	|	|	0.01
38.667	0.00	0.00	0.000	O	|	|	|	0.01
38.750	0.00	0.00	0.000	O	|	|	|	0.01
38.833	0.00	0.00	0.000	O	|	|	|	0.00

38.917	0.00	0.00	0.000	O	|	|	|	0.00
39.000	0.00	0.00	0.000	O	|	|	|	0.00
39.083	0.00	0.00	0.000	O	|	|	|	0.00
39.167	0.00	0.00	0.000	O	|	|	|	0.00
39.250	0.00	0.00	0.000	O	|	|	|	0.00
39.333	0.00	0.00	0.000	O	|	|	|	0.00
39.417	0.00	0.00	0.000	O	|	|	|	0.00
39.500	0.00	0.00	0.000	O	|	|	|	0.00
39.583	0.00	0.00	0.000	O	|	|	|	0.00
39.667	0.00	0.00	0.000	O	|	|	|	0.00
39.750	0.00	0.00	0.000	O	|	|	|	0.00
39.833	0.00	0.00	0.000	O	|	|	|	0.00
39.917	0.00	0.00	0.000	O	|	|	|	0.00
40.000	0.00	0.00	0.000	O	|	|	|	0.00
40.083	0.00	0.00	0.000	O	|	|	|	0.00
40.167	0.00	0.00	0.000	O	|	|	|	0.00
40.250	0.00	0.00	0.000	O	|	|	|	0.00

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

Number of intervals = 483
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.640 (CFS)
Total volume = 1.534 (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 - 2005
Study date: 10/25/24

DEXTER VILLAGE
AREA C
100-YR
24-HR

Program License Serial Number 6094

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

From study/file name: COVEAREAC.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.612 (CFS)
Total volume = 2.384 (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 32.000 to Point/Station 32.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 290
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 (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
1.500	0.102	0.640	0.100	0.104
9.000	0.819	0.640	0.817	0.821
9.500	0.837	0.640	0.835	0.839

10.500	0.887	0.640	0.885	0.889
11.500	0.958	0.640	0.956	0.960
12.500	1.051	0.640	1.049	1.053
13.500	1.168	0.640	1.166	1.170
14.500	1.311	0.640	1.309	1.313
15.500	1.489	0.640	1.487	1.491

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.2 2.31 3.46 4.61	Depth (Ft.)
0.083	0.13	0.00	0.000	O | | | |	0.01
0.167	0.21	0.01	0.002	OI | | | |	0.02
0.250	0.22	0.02	0.003	OI | | | |	0.04
0.333	0.28	0.03	0.004	OI | | | |	0.07
0.417	0.32	0.04	0.006	O I | | | |	0.09
0.500	0.33	0.05	0.008	O I | | | |	0.12
0.583	0.33	0.06	0.010	O I | | | |	0.15
0.667	0.33	0.07	0.012	O I | | | |	0.17
0.750	0.33	0.08	0.013	O I | | | |	0.20
0.833	0.39	0.10	0.015	O I | | | |	0.23
0.917	0.43	0.11	0.017	O I | | | |	0.26
1.000	0.43	0.12	0.020	O I | | | |	0.29
1.083	0.37	0.13	0.021	O I | | | |	0.32
1.167	0.33	0.14	0.023	O I | | | |	0.34
1.250	0.33	0.15	0.024	|OI | | | |	0.36
1.333	0.33	0.16	0.025	|OI | | | |	0.37
1.417	0.33	0.17	0.026	|OI | | | |	0.39
1.500	0.33	0.17	0.028	|OI | | | |	0.40
1.583	0.33	0.18	0.029	|OI | | | |	0.42
1.667	0.33	0.19	0.030	|OI | | | |	0.43
1.750	0.33	0.19	0.030	|OI | | | |	0.45
1.833	0.39	0.20	0.032	|OI | | | |	0.46
1.917	0.43	0.21	0.033	|OI | | | |	0.49
2.000	0.43	0.22	0.035	|O I | | | |	0.51
2.083	0.43	0.23	0.036	|O I | | | |	0.53
2.167	0.43	0.23	0.037	|O I | | | |	0.55
2.250	0.43	0.24	0.039	|O I | | | |	0.57
2.333	0.43	0.25	0.040	|O I | | | |	0.59
2.417	0.43	0.26	0.041	|O I | | | |	0.61
2.500	0.43	0.27	0.042	|O I | | | |	0.62
2.583	0.50	0.27	0.044	|O I | | | |	0.64
2.667	0.54	0.28	0.045	|O I | | | |	0.67
2.750	0.54	0.30	0.047	| OI | | | |	0.69
2.833	0.54	0.31	0.049	| OI | | | |	0.72
2.917	0.54	0.32	0.050	| OI | | | |	0.74
3.000	0.54	0.33	0.052	| OI | | | |	0.76
3.083	0.54	0.33	0.053	| OI | | | |	0.78
3.167	0.54	0.34	0.055	| OI | | | |	0.81
3.250	0.54	0.35	0.056	| OI | | | |	0.82
3.333	0.54	0.36	0.057	| OI | | | |	0.84
3.417	0.54	0.37	0.059	| OI | | | |	0.86
3.500	0.54	0.38	0.060	| OI | | | |	0.88
3.583	0.54	0.38	0.061	| OI | | | |	0.90
3.667	0.54	0.39	0.062	| OI | | | |	0.91
3.750	0.54	0.40	0.063	| OI | | | |	0.93
3.833	0.61	0.40	0.064	| O I | | | |	0.94

3.917	0.64	0.41	0.066	O I				0.97
4.000	0.65	0.42	0.067	O I				0.99
4.083	0.65	0.43	0.069	O I				1.01
4.167	0.65	0.44	0.070	OI				1.03
4.250	0.65	0.45	0.072	OI				1.05
4.333	0.71	0.46	0.073	OI				1.08
4.417	0.75	0.47	0.075	O I				1.10
4.500	0.76	0.48	0.077	O I				1.13
4.583	0.76	0.50	0.079	O I				1.16
4.667	0.76	0.51	0.081	O I				1.19
4.750	0.76	0.52	0.082	O I				1.21
4.833	0.82	0.53	0.084	O I				1.24
4.917	0.86	0.54	0.086	O I				1.27
5.000	0.87	0.56	0.089	O I				1.30
5.083	0.74	0.57	0.090	O I				1.33
5.167	0.66	0.57	0.091	OI				1.34
5.250	0.65	0.58	0.092	OI				1.35
5.333	0.71	0.58	0.092	O				1.36
5.417	0.75	0.59	0.093	OI				1.37
5.500	0.76	0.59	0.095	OI				1.39
5.583	0.82	0.60	0.096	OI				1.41
5.667	0.86	0.61	0.098	OI				1.43
5.750	0.87	0.62	0.099	O I				1.46
5.833	0.87	0.63	0.101	O I				1.48
5.917	0.87	0.64	0.102	O I				1.50
6.000	0.87	0.64	0.104	O I				1.52
6.083	0.93	0.64	0.106	O I				1.54
6.167	0.97	0.64	0.108	O I				1.56
6.250	0.98	0.64	0.110	O I				1.59
6.333	0.98	0.64	0.113	O I				1.61
6.417	0.98	0.64	0.115	O I				1.63
6.500	0.98	0.64	0.117	O I				1.66
6.583	1.04	0.64	0.120	O I				1.69
6.667	1.08	0.64	0.123	O I				1.72
6.750	1.08	0.64	0.126	O I				1.75
6.833	1.08	0.64	0.129	O I				1.78
6.917	1.08	0.64	0.132	O I				1.81
7.000	1.08	0.64	0.135	O I				1.84
7.083	1.08	0.64	0.138	O I				1.88
7.167	1.08	0.64	0.141	O I				1.91
7.250	1.08	0.64	0.144	O I				1.94
7.333	1.15	0.64	0.147	O I				1.97
7.417	1.19	0.64	0.151	O I				2.01
7.500	1.19	0.64	0.155	O I				2.05
7.583	1.26	0.64	0.159	O I				2.09
7.667	1.30	0.64	0.163	O I				2.14
7.750	1.30	0.64	0.168	O	I			2.19
7.833	1.36	0.64	0.172	O	I			2.24
7.917	1.40	0.64	0.177	O	I			2.29
8.000	1.41	0.64	0.183	O	I			2.34
8.083	1.54	0.64	0.189	O	I			2.40
8.167	1.61	0.64	0.195	O	I			2.47
8.250	1.63	0.64	0.202	O	I			2.54
8.333	1.63	0.64	0.208	O	I			2.61
8.417	1.63	0.64	0.215	O	I			2.68
8.500	1.63	0.64	0.222	O	I			2.76
8.583	1.69	0.64	0.229	O	I			2.83
8.667	1.73	0.64	0.236	O	I			2.91
8.750	1.73	0.64	0.244	O	I			2.99
8.833	1.80	0.64	0.252	O	I			3.07

8.917	1.84	0.64	0.260	O	I				3.15
9.000	1.84	0.64	0.268	O	I				3.24
9.083	1.97	0.64	0.277	O	I				3.33
9.167	2.05	0.64	0.286	O	I				3.43
9.250	2.06	0.64	0.296	O	I				3.53
9.333	2.12	0.64	0.306	O	I				3.63
9.417	2.16	0.64	0.316	O	I				3.74
9.500	2.17	0.64	0.327	O	I				3.85
9.583	2.23	0.64	0.338	O	I				3.96
9.667	2.27	0.64	0.349	O	I				4.08
9.750	2.28	0.64	0.360	O	I				4.20
9.833	2.34	0.64	0.371	O	I				4.32
9.917	2.38	0.64	0.383	O	I				4.44
10.000	2.38	0.64	0.395	O	I				4.57
10.083	1.94	0.64	0.406	O	I				4.68
10.167	1.67	0.64	0.414	O	I				4.76
10.250	1.63	0.64	0.421	O	I				4.83
10.333	1.63	0.64	0.427	O	I				4.90
10.417	1.63	0.64	0.434	O	I				4.98
10.500	1.63	0.64	0.441	O	I				5.05
10.583	1.94	0.64	0.449	O	I				5.13
10.667	2.14	0.64	0.459	O	I				5.23
10.750	2.17	0.64	0.469	O	I				5.34
10.833	2.17	0.64	0.480	O	I				5.45
10.917	2.17	0.64	0.490	O	I				5.56
11.000	2.17	0.64	0.501	O	I				5.67
11.083	2.10	0.64	0.511	O	I				5.78
11.167	2.07	0.64	0.521	O	I				5.88
11.250	2.06	0.64	0.531	O	I				5.98
11.333	2.06	0.64	0.540	O	I				6.09
11.417	2.06	0.64	0.550	O	I				6.19
11.500	2.06	0.64	0.560	O	I				6.29
11.583	1.93	0.64	0.569	O	I				6.39
11.667	1.85	0.64	0.578	O	I				6.48
11.750	1.84	0.64	0.586	O	I				6.57
11.833	1.91	0.64	0.595	O	I				6.65
11.917	1.95	0.64	0.604	O	I				6.75
12.000	1.95	0.64	0.613	O	I				6.84
12.083	2.54	0.64	0.624	O	I				6.96
12.167	2.91	0.64	0.638	O	I				7.11
12.250	2.97	0.64	0.654	O	I				7.27
12.333	3.07	0.64	0.670	O	I				7.44
12.417	3.14	0.64	0.687	O	I				7.62
12.500	3.16	0.64	0.705	O	I				7.80
12.583	3.37	0.64	0.723	O	I				7.99
12.667	3.50	0.64	0.742	O	I				8.19
12.750	3.52	0.64	0.762	O	I				8.40
12.833	3.63	0.64	0.782	O	I				8.61
12.917	3.70	0.64	0.803	O	I				8.83
13.000	3.71	0.64	0.824	O	I				9.13
13.083	4.23	0.64	0.847	O	I				9.69
13.167	4.54	0.64	0.872	O	I				10.21
13.250	4.59	0.64	0.899	O	I				10.68
13.333	4.60	0.64	0.927	O	I				11.06
13.417	4.61	0.64	0.954	O	I				11.44
13.500	4.61	0.64	0.981	O	I				11.75
13.583	3.50	0.64	1.005	O	I				12.00
13.667	2.83	0.64	1.022	O	I				12.19
13.750	2.74	0.64	1.037	O	I				12.35
13.833	2.74	0.64	1.052	O	I				12.50

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13.917    2.75    0.64      1.066  |   O   |        |  I    |        |    12.63
14.000    2.76    0.64      1.081  |   O   |        |  I    |        |    12.75
14.083    3.17    0.64      1.097  |   O   |        |    I  |        |    12.89
14.167    3.42    0.64      1.115  |   O   |        |      I|        |    13.05
14.250    3.46    0.64      1.134  |   O   |        |       I        |    13.21
14.333    3.37    0.64      1.153  |   O   |        |      I|        |    13.37
14.417    3.31    0.64      1.172  |   O   |        |     I |        |    13.53
14.500    3.31    0.64      1.190  |   O   |        |     I |        |    13.66
14.583    3.32    0.64      1.209  |   O   |        |      I|        |    13.78
14.667    3.32    0.64      1.227  |   O   |        |      I|        |    13.91
14.750    3.33    0.64      1.246  |   O   |        |      I|        |    14.04
14.833    3.23    0.64      1.264  |   O   |        |     I |        |    14.17
14.917    3.18    0.64      1.281  |   O   |        |     I |        |    14.29
15.000    3.17    0.64      1.299  |   O   |        |     I |        |    14.42
15.083    3.08    0.64      1.316  |   O   |        |    I  |        |    14.53
15.167    3.02    0.64      1.333  |   O   |        |   I   |        |    14.62
15.250    3.02    0.64      1.349  |   O   |        |   I   |        |    14.71
15.333    2.92    0.64      1.365  |   O   |        |   I   |        |    14.80
15.417    2.87    0.64      1.381  |   O   |        |  I    |        |    14.89
15.500    2.86    0.64      1.396  |   O   |        |  I    |        |    14.98
15.583    2.46    0.64      1.410  |   O   |        |I      |        |    15.05
15.667    2.22    0.64      1.422  |   O   |       I|       |        |    15.12
15.750    2.19    0.64      1.432  |   O   |       I|       |        |    15.18
15.833    2.20    0.64      1.443  |   O   |       I|       |        |    15.24
15.917    2.20    0.64      1.454  |   O   |       I|       |        |    15.30
16.000    2.21    0.64      1.465  |   O   |       I|       |        |    15.36
16.083    1.16    0.64      1.472  |   O   |I       |       |        |    15.40
16.167    0.53    0.64      1.473  |  IO   |        |       |        |    15.41
16.250    0.43    0.64      1.472  |  IO   |        |       |        |    15.40
16.333    0.43    0.64      1.471  |  IO   |        |       |        |    15.40
16.417    0.43    0.64      1.469  |  IO   |        |       |        |    15.39
16.500    0.43    0.64      1.468  |  IO   |        |       |        |    15.38
16.583    0.37    0.64      1.466  | I O   |        |       |        |    15.37
16.667    0.33    0.64      1.464  | I O   |        |       |        |    15.36
16.750    0.33    0.64      1.462  | I O   |        |       |        |    15.35
16.833    0.33    0.64      1.460  | I O   |        |       |        |    15.34
16.917    0.33    0.64      1.458  | I O   |        |       |        |    15.32
17.000    0.33    0.64      1.455  | I O   |        |       |        |    15.31
17.083    0.45    0.64      1.454  |  IO   |        |       |        |    15.30
17.167    0.53    0.64      1.453  |  IO   |        |       |        |    15.30
17.250    0.54    0.64      1.452  |  IO   |        |       |        |    15.29
17.333    0.54    0.64      1.451  |  IO   |        |       |        |    15.29
17.417    0.54    0.64      1.451  |  IO   |        |       |        |    15.28
17.500    0.54    0.64      1.450  |  IO   |        |       |        |    15.28
17.583    0.54    0.64      1.449  |  IO   |        |       |        |    15.28
17.667    0.54    0.64      1.449  |  IO   |        |       |        |    15.27
17.750    0.54    0.64      1.448  |  IO   |        |       |        |    15.27
17.833    0.48    0.64      1.447  |  IO   |        |       |        |    15.26
17.917    0.44    0.64      1.446  |  IO   |        |       |        |    15.26
18.000    0.43    0.64      1.444  |  IO   |        |       |        |    15.25
18.083    0.43    0.64      1.443  |  IO   |        |       |        |    15.24
18.167    0.43    0.64      1.442  |  IO   |        |       |        |    15.23
18.250    0.43    0.64      1.440  |  IO   |        |       |        |    15.23
18.333    0.43    0.64      1.439  |  IO   |        |       |        |    15.22
18.417    0.43    0.64      1.437  |  IO   |        |       |        |    15.21
18.500    0.43    0.64      1.436  |  IO   |        |       |        |    15.20
18.583    0.37    0.64      1.434  | I O   |        |       |        |    15.19
18.667    0.33    0.64      1.432  | I O   |        |       |        |    15.18
18.750    0.33    0.64      1.430  | I O   |        |       |        |    15.17
18.833    0.26    0.64      1.428  |I  O   |        |       |        |    15.16
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18.917	0.22	0.64	1.425	I O				15.14
19.000	0.22	0.64	1.422	I O				15.12
19.083	0.28	0.64	1.419	I O				15.11
19.167	0.32	0.64	1.417	I O				15.10
19.250	0.33	0.64	1.415	I O				15.08
19.333	0.39	0.64	1.413	I O				15.07
19.417	0.43	0.64	1.411	I O				15.06
19.500	0.43	0.64	1.410	IO				15.06
19.583	0.37	0.64	1.408	I O				15.05
19.667	0.33	0.64	1.406	I O				15.03
19.750	0.33	0.64	1.404	I O				15.02
19.833	0.26	0.64	1.402	I O				15.01
19.917	0.22	0.64	1.399	I O				14.99
20.000	0.22	0.64	1.396	I O				14.98
20.083	0.28	0.64	1.393	I O				14.96
20.167	0.32	0.64	1.391	I O				14.95
20.250	0.33	0.64	1.389	I O				14.94
20.333	0.33	0.64	1.387	I O				14.93
20.417	0.33	0.64	1.384	I O				14.91
20.500	0.33	0.64	1.382	I O				14.90
20.583	0.33	0.64	1.380	I O				14.89
20.667	0.33	0.64	1.378	I O				14.88
20.750	0.33	0.64	1.376	I O				14.86
20.833	0.26	0.64	1.373	I O				14.85
20.917	0.22	0.64	1.371	I O				14.84
21.000	0.22	0.64	1.368	I O				14.82
21.083	0.28	0.64	1.365	I O				14.80
21.167	0.32	0.64	1.363	I O				14.79
21.250	0.33	0.64	1.361	I O				14.78
21.333	0.26	0.64	1.358	I O				14.77
21.417	0.22	0.64	1.355	I O				14.75
21.500	0.22	0.64	1.353	I O				14.73
21.583	0.28	0.64	1.350	I O				14.72
21.667	0.32	0.64	1.348	I O				14.71
21.750	0.33	0.64	1.345	I O				14.69
21.833	0.26	0.64	1.343	I O				14.68
21.917	0.22	0.64	1.340	I O				14.66
22.000	0.22	0.64	1.337	I O				14.65
22.083	0.28	0.64	1.335	I O				14.63
22.167	0.32	0.64	1.332	I O				14.62
22.250	0.33	0.64	1.330	I O				14.61
22.333	0.26	0.64	1.328	I O				14.59
22.417	0.22	0.64	1.325	I O				14.58
22.500	0.22	0.64	1.322	I O				14.56
22.583	0.22	0.64	1.319	I O				14.55
22.667	0.22	0.64	1.316	I O				14.53
22.750	0.22	0.64	1.313	I O				14.51
22.833	0.22	0.64	1.310	I O				14.50
22.917	0.22	0.64	1.307	I O				14.48
23.000	0.22	0.64	1.305	I O				14.45
23.083	0.22	0.64	1.302	I O				14.43
23.167	0.22	0.64	1.299	I O				14.41
23.250	0.22	0.64	1.296	I O				14.39
23.333	0.22	0.64	1.293	I O				14.37
23.417	0.22	0.64	1.290	I O				14.35
23.500	0.22	0.64	1.287	I O				14.33
23.583	0.22	0.64	1.284	I O				14.31
23.667	0.22	0.64	1.281	I O				14.29
23.750	0.22	0.64	1.278	I O				14.27
23.833	0.22	0.64	1.275	I O				14.25

23.917	0.22	0.64	1.272	|I	O	|	|	|	14.23
24.000	0.22	0.64	1.270	|I	O	|	|	|	14.21
24.083	0.09	0.64	1.266	I	O	|	|	|	14.19
24.167	0.01	0.64	1.262	I	O	|	|	|	14.16
24.250	0.00	0.64	1.258	I	O	|	|	|	14.13
24.333	0.00	0.64	1.253	I	O	|	|	|	14.10
24.417	0.00	0.64	1.249	I	O	|	|	|	14.07
24.500	0.00	0.64	1.245	I	O	|	|	|	14.04
24.583	0.00	0.64	1.240	I	O	|	|	|	14.00
24.667	0.00	0.64	1.236	I	O	|	|	|	13.97
24.750	0.00	0.64	1.231	I	O	|	|	|	13.94
24.833	0.00	0.64	1.227	I	O	|	|	|	13.91
24.917	0.00	0.64	1.223	I	O	|	|	|	13.88
25.000	0.00	0.64	1.218	I	O	|	|	|	13.85
25.083	0.00	0.64	1.214	I	O	|	|	|	13.82
25.167	0.00	0.64	1.209	I	O	|	|	|	13.79
25.250	0.00	0.64	1.205	I	O	|	|	|	13.76
25.333	0.00	0.64	1.201	I	O	|	|	|	13.73
25.417	0.00	0.64	1.196	I	O	|	|	|	13.70
25.500	0.00	0.64	1.192	I	O	|	|	|	13.67
25.583	0.00	0.64	1.187	I	O	|	|	|	13.63
25.667	0.00	0.64	1.183	I	O	|	|	|	13.60
25.750	0.00	0.64	1.178	I	O	|	|	|	13.57
25.833	0.00	0.64	1.174	I	O	|	|	|	13.54
25.917	0.00	0.64	1.170	I	O	|	|	|	13.51
26.000	0.00	0.64	1.165	I	O	|	|	|	13.48
26.083	0.00	0.64	1.161	I	O	|	|	|	13.44
26.167	0.00	0.64	1.156	I	O	|	|	|	13.40
26.250	0.00	0.64	1.152	I	O	|	|	|	13.36
26.333	0.00	0.64	1.148	I	O	|	|	|	13.33
26.417	0.00	0.64	1.143	I	O	|	|	|	13.29
26.500	0.00	0.64	1.139	I	O	|	|	|	13.25
26.583	0.00	0.64	1.134	I	O	|	|	|	13.21
26.667	0.00	0.64	1.130	I	O	|	|	|	13.18
26.750	0.00	0.64	1.126	I	O	|	|	|	13.14
26.833	0.00	0.64	1.121	I	O	|	|	|	13.10
26.917	0.00	0.64	1.117	I	O	|	|	|	13.06
27.000	0.00	0.64	1.112	I	O	|	|	|	13.02
27.083	0.00	0.64	1.108	I	O	|	|	|	12.99
27.167	0.00	0.64	1.104	I	O	|	|	|	12.95
27.250	0.00	0.64	1.099	I	O	|	|	|	12.91
27.333	0.00	0.64	1.095	I	O	|	|	|	12.87
27.417	0.00	0.64	1.090	I	O	|	|	|	12.84
27.500	0.00	0.64	1.086	I	O	|	|	|	12.80
27.583	0.00	0.64	1.081	I	O	|	|	|	12.76
27.667	0.00	0.64	1.077	I	O	|	|	|	12.72
27.750	0.00	0.64	1.073	I	O	|	|	|	12.69
27.833	0.00	0.64	1.068	I	O	|	|	|	12.65
27.917	0.00	0.64	1.064	I	O	|	|	|	12.61
28.000	0.00	0.64	1.059	I	O	|	|	|	12.57
28.083	0.00	0.64	1.055	I	O	|	|	|	12.53
28.167	0.00	0.64	1.051	I	O	|	|	|	12.50
28.250	0.00	0.64	1.046	I	O	|	|	|	12.45
28.333	0.00	0.64	1.042	I	O	|	|	|	12.40
28.417	0.00	0.64	1.037	I	O	|	|	|	12.35
28.500	0.00	0.64	1.033	I	O	|	|	|	12.31
28.583	0.00	0.64	1.029	I	O	|	|	|	12.26
28.667	0.00	0.64	1.024	I	O	|	|	|	12.21
28.750	0.00	0.64	1.020	I	O	|	|	|	12.16
28.833	0.00	0.64	1.015	I	O	|	|	|	12.12

28.917	0.00	0.64	1.011	I	O	|	|	|	|	12.07
29.000	0.00	0.64	1.007	I	O	|	|	|	|	12.02
29.083	0.00	0.64	1.002	I	O	|	|	|	|	11.97
29.167	0.00	0.64	0.998	I	O	|	|	|	|	11.93
29.250	0.00	0.64	0.993	I	O	|	|	|	|	11.88
29.333	0.00	0.64	0.989	I	O	|	|	|	|	11.83
29.417	0.00	0.64	0.985	I	O	|	|	|	|	11.79
29.500	0.00	0.64	0.980	I	O	|	|	|	|	11.74
29.583	0.00	0.64	0.976	I	O	|	|	|	|	11.69
29.667	0.00	0.64	0.971	I	O	|	|	|	|	11.64
29.750	0.00	0.64	0.967	I	O	|	|	|	|	11.60
29.833	0.00	0.64	0.962	I	O	|	|	|	|	11.55
29.917	0.00	0.64	0.958	I	O	|	|	|	|	11.50
30.000	0.00	0.64	0.954	I	O	|	|	|	|	11.44
30.083	0.00	0.64	0.949	I	O	|	|	|	|	11.38
30.167	0.00	0.64	0.945	I	O	|	|	|	|	11.31
30.250	0.00	0.64	0.940	I	O	|	|	|	|	11.25
30.333	0.00	0.64	0.936	I	O	|	|	|	|	11.19
30.417	0.00	0.64	0.932	I	O	|	|	|	|	11.13
30.500	0.00	0.64	0.927	I	O	|	|	|	|	11.07
30.583	0.00	0.64	0.923	I	O	|	|	|	|	11.00
30.667	0.00	0.64	0.918	I	O	|	|	|	|	10.94
30.750	0.00	0.64	0.914	I	O	|	|	|	|	10.88
30.833	0.00	0.64	0.910	I	O	|	|	|	|	10.82
30.917	0.00	0.64	0.905	I	O	|	|	|	|	10.76
31.000	0.00	0.64	0.901	I	O	|	|	|	|	10.69
31.083	0.00	0.64	0.896	I	O	|	|	|	|	10.63
31.167	0.00	0.64	0.892	I	O	|	|	|	|	10.57
31.250	0.00	0.64	0.888	I	O	|	|	|	|	10.51
31.333	0.00	0.64	0.883	I	O	|	|	|	|	10.42
31.417	0.00	0.64	0.879	I	O	|	|	|	|	10.33
31.500	0.00	0.64	0.874	I	O	|	|	|	|	10.25
31.583	0.00	0.64	0.870	I	O	|	|	|	|	10.16
31.667	0.00	0.64	0.866	I	O	|	|	|	|	10.07
31.750	0.00	0.64	0.861	I	O	|	|	|	|	9.98
31.833	0.00	0.64	0.857	I	O	|	|	|	|	9.89
31.917	0.00	0.64	0.852	I	O	|	|	|	|	9.81
32.000	0.00	0.64	0.848	I	O	|	|	|	|	9.72
32.083	0.00	0.64	0.843	I	O	|	|	|	|	9.63
32.167	0.00	0.64	0.839	I	O	|	|	|	|	9.54
32.250	0.00	0.64	0.835	I	O	|	|	|	|	9.43
32.333	0.00	0.64	0.830	I	O	|	|	|	|	9.31
32.417	0.00	0.64	0.826	I	O	|	|	|	|	9.19
32.500	0.00	0.64	0.821	I	O	|	|	|	|	9.07
32.583	0.00	0.64	0.817	I	O	|	|	|	|	8.98
32.667	0.00	0.64	0.813	I	O	|	|	|	|	8.93
32.750	0.00	0.64	0.808	I	O	|	|	|	|	8.89
32.833	0.00	0.64	0.804	I	O	|	|	|	|	8.84
32.917	0.00	0.64	0.799	I	O	|	|	|	|	8.79
33.000	0.00	0.64	0.795	I	O	|	|	|	|	8.75
33.083	0.00	0.64	0.791	I	O	|	|	|	|	8.70
33.167	0.00	0.64	0.786	I	O	|	|	|	|	8.66
33.250	0.00	0.64	0.782	I	O	|	|	|	|	8.61
33.333	0.00	0.64	0.777	I	O	|	|	|	|	8.56
33.417	0.00	0.64	0.773	I	O	|	|	|	|	8.52
33.500	0.00	0.64	0.769	I	O	|	|	|	|	8.47
33.583	0.00	0.64	0.764	I	O	|	|	|	|	8.43
33.667	0.00	0.64	0.760	I	O	|	|	|	|	8.38
33.750	0.00	0.64	0.755	I	O	|	|	|	|	8.33
33.833	0.00	0.64	0.751	I	O	|	|	|	|	8.29

33.917	0.00	0.64	0.747	I	O	|	|	|	|	8.24
34.000	0.00	0.64	0.742	I	O	|	|	|	|	8.20
34.083	0.00	0.64	0.738	I	O	|	|	|	|	8.15
34.167	0.00	0.64	0.733	I	O	|	|	|	|	8.10
34.250	0.00	0.64	0.729	I	O	|	|	|	|	8.06
34.333	0.00	0.64	0.724	I	O	|	|	|	|	8.01
34.417	0.00	0.64	0.720	I	O	|	|	|	|	7.97
34.500	0.00	0.64	0.716	I	O	|	|	|	|	7.92
34.583	0.00	0.64	0.711	I	O	|	|	|	|	7.87
34.667	0.00	0.64	0.707	I	O	|	|	|	|	7.83
34.750	0.00	0.64	0.702	I	O	|	|	|	|	7.78
34.833	0.00	0.64	0.698	I	O	|	|	|	|	7.73
34.917	0.00	0.64	0.694	I	O	|	|	|	|	7.69
35.000	0.00	0.64	0.689	I	O	|	|	|	|	7.64
35.083	0.00	0.64	0.685	I	O	|	|	|	|	7.60
35.167	0.00	0.64	0.680	I	O	|	|	|	|	7.55
35.250	0.00	0.64	0.676	I	O	|	|	|	|	7.50
35.333	0.00	0.64	0.672	I	O	|	|	|	|	7.46
35.417	0.00	0.64	0.667	I	O	|	|	|	|	7.41
35.500	0.00	0.64	0.663	I	O	|	|	|	|	7.37
35.583	0.00	0.64	0.658	I	O	|	|	|	|	7.32
35.667	0.00	0.64	0.654	I	O	|	|	|	|	7.27
35.750	0.00	0.64	0.650	I	O	|	|	|	|	7.23
35.833	0.00	0.64	0.645	I	O	|	|	|	|	7.18
35.917	0.00	0.64	0.641	I	O	|	|	|	|	7.14
36.000	0.00	0.64	0.636	I	O	|	|	|	|	7.09
36.083	0.00	0.64	0.632	I	O	|	|	|	|	7.04
36.167	0.00	0.64	0.627	I	O	|	|	|	|	7.00
36.250	0.00	0.64	0.623	I	O	|	|	|	|	6.95
36.333	0.00	0.64	0.619	I	O	|	|	|	|	6.90
36.417	0.00	0.64	0.614	I	O	|	|	|	|	6.86
36.500	0.00	0.64	0.610	I	O	|	|	|	|	6.81
36.583	0.00	0.64	0.605	I	O	|	|	|	|	6.77
36.667	0.00	0.64	0.601	I	O	|	|	|	|	6.72
36.750	0.00	0.64	0.597	I	O	|	|	|	|	6.67
36.833	0.00	0.64	0.592	I	O	|	|	|	|	6.63
36.917	0.00	0.64	0.588	I	O	|	|	|	|	6.58
37.000	0.00	0.64	0.583	I	O	|	|	|	|	6.54
37.083	0.00	0.64	0.579	I	O	|	|	|	|	6.49
37.167	0.00	0.64	0.575	I	O	|	|	|	|	6.44
37.250	0.00	0.64	0.570	I	O	|	|	|	|	6.40
37.333	0.00	0.64	0.566	I	O	|	|	|	|	6.35
37.417	0.00	0.64	0.561	I	O	|	|	|	|	6.31
37.500	0.00	0.64	0.557	I	O	|	|	|	|	6.26
37.583	0.00	0.64	0.553	I	O	|	|	|	|	6.21
37.667	0.00	0.64	0.548	I	O	|	|	|	|	6.17
37.750	0.00	0.64	0.544	I	O	|	|	|	|	6.12
37.833	0.00	0.64	0.539	I	O	|	|	|	|	6.07
37.917	0.00	0.64	0.535	I	O	|	|	|	|	6.03
38.000	0.00	0.64	0.531	I	O	|	|	|	|	5.98
38.083	0.00	0.64	0.526	I	O	|	|	|	|	5.94
38.167	0.00	0.64	0.522	I	O	|	|	|	|	5.89
38.250	0.00	0.64	0.517	I	O	|	|	|	|	5.84
38.333	0.00	0.64	0.513	I	O	|	|	|	|	5.80
38.417	0.00	0.64	0.508	I	O	|	|	|	|	5.75
38.500	0.00	0.64	0.504	I	O	|	|	|	|	5.71
38.583	0.00	0.64	0.500	I	O	|	|	|	|	5.66
38.667	0.00	0.64	0.495	I	O	|	|	|	|	5.61
38.750	0.00	0.64	0.491	I	O	|	|	|	|	5.57
38.833	0.00	0.64	0.486	I	O	|	|	|	|	5.52

38.917	0.00	0.64	0.482	I	O	|	|	|	|	5.48
39.000	0.00	0.64	0.478	I	O	|	|	|	|	5.43
39.083	0.00	0.64	0.473	I	O	|	|	|	|	5.38
39.167	0.00	0.64	0.469	I	O	|	|	|	|	5.34
39.250	0.00	0.64	0.464	I	O	|	|	|	|	5.29
39.333	0.00	0.64	0.460	I	O	|	|	|	|	5.24
39.417	0.00	0.64	0.456	I	O	|	|	|	|	5.20
39.500	0.00	0.64	0.451	I	O	|	|	|	|	5.15
39.583	0.00	0.64	0.447	I	O	|	|	|	|	5.11
39.667	0.00	0.64	0.442	I	O	|	|	|	|	5.06
39.750	0.00	0.64	0.438	I	O	|	|	|	|	5.01
39.833	0.00	0.64	0.434	I	O	|	|	|	|	4.97
39.917	0.00	0.64	0.429	I	O	|	|	|	|	4.92
40.000	0.00	0.64	0.425	I	O	|	|	|	|	4.88
40.083	0.00	0.64	0.420	I	O	|	|	|	|	4.83
40.167	0.00	0.64	0.416	I	O	|	|	|	|	4.78
40.250	0.00	0.64	0.412	I	O	|	|	|	|	4.74
40.333	0.00	0.64	0.407	I	O	|	|	|	|	4.69
40.417	0.00	0.64	0.403	I	O	|	|	|	|	4.65
40.500	0.00	0.64	0.398	I	O	|	|	|	|	4.60
40.583	0.00	0.64	0.394	I	O	|	|	|	|	4.55
40.667	0.00	0.64	0.389	I	O	|	|	|	|	4.51
40.750	0.00	0.64	0.385	I	O	|	|	|	|	4.46
40.833	0.00	0.64	0.381	I	O	|	|	|	|	4.41
40.917	0.00	0.64	0.376	I	O	|	|	|	|	4.37
41.000	0.00	0.64	0.372	I	O	|	|	|	|	4.32
41.083	0.00	0.64	0.367	I	O	|	|	|	|	4.28
41.167	0.00	0.64	0.363	I	O	|	|	|	|	4.23
41.250	0.00	0.64	0.359	I	O	|	|	|	|	4.18
41.333	0.00	0.64	0.354	I	O	|	|	|	|	4.14
41.417	0.00	0.64	0.350	I	O	|	|	|	|	4.09
41.500	0.00	0.64	0.345	I	O	|	|	|	|	4.05
41.583	0.00	0.64	0.341	I	O	|	|	|	|	4.00
41.667	0.00	0.64	0.337	I	O	|	|	|	|	3.95
41.750	0.00	0.64	0.332	I	O	|	|	|	|	3.91
41.833	0.00	0.64	0.328	I	O	|	|	|	|	3.86
41.917	0.00	0.64	0.323	I	O	|	|	|	|	3.82
42.000	0.00	0.64	0.319	I	O	|	|	|	|	3.77
42.083	0.00	0.64	0.315	I	O	|	|	|	|	3.72
42.167	0.00	0.64	0.310	I	O	|	|	|	|	3.68
42.250	0.00	0.64	0.306	I	O	|	|	|	|	3.63
42.333	0.00	0.64	0.301	I	O	|	|	|	|	3.59
42.417	0.00	0.64	0.297	I	O	|	|	|	|	3.54
42.500	0.00	0.64	0.293	I	O	|	|	|	|	3.49
42.583	0.00	0.64	0.288	I	O	|	|	|	|	3.45
42.667	0.00	0.64	0.284	I	O	|	|	|	|	3.40
42.750	0.00	0.64	0.279	I	O	|	|	|	|	3.35
42.833	0.00	0.64	0.275	I	O	|	|	|	|	3.31
42.917	0.00	0.64	0.270	I	O	|	|	|	|	3.26
43.000	0.00	0.64	0.266	I	O	|	|	|	|	3.22
43.083	0.00	0.64	0.262	I	O	|	|	|	|	3.17
43.167	0.00	0.64	0.257	I	O	|	|	|	|	3.12
43.250	0.00	0.64	0.253	I	O	|	|	|	|	3.08
43.333	0.00	0.64	0.248	I	O	|	|	|	|	3.03
43.417	0.00	0.64	0.244	I	O	|	|	|	|	2.99
43.500	0.00	0.64	0.240	I	O	|	|	|	|	2.94
43.583	0.00	0.64	0.235	I	O	|	|	|	|	2.89
43.667	0.00	0.64	0.231	I	O	|	|	|	|	2.85
43.750	0.00	0.64	0.226	I	O	|	|	|	|	2.80
43.833	0.00	0.64	0.222	I	O	|	|	|	|	2.76

43.917	0.00	0.64	0.218	I	O	|	|	|	2.71
44.000	0.00	0.64	0.213	I	O	|	|	|	2.66
44.083	0.00	0.64	0.209	I	O	|	|	|	2.62
44.167	0.00	0.64	0.204	I	O	|	|	|	2.57
44.250	0.00	0.64	0.200	I	O	|	|	|	2.52
44.333	0.00	0.64	0.196	I	O	|	|	|	2.48
44.417	0.00	0.64	0.191	I	O	|	|	|	2.43
44.500	0.00	0.64	0.187	I	O	|	|	|	2.39
44.583	0.00	0.64	0.182	I	O	|	|	|	2.34
44.667	0.00	0.64	0.178	I	O	|	|	|	2.29
44.750	0.00	0.64	0.174	I	O	|	|	|	2.25
44.833	0.00	0.64	0.169	I	O	|	|	|	2.20
44.917	0.00	0.64	0.165	I	O	|	|	|	2.16
45.000	0.00	0.64	0.160	I	O	|	|	|	2.11
45.083	0.00	0.64	0.156	I	O	|	|	|	2.06
45.167	0.00	0.64	0.151	I	O	|	|	|	2.02
45.250	0.00	0.64	0.147	I	O	|	|	|	1.97
45.333	0.00	0.64	0.143	I	O	|	|	|	1.93
45.417	0.00	0.64	0.138	I	O	|	|	|	1.88
45.500	0.00	0.64	0.134	I	O	|	|	|	1.83
45.583	0.00	0.64	0.129	I	O	|	|	|	1.79
45.667	0.00	0.64	0.125	I	O	|	|	|	1.74
45.750	0.00	0.64	0.121	I	O	|	|	|	1.69
45.833	0.00	0.64	0.116	I	O	|	|	|	1.65
45.917	0.00	0.64	0.112	I	O	|	|	|	1.60
46.000	0.00	0.64	0.107	I	O	|	|	|	1.56
46.083	0.00	0.64	0.103	I	O	|	|	|	1.51
46.167	0.00	0.62	0.099	I	O	|	|	|	1.45
46.250	0.00	0.59	0.094	I	O	|	|	|	1.39
46.333	0.00	0.57	0.090	I	O	|	|	|	1.33
46.417	0.00	0.54	0.087	I	O	|	|	|	1.27
46.500	0.00	0.52	0.083	I	O	|	|	|	1.22
46.583	0.00	0.50	0.079	I	O	|	|	|	1.17
46.667	0.00	0.48	0.076	I	O	|	|	|	1.12
46.750	0.00	0.46	0.073	I	O	|	|	|	1.07
46.833	0.00	0.44	0.070	I	O	|	|	|	1.03
46.917	0.00	0.42	0.067	I	O	|	|	|	0.98
47.000	0.00	0.40	0.064	I	O	|	|	|	0.94
47.083	0.00	0.38	0.061	I	O	|	|	|	0.90
47.167	0.00	0.37	0.059	I	O	|	|	|	0.86
47.250	0.00	0.35	0.056	I	O	|	|	|	0.83
47.333	0.00	0.34	0.054	I	O	|	|	|	0.79
47.417	0.00	0.32	0.052	I	O	|	|	|	0.76
47.500	0.00	0.31	0.049	I	O	|	|	|	0.73
47.583	0.00	0.30	0.047	I	O	|	|	|	0.70
47.667	0.00	0.28	0.045	I	O	|	|	|	0.67
47.750	0.00	0.27	0.043	I	O	|	|	|	0.64
47.833	0.00	0.26	0.042	I	O	|	|	|	0.61
47.917	0.00	0.25	0.040	I	O	|	|	|	0.59
48.000	0.00	0.24	0.038	I	O	|	|	|	0.56
48.083	0.00	0.23	0.037	I	O	|	|	|	0.54
48.167	0.00	0.22	0.035	I	O	|	|	|	0.51
48.250	0.00	0.21	0.033	I	O	|	|	|	0.49
48.333	0.00	0.20	0.032	I	O	|	|	|	0.47
48.417	0.00	0.19	0.031	I	O	|	|	|	0.45
48.500	0.00	0.18	0.029	I	O	|	|	|	0.43
48.583	0.00	0.18	0.028	I	O	|	|	|	0.41
48.667	0.00	0.17	0.027	I	O	|	|	|	0.40
48.750	0.00	0.16	0.026	I	O	|	|	|	0.38
48.833	0.00	0.16	0.025	I	O	|	|	|	0.36

48.917	0.00	0.15	0.024	IO				0.35
49.000	0.00	0.14	0.023	O				0.33
49.083	0.00	0.14	0.022	O				0.32
49.167	0.00	0.13	0.021	O				0.31
49.250	0.00	0.13	0.020	O				0.29
49.333	0.00	0.12	0.019	O				0.28
49.417	0.00	0.11	0.018	O				0.27
49.500	0.00	0.11	0.018	O				0.26
49.583	0.00	0.11	0.017	O				0.25
49.667	0.00	0.10	0.016	O				0.24
49.750	0.00	0.10	0.015	O				0.23
49.833	0.00	0.09	0.015	O				0.22
49.917	0.00	0.09	0.014	O				0.21
50.000	0.00	0.08	0.014	O				0.20
50.083	0.00	0.08	0.013	O				0.19
50.167	0.00	0.08	0.012	O				0.18
50.250	0.00	0.07	0.012	O				0.17
50.333	0.00	0.07	0.011	O				0.17
50.417	0.00	0.07	0.011	O				0.16
50.500	0.00	0.07	0.010	O				0.15
50.583	0.00	0.06	0.010	O				0.15
50.667	0.00	0.06	0.010	O				0.14
50.750	0.00	0.06	0.009	O				0.13
50.833	0.00	0.06	0.009	O				0.13
50.917	0.00	0.05	0.008	O				0.12
51.000	0.00	0.05	0.008	O				0.12
51.083	0.00	0.05	0.008	O				0.11
51.167	0.00	0.05	0.007	O				0.11
51.250	0.00	0.04	0.007	O				0.10
51.333	0.00	0.04	0.007	O				0.10
51.417	0.00	0.04	0.006	O				0.10
51.500	0.00	0.04	0.006	O				0.09
51.583	0.00	0.04	0.006	O				0.09
51.667	0.00	0.04	0.006	O				0.08
51.750	0.00	0.03	0.005	O				0.08
51.833	0.00	0.03	0.005	O				0.08
51.917	0.00	0.03	0.005	O				0.07
52.000	0.00	0.03	0.005	O				0.07
52.083	0.00	0.03	0.005	O				0.07
52.167	0.00	0.03	0.004	O				0.06
52.250	0.00	0.03	0.004	O				0.06
52.333	0.00	0.03	0.004	O				0.06
52.417	0.00	0.02	0.004	O				0.06
52.500	0.00	0.02	0.004	O				0.05
52.583	0.00	0.02	0.004	O				0.05
52.667	0.00	0.02	0.003	O				0.05
52.750	0.00	0.02	0.003	O				0.05
52.833	0.00	0.02	0.003	O				0.05
52.917	0.00	0.02	0.003	O				0.04
53.000	0.00	0.02	0.003	O				0.04
53.083	0.00	0.02	0.003	O				0.04
53.167	0.00	0.02	0.003	O				0.04
53.250	0.00	0.02	0.003	O				0.04
53.333	0.00	0.02	0.002	O				0.04
53.417	0.00	0.01	0.002	O				0.03
53.500	0.00	0.01	0.002	O				0.03
53.583	0.00	0.01	0.002	O				0.03
53.667	0.00	0.01	0.002	O				0.03
53.750	0.00	0.01	0.002	O				0.03
53.833	0.00	0.01	0.002	O				0.03

53.917	0.00	0.01	0.002	O	|	|	|	|	0.03
54.000	0.00	0.01	0.002	O	|	|	|	|	0.02
54.083	0.00	0.01	0.002	O	|	|	|	|	0.02
54.167	0.00	0.01	0.002	O	|	|	|	|	0.02
54.250	0.00	0.01	0.001	O	|	|	|	|	0.02
54.333	0.00	0.01	0.001	O	|	|	|	|	0.02
54.417	0.00	0.01	0.001	O	|	|	|	|	0.02
54.500	0.00	0.01	0.001	O	|	|	|	|	0.02
54.583	0.00	0.01	0.001	O	|	|	|	|	0.02
54.667	0.00	0.01	0.001	O	|	|	|	|	0.02
54.750	0.00	0.01	0.001	O	|	|	|	|	0.02
54.833	0.00	0.01	0.001	O	|	|	|	|	0.02
54.917	0.00	0.01	0.001	O	|	|	|	|	0.02
55.000	0.00	0.01	0.001	O	|	|	|	|	0.01
55.083	0.00	0.01	0.001	O	|	|	|	|	0.01
55.167	0.00	0.01	0.001	O	|	|	|	|	0.01
55.250	0.00	0.01	0.001	O	|	|	|	|	0.01
55.333	0.00	0.01	0.001	O	|	|	|	|	0.01
55.417	0.00	0.01	0.001	O	|	|	|	|	0.01
55.500	0.00	0.00	0.001	O	|	|	|	|	0.01
55.583	0.00	0.00	0.001	O	|	|	|	|	0.01
55.667	0.00	0.00	0.001	O	|	|	|	|	0.01
55.750	0.00	0.00	0.001	O	|	|	|	|	0.01
55.833	0.00	0.00	0.001	O	|	|	|	|	0.01
55.917	0.00	0.00	0.001	O	|	|	|	|	0.01
56.000	0.00	0.00	0.001	O	|	|	|	|	0.01
56.083	0.00	0.00	0.001	O	|	|	|	|	0.01
56.167	0.00	0.00	0.001	O	|	|	|	|	0.01
56.250	0.00	0.00	0.001	O	|	|	|	|	0.01
56.333	0.00	0.00	0.001	O	|	|	|	|	0.01
56.417	0.00	0.00	0.000	O	|	|	|	|	0.01
56.500	0.00	0.00	0.000	O	|	|	|	|	0.01
56.583	0.00	0.00	0.000	O	|	|	|	|	0.01
56.667	0.00	0.00	0.000	O	|	|	|	|	0.01
56.750	0.00	0.00	0.000	O	|	|	|	|	0.01
56.833	0.00	0.00	0.000	O	|	|	|	|	0.01
56.917	0.00	0.00	0.000	O	|	|	|	|	0.01
57.000	0.00	0.00	0.000	O	|	|	|	|	0.01
57.083	0.00	0.00	0.000	O	|	|	|	|	0.01
57.167	0.00	0.00	0.000	O	|	|	|	|	0.00
57.250	0.00	0.00	0.000	O	|	|	|	|	0.00
57.333	0.00	0.00	0.000	O	|	|	|	|	0.00
57.417	0.00	0.00	0.000	O	|	|	|	|	0.00
57.500	0.00	0.00	0.000	O	|	|	|	|	0.00
57.583	0.00	0.00	0.000	O	|	|	|	|	0.00
57.667	0.00	0.00	0.000	O	|	|	|	|	0.00
57.750	0.00	0.00	0.000	O	|	|	|	|	0.00
57.833	0.00	0.00	0.000	O	|	|	|	|	0.00
57.917	0.00	0.00	0.000	O	|	|	|	|	0.00
58.000	0.00	0.00	0.000	O	|	|	|	|	0.00
58.083	0.00	0.00	0.000	O	|	|	|	|	0.00
58.167	0.00	0.00	0.000	O	|	|	|	|	0.00
58.250	0.00	0.00	0.000	O	|	|	|	|	0.00
58.333	0.00	0.00	0.000	O	|	|	|	|	0.00
58.417	0.00	0.00	0.000	O	|	|	|	|	0.00
58.500	0.00	0.00	0.000	O	|	|	|	|	0.00
58.583	0.00	0.00	0.000	O	|	|	|	|	0.00

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

Number of intervals = 703

```
            Time interval =    5.0 (Min.)
            Maximum/Peak flow rate =        0.640 (CFS)
            Total volume =       2.384 (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
****************************************************************************

----------------------------------------------------------------------
```

APPENDIX E

HYDRAULICS

INFILTRATION DETENTION BASIN NO. 1
EMERGENCY OUTLET CALCULATIONS

Worksheet for EMERGENCY OUTLET STRUCTURE

Project Description

Solve For	Headwater Elevation

Input Data

Discharge	23.70	ft³/s
Centroid Elevation	1300.10	ft
Tailwater Elevation	0.00	ft
Discharge Coefficient	0.60	
Opening Width	21.00	ft
Opening Height	0.33	ft

Results

Headwater Elevation	1300.60	ft
Headwater Height Above Centroid	0.50	ft
Tailwater Height Above Centroid	-1300.10	ft
Flow Area	6.99	ft²
Velocity	3.39	ft/s

OFFSITE INLET CALCULATIONS

Worksheet for OFFSITE INLET SIZING

Project Description

Solve For	Headwater Elevation

Input Data

Discharge	320.30	ft³/s
Centroid Elevation	3.25	ft
Tailwater Elevation	0.00	ft
Discharge Coefficient	0.60	
Diameter	6.50	ft

Results

Headwater Elevation	7.27	ft
Headwater Height Above Centroid	4.02	ft
Tailwater Height Above Centroid	-3.25	ft
Flow Area	33.18	ft²
Velocity	9.65	ft/s

AN 8.3' DEPRESSION DEPTH WILL BE PROVIDED TO ACCOUNT FOR FREEBOARD.

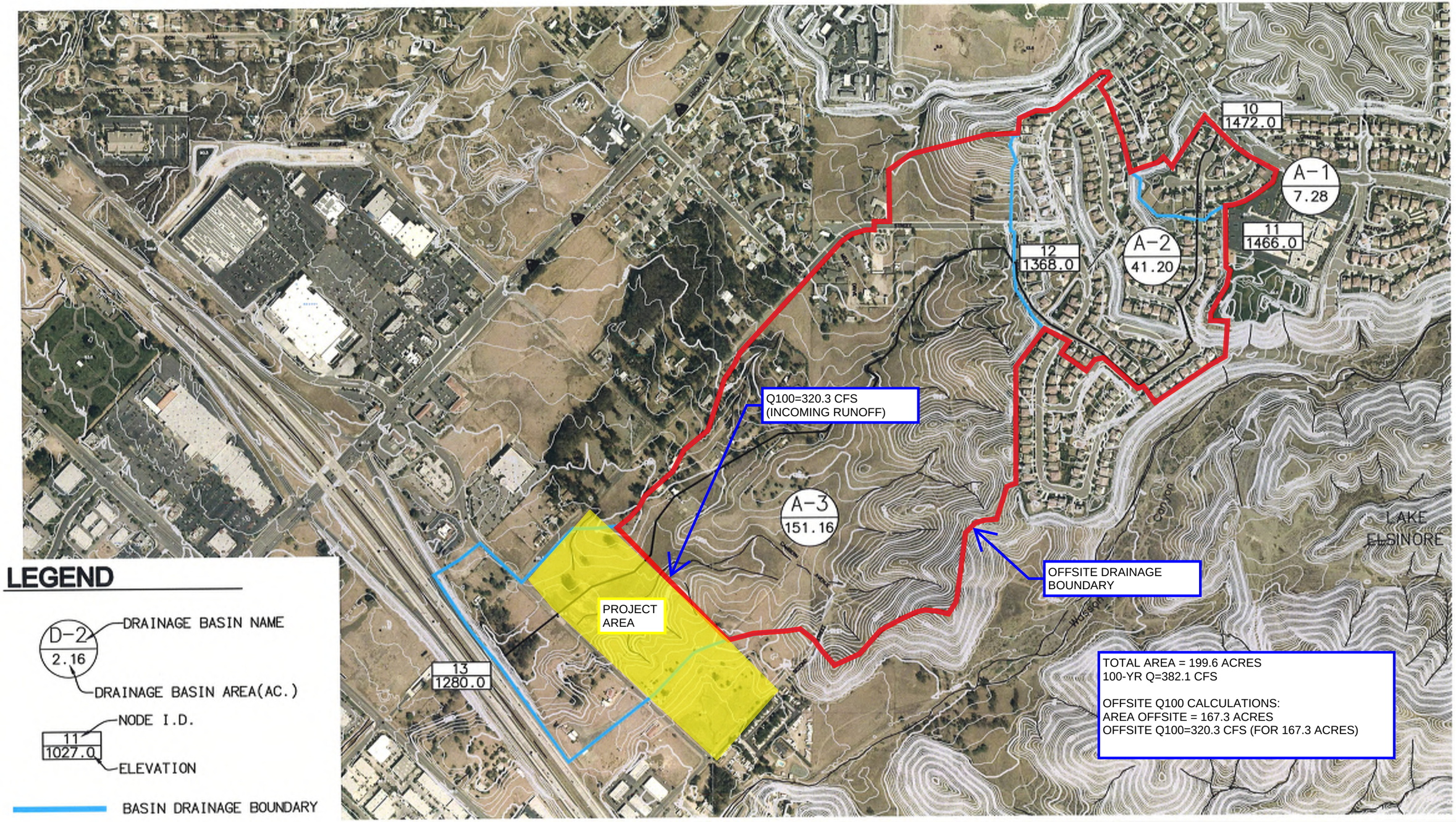
A HEADWALL INLET TYPE STRCUTURE WILL BE PROVIDED, THUS THE INLET IS SIZED A 78" ORIFICE OPENING.

APPENDIX F

REFERENCE MATERIAL

OFFSITE DRAINAGE CALCULATIONS

(FROM THIRD STREET DRAINAGE IMPROVEMENTS, TECHNICAL STUDY)



Michael Baker
INTERNATIONAL
40810 COUNTY CENTER DR.,
SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

THIRD STREET SD

DEXTER LATERAL D HYDROLOGY MAP

H:\PDATA\148215\CADD\STRMWATER\EXHIBITS\148215-HYDRO MAP-DEXTER-LAT.DWG XOCHITL.LOZANO 7/21/17 2:47 pm

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 07/17/17 File:3RDDEXTER.out

3RD STREET STORM DRAIN
DEXTER LATERAL FLOW
100-YEAR STORM ANALYSIS
MICHAEL BAKER INTL-TEMECULA

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

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

Program License Serial Number 6341

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 585.000(Ft.)
Top (of initial area) elevation = 1472.000(Ft.)
Bottom (of initial area) elevation = 1466.000(Ft.)
Difference in elevation = 6.000(Ft.)
Slope = 0.01026 s(percent)= 1.03
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.466 min.
Rainfall intensity = 3.189(In/Hr) for a 100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.845
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 2)  =  75.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     19.616(CFS)
Total initial stream area =        7.280(Ac.)
Pervious area fraction = 0.500


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------------
Top of street segment elevation =  1466.000(Ft.)
End of street segment elevation =  1368.000(Ft.)
Length of street segment  =  2485.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  22.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
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 =     64.911(CFS)
Depth of flow =   0.558(Ft.), Average velocity =   6.697(Ft/s)
Warning: depth of flow exceeds top of curb
Distance that curb overflow reaches into property =    2.32(Ft.)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  21.569(Ft.)
Flow velocity =   6.70(Ft/s)
Travel time =    6.18 min.     TC =   18.65  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.835
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 2)  =  75.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      2.628(In/Hr) for a   100.0 year storm
Subarea runoff =     90.408(CFS) for     41.200(Ac.)
Total runoff =    110.025(CFS)   Total area =      48.480(Ac.)
Street flow at end of street =    110.025(CFS)
Half street flow at end of street =     55.012(CFS)
Depth of flow =   0.643(Ft.), Average velocity =   7.803(Ft/s)
Warning: depth of flow exceeds top of curb
Note:  depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property =    5.71(Ft.)
Flow width (from curb towards crown)=  22.000(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       12.000 to Point/Station       13.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
```

```
Top of natural channel elevation =   1368.000(Ft.)
End of natural channel elevation =   1280.000(Ft.)
Length of natural channel  =  4630.000(Ft.)
Estimated mean flow rate at midpoint of channel =    281.553(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 =   9.00(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
     Normal channel slope =  0.0190
Corrected/adjusted channel slope =  0.0190
Travel time =    8.58 min.     TC =   27.23  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.821
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.100
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.400
RI index for soil(AMC 2)  =  86.40
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.192(In/Hr) for a   100.0 year storm
Subarea runoff =    272.120(CFS) for    151.160(Ac.)
Total runoff =    382.145(CFS)  Total area =     199.640(Ac.)
End of computations, total study area =          199.64 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.879
Area averaged RI index number =  83.6
```



THIRD STREET DRAINAGE IMPROVEMENTS

TECHNICAL DRAINAGE STUDY

TECHNICAL
DRAINAGE STUDY

THIRD STREET DRAINAGE IMPROVEMENTS
Lake Elsinore, California
February 13, 2018

Prepared for:

Brad Fagrell, P.E., City Engineer
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Engineer of Work/ Contact Person:
John Tanner III, P.E.

JN 148215

02/13/2018

TECHNICAL
DRAINAGE STUDY

THIRD STREET DRAINAGE IMPROVEMENTS
Lake Elsinore, California
February 13, 2018

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No Received Stamp

02/13/2018

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Appendix B Stage II Watershed Area A1: Synthetic Unit Hydrograph Analysis, 100-year frequency, 3-hr, 6-hr & 24-hr

Appendix C Stage II Watershed Area A2: Synthetic Unit Hydrograph Analysis, 100-year frequency, 3-hr, 6-hr & 24-hr

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Appendix E Stage II Watershed Area A4: Synthetic Unit Hydrograph Analysis, 100-year frequency, 3-hr, 6-hr & 24-hr

Appendix F Stage III Watershed Area A5: Synthetic Unit Hydrograph Analysis, 100-year frequency, 3-hr, 6-hr & 24-hr

Appendix G Stage III Watershed Area A6: Synthetic Unit Hydrograph Analysis, 100-year frequency, 3-hr, 6-hr & 24-hr

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Appendix I Storm Drain Hydraulics (WSPG Input/Output)

Appendix J Existing & Proposed Storm Drain Facilities

Appendix K Memorandum of Understanding

Appendix L D-Load Calculations

Appendix M Reference Documents & CD

Appendix N Amendment – Interim Conditions

SECTION 1 – INTRODUCTION

1.1 BACKGROUND

Michael Baker International has been retained by the City of Lake Elsinore to provide professional engineering services for the design and plan preparation of final PS&E for Third Street Channel Watershed Drainage Improvements, a Master Drainage facility or as cited in City's RFP as Third Street Drainage Improvements.

The watershed is approximately 700-acres, located in the City of Lake Elsinore, County of Riverside, California. It lays within the Santa Ana River Basin and the RCFC&WCD Zone 3 watershed. It is bounded roughly to the north by Central Avenue (State Highway 74) and Mauricio Avenue, to the east by the ridgeline of Wasson Canyon Wash, to the west by Collier Avenue and to the south by 2nd Street. The existing land use consists primarily of vacant parcels with fewer medium to low residential development with some commercial areas.

The watershed topography ranges from mildly steep-sloped foothills to relatively flat valley terrain and generally flows in the southwesterly direction. The Third Street Drainage Improvements will convey storm water through this area, out-letting into the existing Third Street Channel and double culvert located on 3rd Street and Collier Avenue.

On February 11, 2016 the City met with Riverside County Flood Control & Water Conservation District (RCFC&WCD) to discuss the master drainage improvements (MDP) for the existing Third Street Channel Watershed, its funding, operation and maintenance, where agreement was made for RCFC&WCD to own, operate and maintain the Third Street Channel Watershed Improvements.

1.2 PURPOSE

The purpose of this technical drainage study is to investigate and evaluate deficiencies in the Third Street Channel watershed and to develop an economical drainage plan which considers protection of both existing development and potential future development. The results from the engineering analysis will ultimately serve as technical documentation for the preparation of Final engineering design and selection of the recommended watershed improvements.

The recommendations of this Plan will provide increased flood protection as facilities are installed and will be used as a guide for locating and sizing major drainage facilities, as development increases in the area.

SECTION 2 - HYDROLOGY

2.1 METHODOLOGY

The hydrology analysis for this watershed was developed using the Synthetic Unit Hydrograph Method (SUH) which is suitable for watersheds larger than 300 to 500 acres as described and in accordance with the procedures and recommendations outlined in the Riverside County Flood Control and Water Conservation District Hydrology Manual 1978 edition (Ref. 1), referred to hereafter as "Hydrology Manual". CivilDesign® Unit Hydrograph Hydrology, Riverside County Software was used to perform the Synthetic Unit Hydrograph Hydrology.

For the Cambern Lateral, Lateral D and Lateral F, the hydrology analysis was completed using the Rational Method. CivilDesign® Rational Method Hydrology, Riverside County Software was used to perform the Rational Method Hydrology.

The Antecedent Moisture Conditions (AMC) used in this study was AMC II, defined in the District's Hydrology Manual as moderate runoff potential, an intermediate condition. The composite runoff index coefficients for each sub-basin were determined based upon land-use and hydrological soil types.

The SUH 100 year frequency storm flows are summarized for Stage II and Stage III in Table 1.1 and 1.2 respectively.

TABLE 1.1 - Stage II Results

Duration Storm Analyzed	A1 Peak flow rates (cfs)	A2 Peak flow rates (cfs)	A3 Peak flow rates (cfs)	A4 Peak flow rates (cfs)	A Peak flow rates (cfs)
3-HR	570.3	587.1	621.1	938.6	1,043.9
6-HR	539.3	555.3	590.0	888.0	988.0
24-HR	259.4	267.2	291.8	430.0	484.6
Tributary Area (acres)	383.4	393.8	431.3	631.0	704.4

TABLE 1.2 - Stage III Results

Duration Storm Analyzed	A5 Peak flow rates (cfs)	A6 Peak flow rates (cfs)	A7 Peak flow rates (cfs)
3-HR	501.4	488.7	593.6
6-HR	475.1	462.9	561.4
24-HR	225.8	227.7	272.2
Tributary Area (acres)	330.0	338.8	402.6

2.2 STAGE II CRITERIA

A preliminary analysis, hydrology study and 35% schematic drawings were previously completed by Otte Berkeley Group on behalf of Walmart, and provided to Michael Baker International for reference. The schematic drawings under Otte Berkely's preliminary design proposes drainage improvements along 3rd street between Collier Avenue and Cambern Avenue.

The drainage watercourse was determined based on Flood Control topography, City as-built drawings, sub division and road survey plans and field investigations. The watershed under this study has been designated watershed "A" and divided into 4 sub areas, where each sub area corresponds to the segment or reach evaluated for necessary drainage improvements along the proposed alignment. The initial area is Watershed "A1" with concentration point at Cambern Avenue, roughly 400 lineal feet west of 3rd Street. Most of the storm flows at this location are being released upstream from an existing storm drain located at Conard Avenue, approximately 90 lineal feet north of Welch Drive. From the outlet point on Conard Avenue, storm flows travel downstream traversing private property via a meandering natural channel with unknown widths towards Cambern Avenue. However there appears to be a more or less defined small v-shape earthen channel located between private properties at the "A1" concentration point.

AMENDMENT: Riverside County Flood Control has requested to increase the pipe size on Cambern Avenue from a 54" to 78" diameter pipe in the case that State III is not developed. By increasing the pipe size of this lateral RCFC is insuring that this lateral will have the capacity to incorporate flows east of Camern Avenue, approximately an additional 500 cfs. New calculations have been added to prove that this increase in pipe size can handle the additional flows. The calculations for these interim conditions can be found in the Appendix N.

A preliminary normal depth analysis performed for the v-channel segment and based on the aerial topography shows a maximum channel capacity of 80 cfs. Therefore it is being assumed

that actual developed storm flows do not concentrate at this point but disperse and continue in the southerly direction. The proposed inlet structure proposed at this location is for an interim condition until the master drainage facility is extended to the intersection of Conard Avenue and Welch Drive and collects storm flows tributary to this point. It should be noted that "A1" storm flows under the interim conditions will be higher than those for the ultimate developed conditions, and therefore the storm drain facility will be designed to safely convey the larger storm flows.

The next sub-area is "A2" which allows us to estimate developed storm water flows within Cambern Avenue between Highway 74 and 3rd Street; and it is followed by the next downstream Sub-area "A3 with a concentration point at the Intersection of Dexter Avenue and 3rd Street; the next and final sub-area is "A4" with a concentration point at the end of 3rd Street and north side of interstate 15 right-of-way. Finally, watershed "A" has the concentration point at the existing double reinforced concrete culvert located at the intersection of 3rd street and Collier Avenue.

The watershed is traversed at the lower end (downstream) in a northwest-southeast direction by California Interstate 15. Per our investigation, there are five (5) storm drain culverts crossing underneath the highway. The culverts lay roughly perpendicular to the highway allowing storm water to flow unobstructed from its natural watercourse. There is an existing 24-inch pipe culvert beginning from the north, followed in a southerly direction by a 30, 36, and 54-inch pipe culverts; and near the southerly end of the watershed an 8'x6' Reinforced Concrete Box. These facilities are owned, maintained and located in CALTRANS right-of-way.

As summarized in Table 1.1, the ultimate developed storm water flows between concentration points "A4" and "A" is estimated to be 105.3 cfs, of which approximately 87 cfs is expected to be generated by the tributary areas to the north and northwest of the intersection of Collier Avenue and 3rd Street; and the remainder flows by the area to the northeast and south of interstate 15.

To collect flows from the north and northwest under ultimate conditions, a 48-inch RCP storm drain lateral stub with bulkhead is being proposed at station 26+77.51 (Lateral C). This line will need to be extended by others as development occurs. However under existing conditions, an existing storm inlet headwall with a 30-inch CMP storm drain pipe collects and conveys some of the tributary flows from this area; the inlet headwall is located on the north side of Collier Avenue at approximately 285 feet northwest of the existing double 4.5'x14' RCB, and the drain pipe extends to the existing box culvert. For purposes of this study, however, the existing 30-inch inlet is assumed to be plugged such that flows will continue to travel southeast to the proposed temporary concrete inlet headwall structure and the 42-inch RCP lateral that connect to the new RCB structure on the west side at station 22+69.07 (Lateral B).

Flows developed under the ultimate conditions from the northeast area of the street intersection of Collier Avenue and Third Street, and to the south of interstate 15 are estimated to be

approximately 19 cfs of which 9 cfs are conveyed by the north side of Collier Avenue (see Appendix 1 for map) where they will be collected by a CMP riser and an 18-inch RCP lateral (Lateral F); the remainder flows will be conveyed by the existing 42-inch CMP culvert and the proposed 42-inch RCP lateral, which will connect to the east of the new RCB structure at station 22+52.95 (Lateral A).

Prior to construction of the future 78-inch MDP lateral at Dexter Avenue, all flows developed under the existing conditions from the watershed area that is tributary to the northeast corner of the street intersection of Collier Avenue and 3rd Street, will continue to travel in a southwest direction through the existing Caltrans 8'x6' RCB culvert, and intercepted by the existing 42-inch inlet headwall structure located east of Third Street and on the north side of Collier Avenue, discharging to the new RCB structure via the new connection at station 22+52.95 (Lateral A).

2.3 STAGE III CRITERIA

The drainage watercourse was determined based on Flood Control topography, City as-built drawings, sub division and road survey plans and field investigations. Stage III watersheds are part of the Stage II watershed "A" and have been divided into 3 sub areas, where each sub area corresponds to the segment or reach evaluated for necessary drainage improvements along the proposed alignment.

Stage III initial area is Watershed "A5" with concentration point at Conard Avenue and Welch Drive. Flows at this location will captured flows from an existing meandering natural channel by a future proposed structure just east of Welch Drive dead end. The next sub-area is "A6" with a concentration point at the Intersection of Cambern Avenue and 3rd Street; and it is followed by Sub-area "A7" with a concentration point at the Intersection of Cambern Avenue and 3rd Street as well. "A7" will allows us to determine ultimate developed storm water flows within Cambern Avenue between Highway 74 and 3rd Street.

2.4 RAINFALL VALUES

The NOAA Atlas 2 rainfall data from precipitation maps found in RCFC&WCD Hydrology Manual dated April 1978 was used in this technical drainage study. See Table 2 for Point Rainfall amounts.

TABLE 2: POINT RAINFALL AMOUNTS

FREQUENCY YEARS	DURATION HOURS	POINT RAINFALL INCHES
2	1	0.58
	3	0.95
	6	1.35
	24	2.5
100	1	1.45
	3	2.3
	6	3.3
	24	6

2.5 HYDROLOGIC SOIL TYPES

Hydrologic soil types were determined from City G.I.S database which includes soil names and descriptions. The majority of the area consists of soil types D, to lesser extent C, small amounts of B and negligible amounts of A. The composite soil map is included in Appendix.

2.6 LAND USE

Land use assumptions used throughout the study were based on the City of Lake Elsinore General Plan, updated 2011 and with revisions adopted by the City Council on April 23, 2013. The watershed lays within two City Districts, the Lake Elsinore Hills District and the Business District, with an area within the Ramsgate Specific Plan.

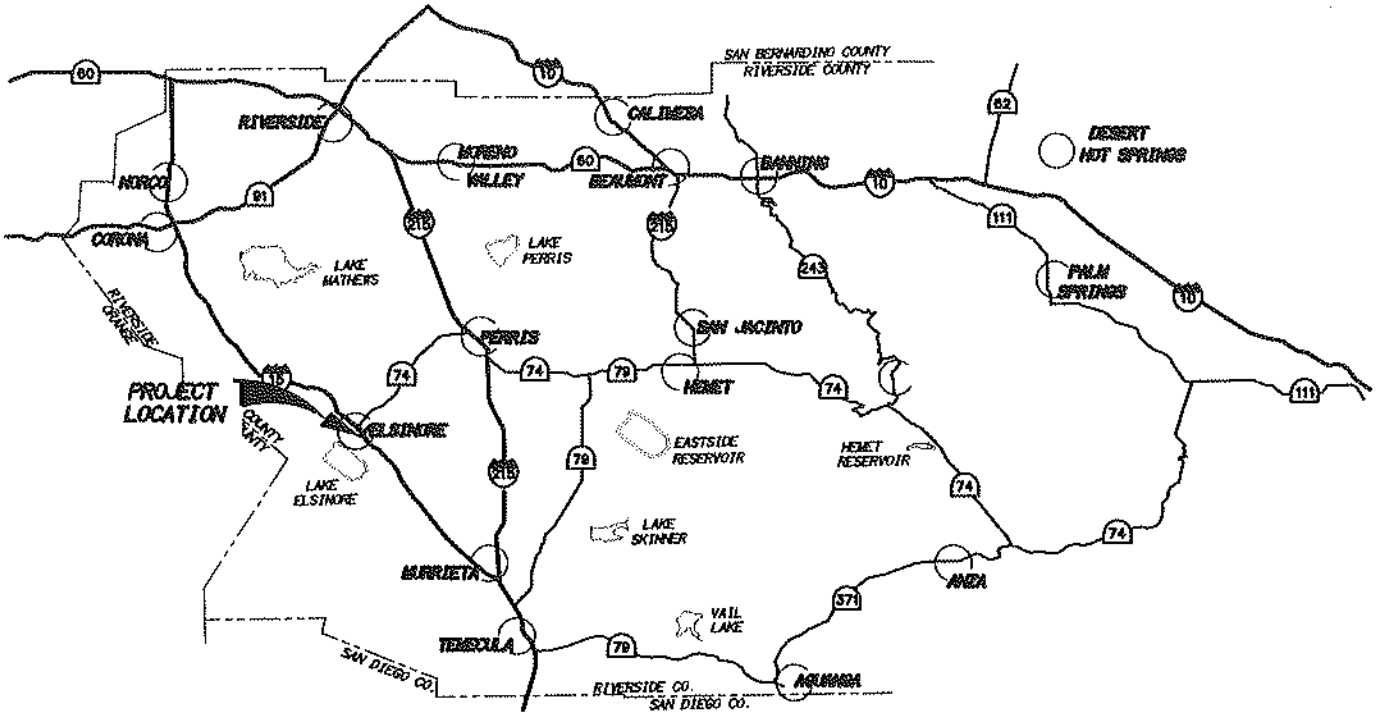
SECTION 3 - HYDRAULICS

3.1 STORM DRAIN ANALYSIS

The storm drains were sized to convey the 100-year storm without exceeding RCF&WCD hydraulic criteria. The hydraulic analysis was performed using the Water Surface Pressure Gradient (WSPG) computer program. The starting water surface elevation controls for storm drains out-letting into the Third Street Channel uses the maximum 100-year water surface in the channel. For laterals, the starting water surface used was the hydraulic grade line at the confluence. The WSPG input and output files are included in Appendix I.

SECTION 4 – REFERENCES

1. Riverside County Flood Control and Water Conservation District (RCFC&WCD) *Hydrology Manual, 1978*
2. Memorandum of Understanding by Albert A. Webb Associates, dated July 20, 2015.
3. CivilDesign® *Unit Hydrograph Hydrology, Riverside County.* Ver. 9.0
4. CivilDesign® *Rational Method Hydrology, Riverside County.* Ver. 9.0
5. CivilDesign® *Water Surface and Pressure Gradient Hydraulic Analysis System Program WSPGW.* Ver. 14.07
6. USDA/NRCS – National Geospatial Center of Excellence, Digital General Soil Map of U.S., Calendar Date: 2000 – Present, Metadata Date: August 7, 2015
7. USDA/NRCS – National Geospatial Center of Excellence, 2011 National Land Cover Dataset (NLCD), Calendar Date: 2011, Metadata Date: August 6, 2015



VICINITY MAP

NTS

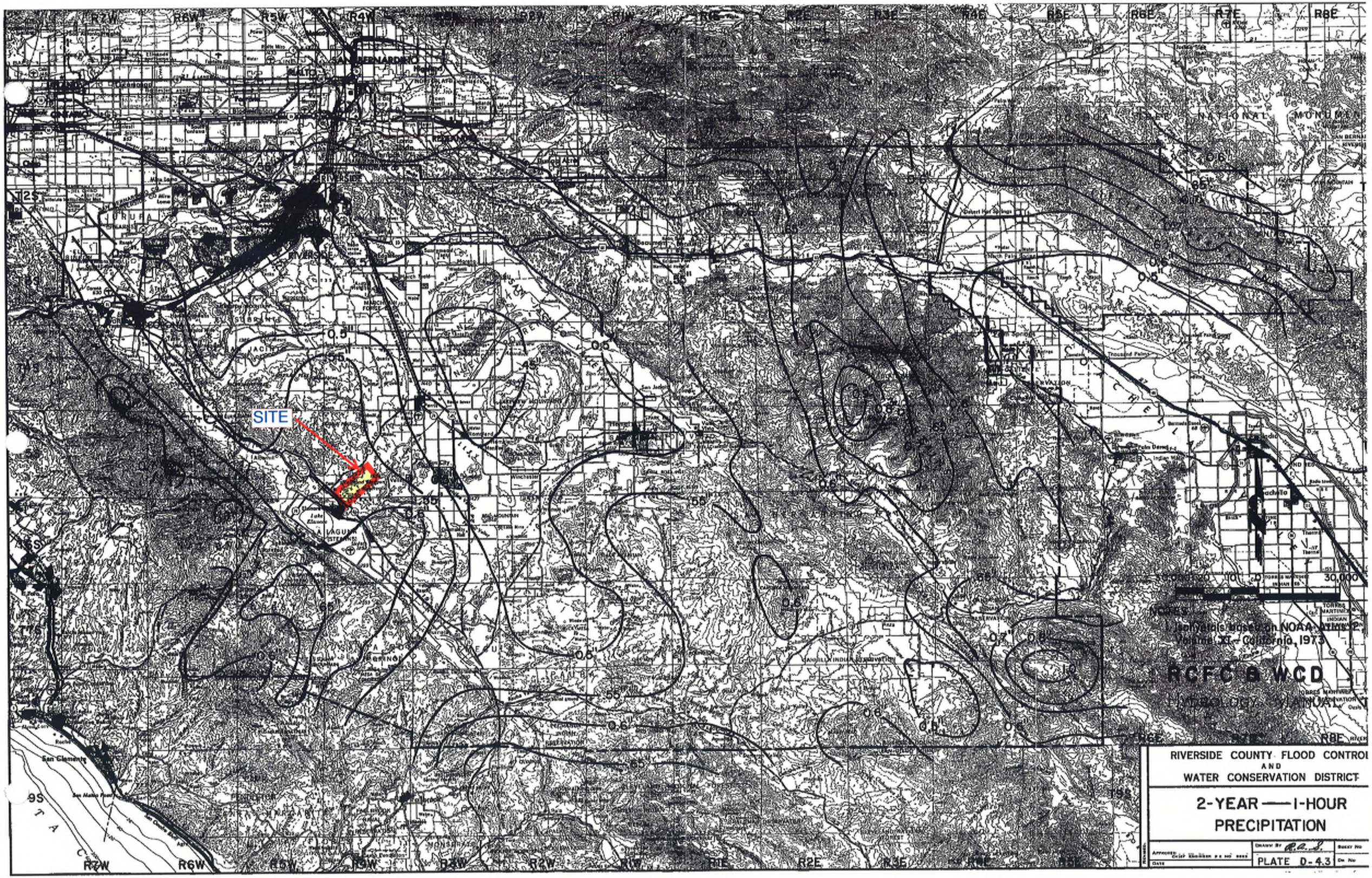
Michael Baker INTERNATIONAL

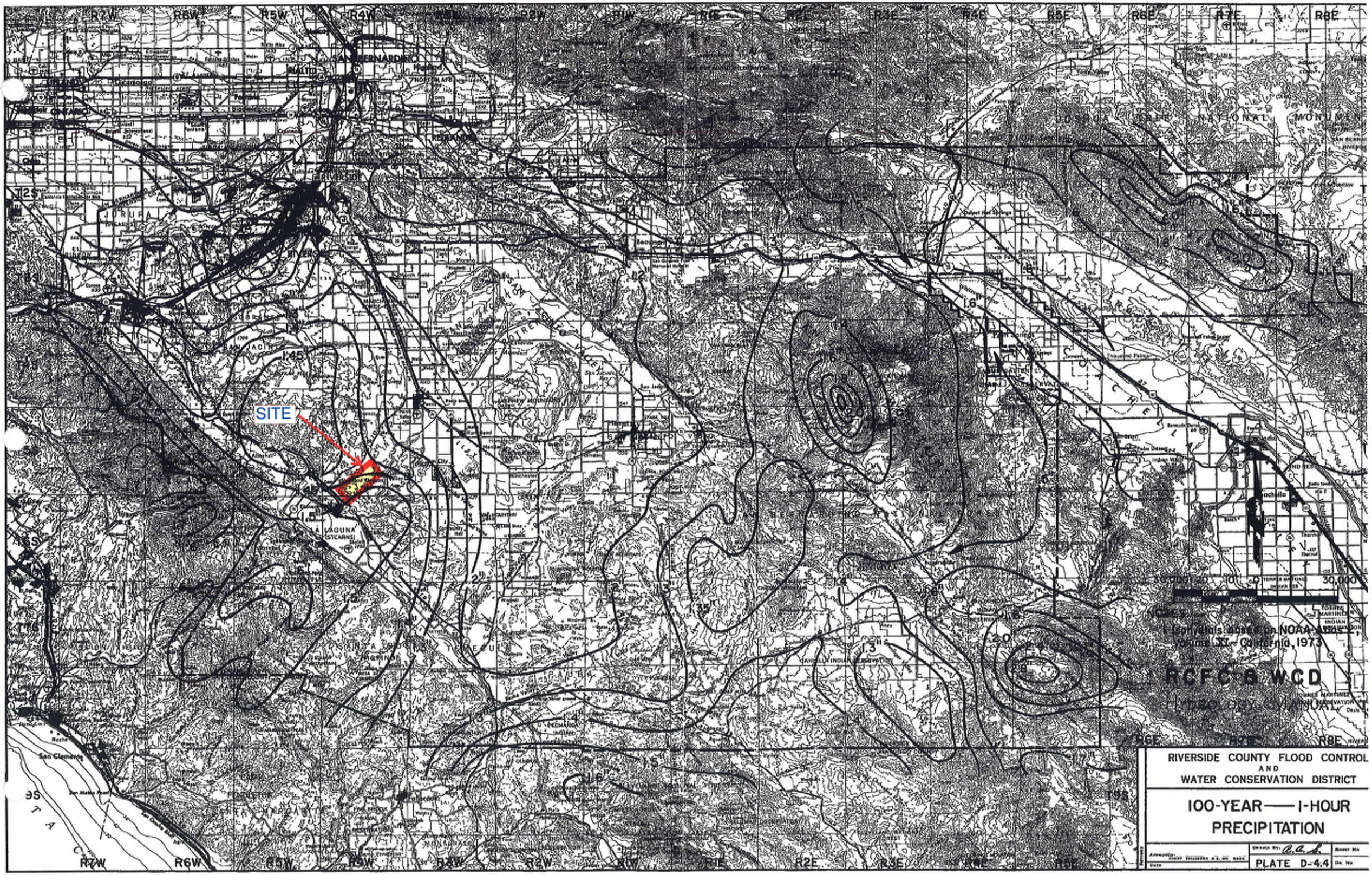
40810 COUNTY CENTER DR.,
SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

3rd STREET STORM DRAIN

FIGURE 1
VICINITY MAP

H:\PDATA\148215\ADMIN\REPORTS\SURFACE WATER\H&H\148215-FIG-001-VICINITY.DWG CHRIS.MORLOK 4/11/16 1:36 pm

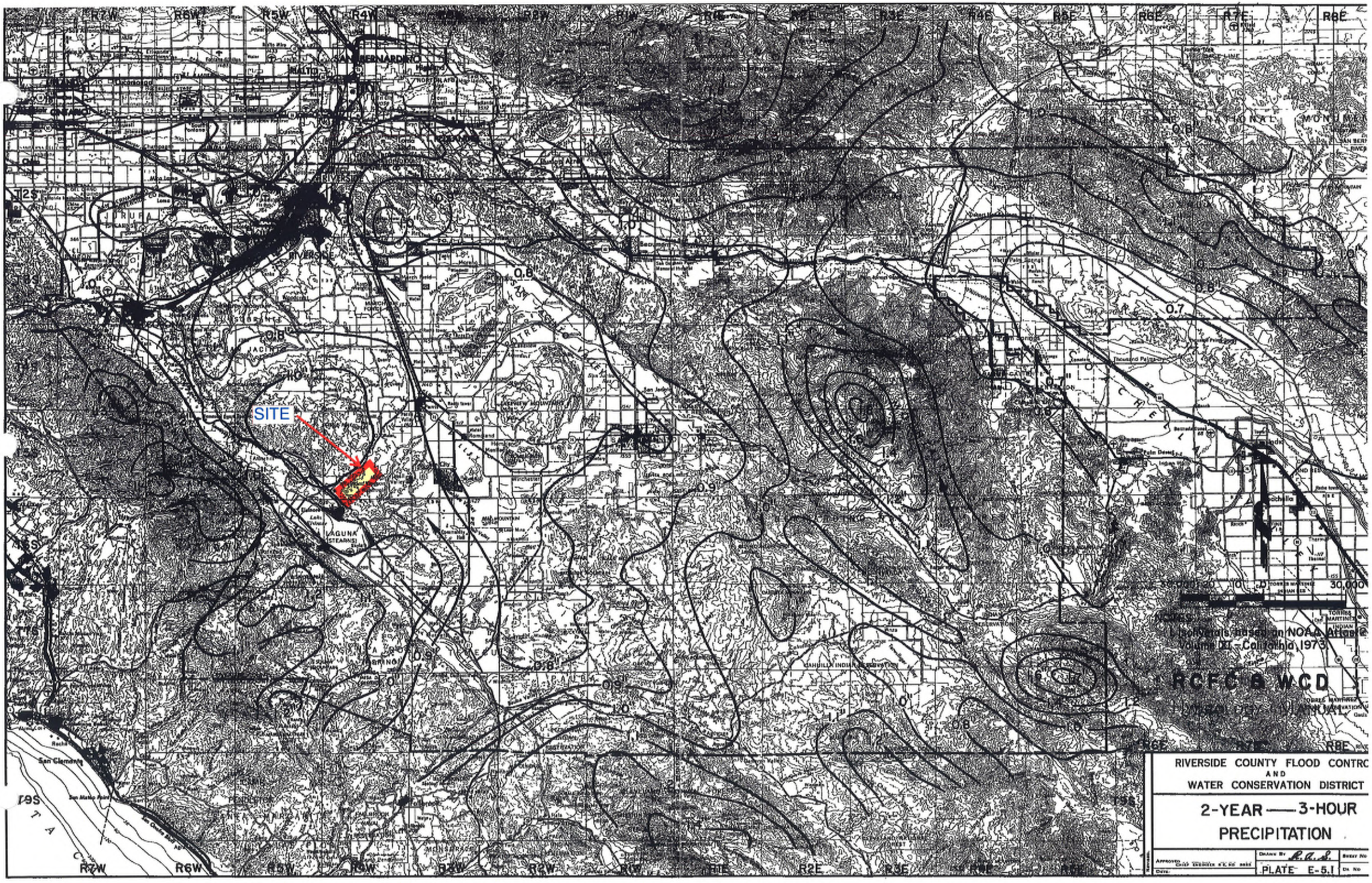

SITE
SAN BERNARDINO
RIVERSIDE
NATIONAL
MONUMENT
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
0.5"
0.6"
0.7"
0.8"
45
55
65
85
30,000
San Clemente
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
2-YEAR — 1-HOUR PRECIPITATION
PLATE D-4.3

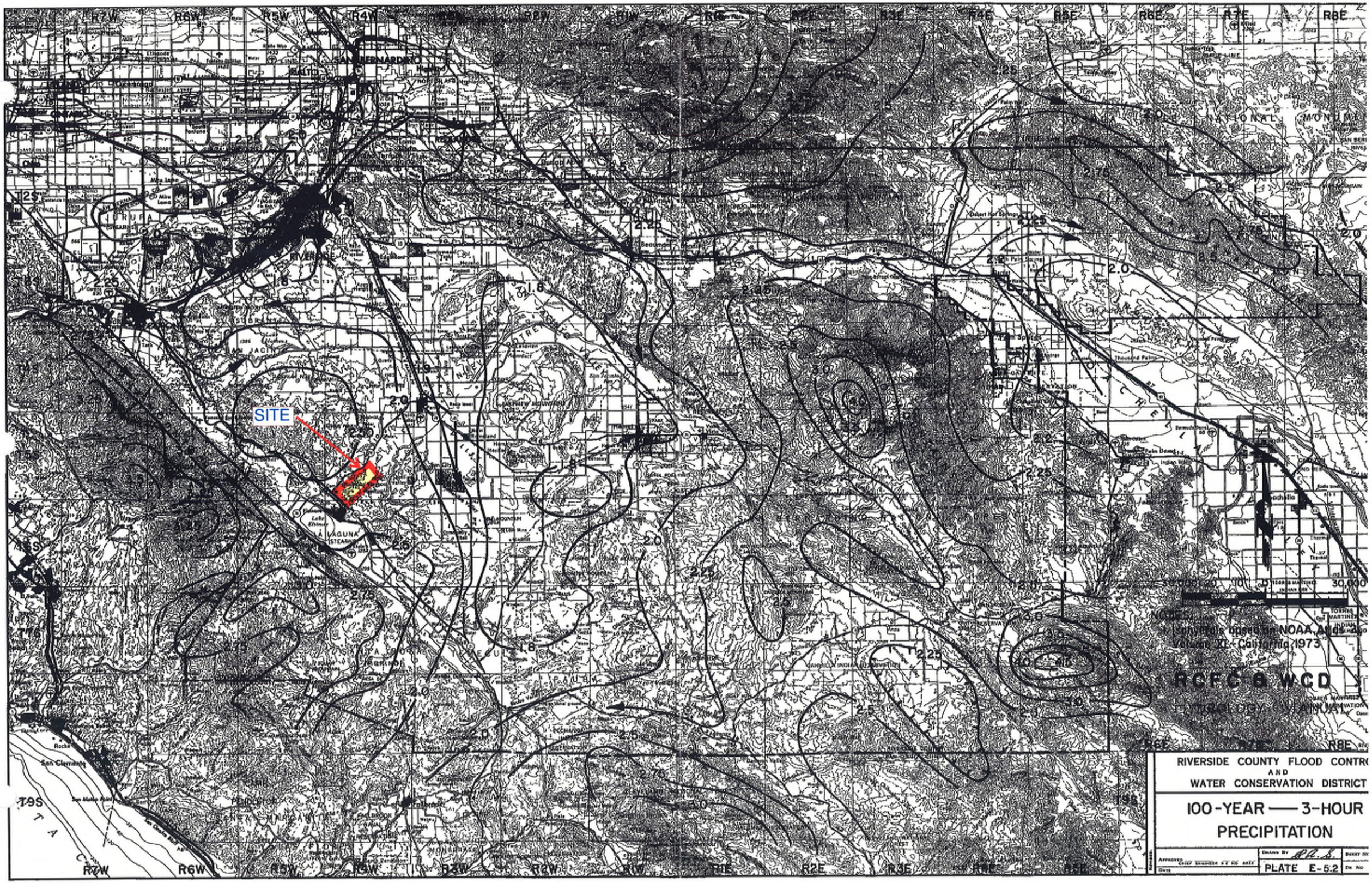


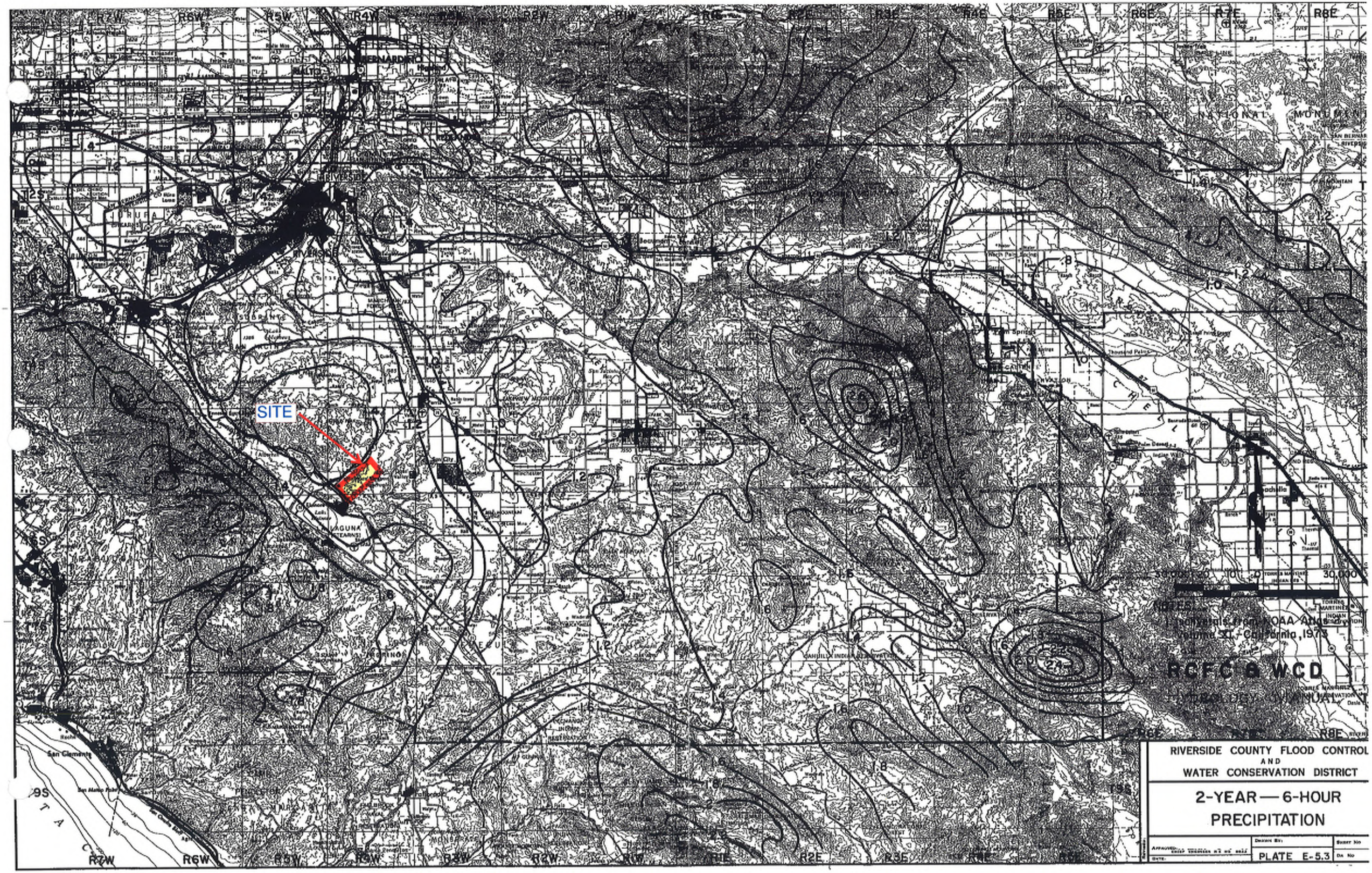
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

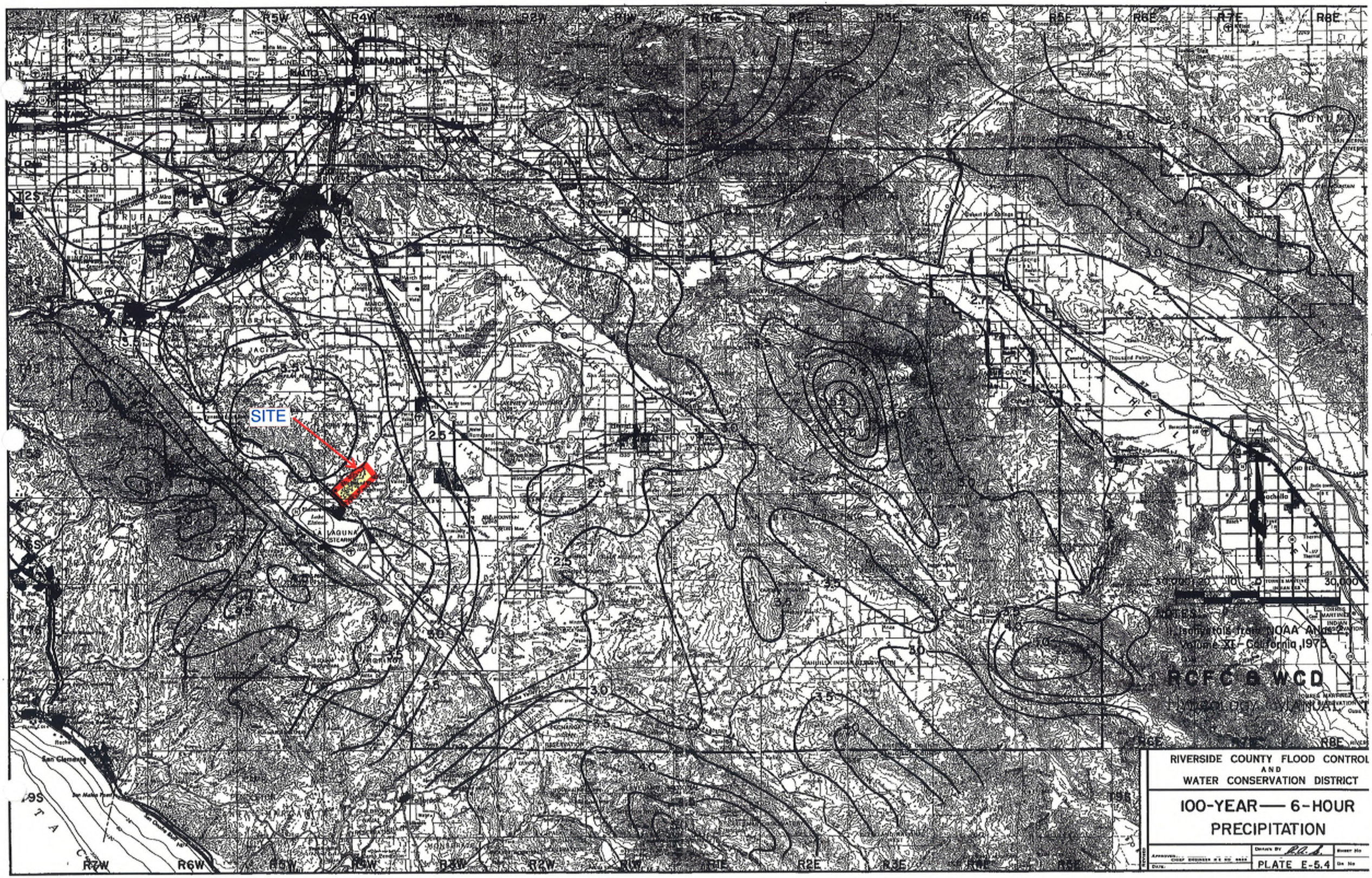
100-YEAR — 1-HOUR PRECIPITATION

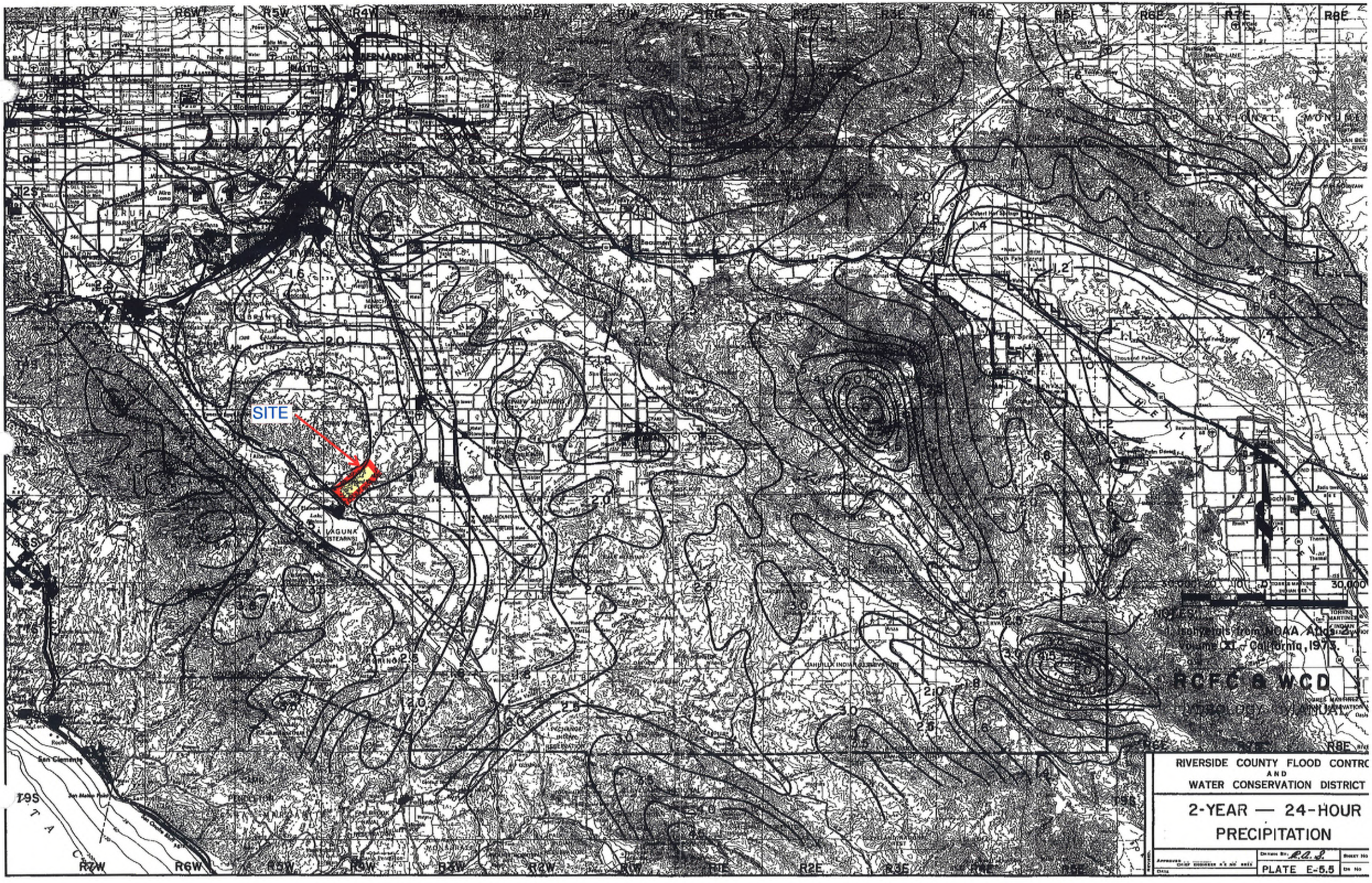
APPROVED: CHIEF ENGINEER R.C.F.C. & W.C.D. DATE	DRAWN BY: A.A.L.	BOOK No.
	PLATE D-4.4	DR. No.

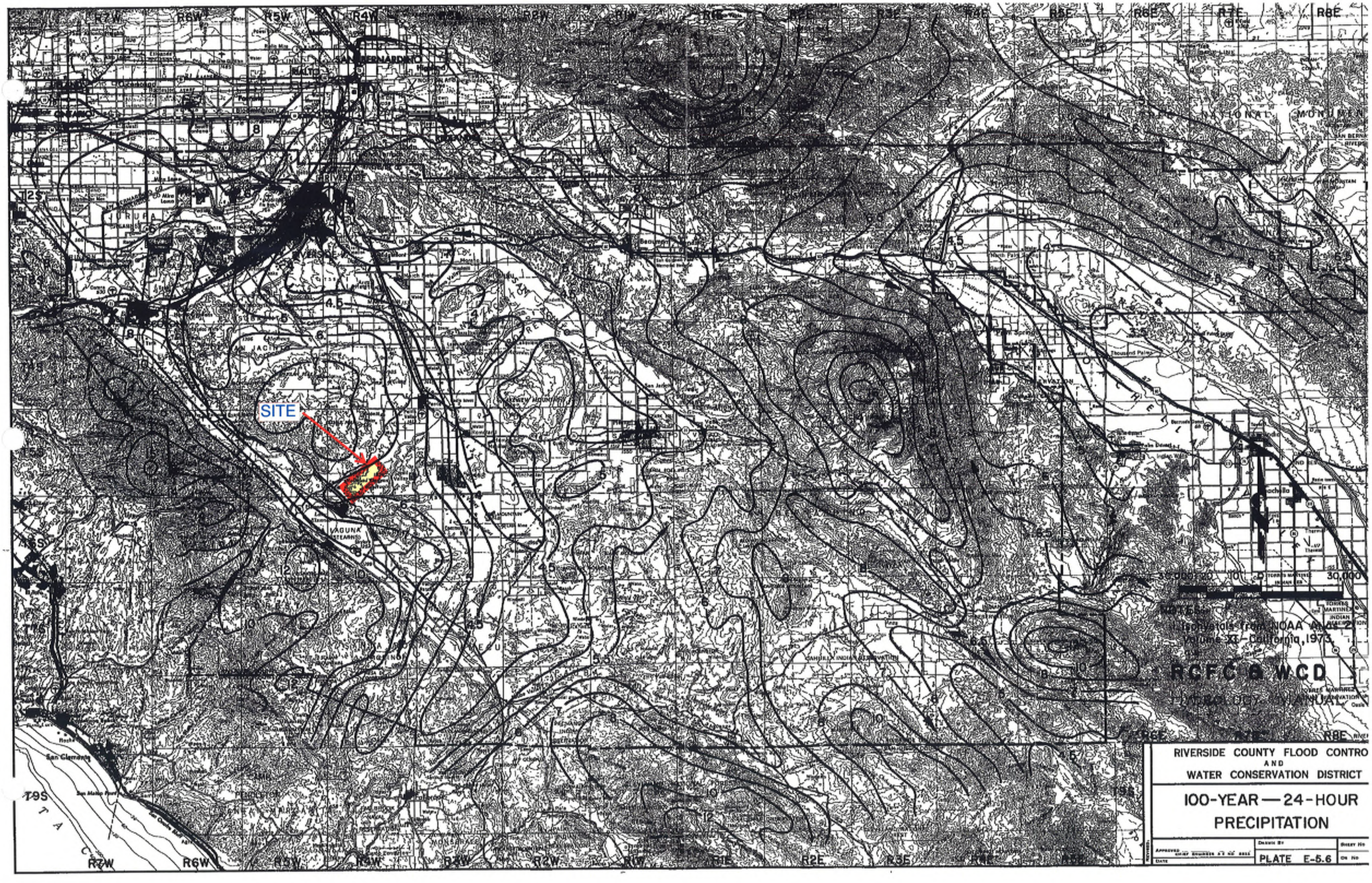

SITE
SAN BERNARDINO
RIVERSIDE
LAGUNA
SAN JACINTO
PALM SPRINGS
Rancho San Gorgonio
San Gorgonio Pass
San Clemente
San Mateo Point
San Onofre State Beach
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
0.8
0.9
1.0
1.1
1.2
1.4
0.7
SCALE 1:250,000
30,000
NOTES:
Isohyetals based on NOAA Atlas 2,
Volume XI - California, 1973
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTRC
AND
WATER CONSERVATION DISTRICT
2-YEAR — 3-HOUR
PRECIPITATION
DRAWN BY R.A.S.
PLATE E-5.1


SITE
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
T6S
RIVERSIDE
SAN BERNARDINO
PERRIS
SAN JACINTO
HEMET
SAN JACINTO MTNS
SAN GORGONIO MTN
SAN JACINTO PEAK
SAN GABRIEL MTNS
SAN GABRIEL PEAK
SAN BERNARDINO MTNS
SAN ANDREAS FAULT
SAN JACINTO FAULT
SAN JACINTO FAULT ZONE
SAN JACINTO VALLEY
LAKE ELSINORE
LAGUNA MTN
PALOMAR MTN
MT. SAN JACINTO
MT. SAN ANTONIO
SAN GABRIEL RIVER
SANTA ANA RIVER
SANTA ANA MTNS
SAN JACINTO RIVER
SAN JACINTO WILDERNESS
SAN GORGONIO WILDERNESS
JOSHUA TREE NATIONAL MONUMENT
2.0
2.25
2.5
2.75
3.0
1.8
NOAA Atlas 2
Volume XI - California 1973
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 3-HOUR
PRECIPITATION
PLATE E-5.2


SITE
SAN BERNARDINO
RIVERSIDE
SAN JACINTO
SAN GABRIEL MOUNTAINS NATIONAL MONUMENT
SAN JACINTO MOUNTAINS
SAN GORGONIO PASS
SAN JACINTO VALLEY
SAN TA CLARA
San Clemente
Palm Springs
Indio
Coachella
NOTES:
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
PLATE E-5.3


SITE
SAN BERNARDINO
RIVERSIDE
ANAHEIM
SANTA ANA
SAN CLEMENTE
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
3.0
2.5
2.0
3.5
4.0
Isopluvials from NOAA Atlas 2
Volume XI - California, 1973
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 6-HOUR
PRECIPITATION
PLATE E-5.4


SITE
NOTES
Isohyetals from NOAA Atlas 2
Volume XI - California, 1973.
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTRO
AND
WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR
PRECIPITATION
PLATE E-5.5


SITE
RIVERSIDE COUNTY FLOOD CONTRO
AND
WATER CONSERVATION DISTRICT
100-YEAR — 24-HOUR
PRECIPITATION
PLATE E-5.6
Isohyetals from NOAA Atlas 2
Volume XI - California, 1973
RCFC & WCD
SAN BERNARDINO
RIVERSIDE
JURUPA
RIALTO
COLTON
LAGUNA MOUNTAINS
SAN JACINTO MOUNTAINS
SAN GABRIEL MOUNTAINS
SAN GABRIEL INDIAN RESERVATION
SAN MANUEL INDIAN RESERVATION
SAN JACINTO INDIAN RESERVATION
SANTA ANA
PERRIS
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
T2S
T4S
T6S
T8S
T9S

APPENDIX 1

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software, (c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 07/18/17 File:3RDCAMBERN.out

3RD STREET STORM DRAIN
CAMBERN LATERAL FLOW
100-YEAR STORM ANALYSIS
MICHAEL BAKER INTL-TEMECULA

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

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

Program License Serial Number 6341

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 915.000(Ft.)
Top (of initial area) elevation = 1406.000(Ft.)
Bottom (of initial area) elevation = 1379.500(Ft.)
Difference in elevation = 26.500(Ft.)
Slope = 0.02896 s(percent)= 2.90
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.318 min.
Rainfall intensity = 3.667(In/Hr) for a 100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.890
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 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =     14.234(CFS)
Total initial stream area =        4.360(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
----------------------------------------------------------------------------
Top of street segment elevation =  1379.500(Ft.)
End of street segment elevation =  1320.000(Ft.)
Length of street segment  =  2995.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  22.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
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 =     48.333(CFS)
Depth of flow =   0.566(Ft.), Average velocity =   4.787(Ft/s)
Warning: depth of flow exceeds top of curb
Distance that curb overflow reaches into property =    2.66(Ft.)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  21.986(Ft.)
Flow velocity =   4.79(Ft/s)
Travel time =   10.43 min.     TC =   19.75  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.810
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.300
Decimal fraction soil group C = 0.300
Decimal fraction soil group D = 0.400
RI index for soil(AMC 2)  =  67.50
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      2.557(In/Hr) for a   100.0 year storm
Subarea runoff =     68.081(CFS) for     32.880(Ac.)
Total runoff =     82.316(CFS)   Total area =      37.240(Ac.)
Street flow at end of street =     82.316(CFS)
Half street flow at end of street =     41.158(CFS)
Depth of flow =   0.652(Ft.), Average velocity =   5.626(Ft/s)
Warning: depth of flow exceeds top of curb
Note:  depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property =    6.09(Ft.)
Flow width (from curb towards crown)=  22.000(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       12.000 to Point/Station       13.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
```

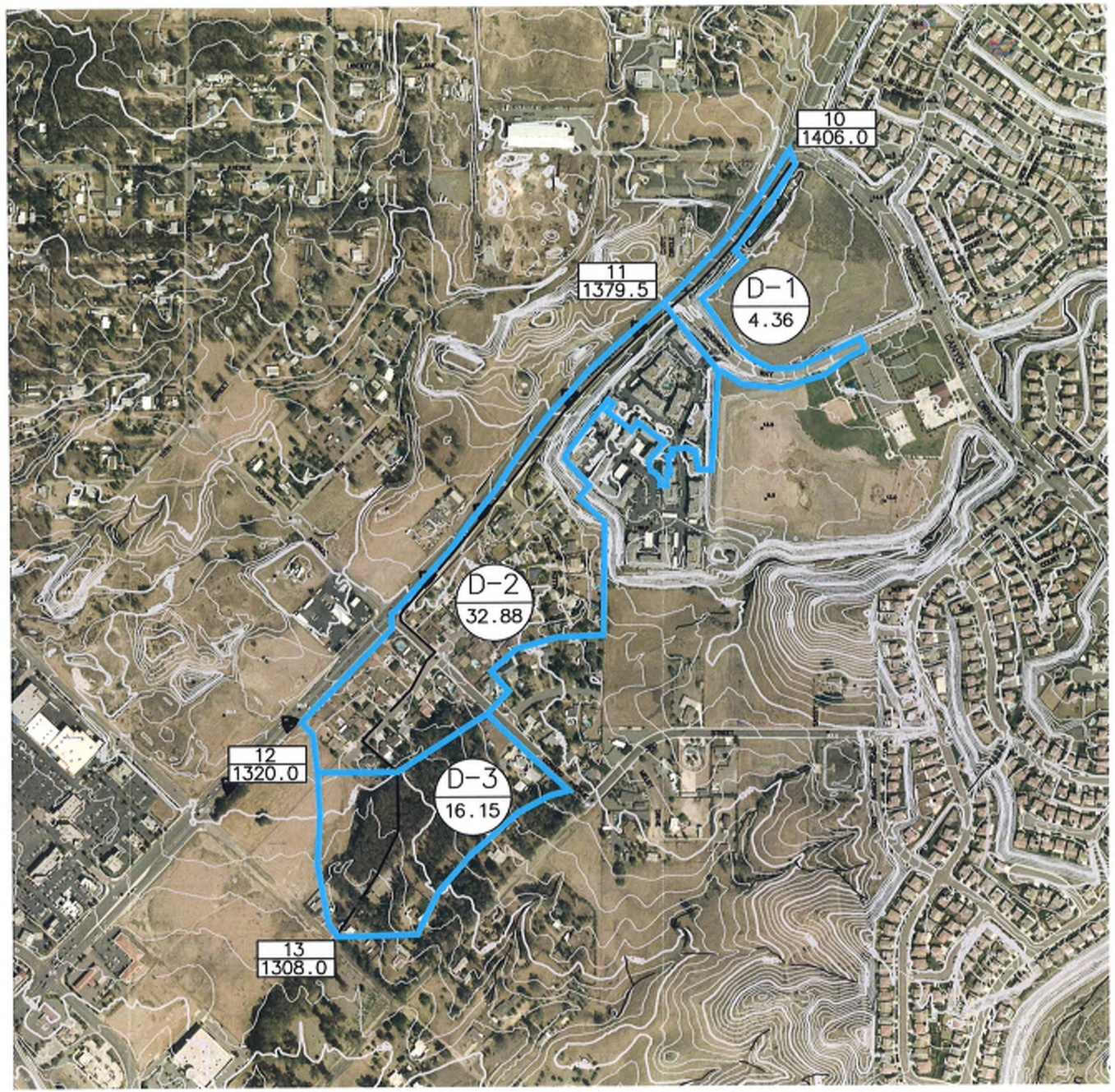
```
Top of natural channel elevation =   1320.000(Ft.)
End of natural channel elevation =   1308.000(Ft.)
Length of natural channel  =   845.000(Ft.)
Estimated mean flow rate at midpoint of channel =    100.165(CFS)

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 =   5.66(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
     Normal channel slope =  0.0142
Corrected/adjusted channel slope =  0.0142
Travel time =    2.49 min.     TC =   22.23  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.803
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  82.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.416(In/Hr) for a   100.0 year storm
Subarea runoff =     31.317(CFS) for     16.150(Ac.)
Total runoff =    113.632(CFS)   Total area =      53.390(Ac.)
End of computations, total study area =           53.39 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.619
Area averaged RI index number =  72.5
```



LEGEND

D-2 / 2.16 — DRAINAGE BASIN NAME; DRAINAGE BASIN AREA(AC.)

11 / 1027.0 — NODE I.D.; ELEVATION

BASIN DRAINAGE BOUNDARY

SUB-BASIN BOUNDARY

FLOW DIRECTION

600 300 0 600

SCALE: 1"=600'

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

THIRD STREET SD

CAMBERN LATERAL HYDROLOGY MAP

H:\PDATA\148215\CADD\STRMWATER\EXHIBITS\148215-HYDRO MAP-CAMBERN-LAT.DWG XOCHITL.LOZANO 7/21/17 2:46 pm

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 07/19/16 File:3RDCOLLIER.out

3RD STREET AND COLLIER AVE FLOW
100-YEAR STORM ANALYSIS

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

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

Program License Serial Number 6341

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 515.000(Ft.)
Top (of initial area) elevation = 1298.000(Ft.)
Bottom (of initial area) elevation = 1280.000(Ft.)
Difference in elevation = 18.000(Ft.)
Slope = 0.03495 s(percent)= 3.50
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 7.131 min.
Rainfall intensity = 4.170(In/Hr) for a 100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.889
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 69.00
Pervious area fraction = 0.100; Impervious fraction = 0.900

```
Initial subarea runoff =      4.076(CFS)
Total initial stream area =        1.100(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------------
Top of street segment elevation =  1280.000(Ft.)
End of street segment elevation =  1268.000(Ft.)
Length of street segment  =   360.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  22.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
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 =      6.251(CFS)
Depth of flow =   0.354(Ft.), Average velocity =   4.420(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  11.348(Ft.)
Flow velocity =   4.42(Ft/s)
Travel time =    1.36 min.     TC =    8.49  min.
 Adding area flow to street
COMMERCIAL subarea type
Runoff Coefficient = 0.888
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Rainfall intensity =      3.835(In/Hr) for a   100.0 year storm
Subarea runoff =      4.256(CFS) for      1.250(Ac.)
Total runoff =      8.332(CFS)   Total area =       2.350(Ac.)
Street flow at end of street =      8.332(CFS)
Half street flow at end of street =      8.332(CFS)
Depth of flow =   0.382(Ft.), Average velocity =   4.729(Ft/s)
Flow width (from curb towards crown)=  12.788(Ft.)
End of computations, total study area =            2.35 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  69.0
```

INTERSTATE 15

COLLIER AVE

1300

1280

Q_{100} =9 CFS
12
1278

11
1280

10
1298

A-1
1.10

A-2
1.25

PM 135/57

LEGEND

D-2
2.16
DRAINAGE BASIN NAME
DRAINAGE BASIN AREA(AC.)

11
1027.0
NODE I.D.
ELEVATION

BASIN DRAINAGE BOUNDARY

SUB-BASIN BOUNDARY

FLOW DIRECTION

100 50 0 100
SCALE: 1"=100'

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

THIRD STREET SD

COLLIER/3RD ST NUISANCE FLOW

H:\PDATA\148215\CADD\STRMWATER\EXHIBITS\148215-HYDRO MAP-COLLIER-3RD.DWG DAVID.ZARATE 7/28/16 3:59 pm

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 07/17/17 File:3RDDEXTER.out

3RD STREET STORM DRAIN
DEXTER LATERAL FLOW
100-YEAR STORM ANALYSIS
MICHAEL BAKER INTL-TEMECULA

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

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

Program License Serial Number 6341

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

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Elsinore-Wildomar] area used.
10 year storm 10 minute intensity = 2.320(In/Hr)
10 year storm 60 minute intensity = 0.980(In/Hr)
100 year storm 10 minute intensity = 3.540(In/Hr)
100 year storm 60 minute intensity = 1.500(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.500(In/Hr)
Slope of intensity duration curve = 0.4800

++
Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 585.000(Ft.)
Top (of initial area) elevation = 1472.000(Ft.)
Bottom (of initial area) elevation = 1466.000(Ft.)
Difference in elevation = 6.000(Ft.)
Slope = 0.01026 s(percent)= 1.03
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.466 min.
Rainfall intensity = 3.189(In/Hr) for a 100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.845
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 2)  =  75.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =     19.616(CFS)
Total initial stream area =        7.280(Ac.)
Pervious area fraction = 0.500


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       11.000 to Point/Station       12.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------------
Top of street segment elevation =  1466.000(Ft.)
End of street segment elevation =  1368.000(Ft.)
Length of street segment  =  2485.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  22.000(Ft.)
Distance from crown to crossfall grade break  =  18.000(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [2] side(s) of the street
Distance from curb to property line  =  10.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
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 =     64.911(CFS)
Depth of flow =   0.558(Ft.), Average velocity =   6.697(Ft/s)
Warning: depth of flow exceeds top of curb
Distance that curb overflow reaches into property =    2.32(Ft.)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  21.569(Ft.)
Flow velocity =   6.70(Ft/s)
Travel time =    6.18 min.     TC =   18.65  min.
 Adding area flow to street
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.835
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 2)  =  75.00
Pervious area fraction =  0.500; Impervious fraction =  0.500
Rainfall intensity =      2.628(In/Hr) for a   100.0 year storm
Subarea runoff =     90.408(CFS) for     41.200(Ac.)
Total runoff =    110.025(CFS)   Total area =      48.480(Ac.)
Street flow at end of street =    110.025(CFS)
Half street flow at end of street =     55.012(CFS)
Depth of flow =   0.643(Ft.), Average velocity =   7.803(Ft/s)
Warning: depth of flow exceeds top of curb
Note:  depth of flow exceeds top of street crown.
Distance that curb overflow reaches into property =    5.71(Ft.)
Flow width (from curb towards crown)=  22.000(Ft.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       12.000 to Point/Station       13.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
```

```
Top of natural channel elevation =   1368.000(Ft.)
End of natural channel elevation =   1280.000(Ft.)
Length of natural channel  =  4630.000(Ft.)
Estimated mean flow rate at midpoint of channel =    281.553(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 =   9.00(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
     Normal channel slope =  0.0190
Corrected/adjusted channel slope =  0.0190
Travel time =    8.58 min.     TC =   27.23  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.821
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.100
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.400
RI index for soil(AMC 2)  =  86.40
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.192(In/Hr) for a   100.0 year storm
Subarea runoff =    272.120(CFS) for    151.160(Ac.)
Total runoff =    382.145(CFS)   Total area =     199.640(Ac.)
End of computations, total study area =          199.64 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.879
Area averaged RI index number =  83.6
```



LEGEND

- D-2 / 2.16 — DRAINAGE BASIN NAME / DRAINAGE BASIN AREA(AC.)
- 11 / 1027.0 — NODE I.D. / ELEVATION
- BASIN DRAINAGE BOUNDARY
- SUB-BASIN BOUNDARY
- FLOW DIRECTION

600 300 0 600

SCALE: 1"=600'

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THIRD STREET SD

DEXTER LATERAL D HYDROLOGY MAP

H:\PDATA\148215\CADD\STRMWATER\EXHIBITS\148215-HYDRO MAP-DEXTER-LAT.DWG XOCHITL.LOZANO 7/21/17 2:47 pm

APPENDIX A

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 06/22/16 File: 3RDSTA3100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A (DESIGN POINT AT COLLIER AVE AND 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 704.41(Ac.) = 1.101 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 704.41(Ac.) = 1.101 Sq. Mi.

Length along longest watercourse = 16170.00(Ft.)
Length along longest watercourse measured to centroid = 6440.00(Ft.)
Length along longest watercourse = 3.063 Mi.
Length along longest watercourse measured to centroid = 1.220 Mi.
Difference in elevation = 416.50(Ft.)
Slope along watercourse = 136.0000 Ft./Mi.
Average Manning's 'N' = 0.018
Lag time = 0.283 Hr.
Lag time = 17.00 Min.
25% of lag time = 4.25 Min.
40% of lag time = 6.80 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
704.41	0.95	669.19

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
704.41	2.30	1620.14

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.69 %
Adjusted average point rain = 2.293(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.670	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
87.030	94.90	0.900
5.160	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.120	86.20	0.500
48.360	84.90	0.500
5.600	76.00	0.150
13.360	89.50	0.050
27.010	78.70	0.400
0.290	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 704.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.024	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.004	0.000
94.6	94.6	0.070	0.900	0.013	0.071	0.001
78.5	78.5	0.262	0.150	0.226	0.045	0.010
94.9	94.9	0.066	0.900	0.013	0.124	0.002
88.9	88.9	0.143	0.750	0.046	0.007	0.000
79.2	79.2	0.253	0.400	0.162	0.094	0.015
86.3	86.3	0.172	0.500	0.095	0.215	0.020
86.2	86.2	0.173	0.500	0.095	0.062	0.006
84.3	84.3	0.195	0.500	0.107	0.023	0.002
86.2	86.2	0.173	0.500	0.095	0.180	0.017
84.9	84.9	0.188	0.500	0.103	0.069	0.007
76.0	76.0	0.291	0.150	0.252	0.008	0.002
89.5	89.5	0.136	0.050	0.130	0.019	0.002
78.7	78.7	0.259	0.400	0.166	0.038	0.006
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.014	0.002
					Sum (F) =	0.095

Area averaged mean soil loss (F) (In/Hr) = 0.095
Minimum soil loss rate ((In/Hr)) = 0.047
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.463

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	29.405	2.823		20.043
2	0.167	58.810	10.248		72.754
3	0.250	88.216	17.990		127.716
4	0.333	117.621	20.005		142.017
5	0.417	147.026	13.151		93.364
6	0.500	176.431	7.614		54.053
7	0.583	205.836	4.839		34.356
8	0.667	235.241	3.757		26.674
9	0.750	264.647	3.022		21.451
10	0.833	294.052	2.533		17.985
11	0.917	323.457	2.034		14.440
12	1.000	352.862	1.769		12.561
13	1.083	382.267	1.486		10.546
14	1.167	411.673	1.266		8.988
15	1.250	441.078	1.005		7.136
16	1.333	470.483	0.927		6.579
17	1.417	499.888	0.885		6.282
18	1.500	529.293	0.765		5.434
19	1.583	558.698	0.642		4.556
20	1.667	588.104	0.558		3.965
21	1.750	617.509	0.508		3.610
22	1.833	646.914	0.421		2.991
23	1.917	676.319	0.365		2.588
24	2.000	705.724	0.295		2.092
25	2.083	735.130	0.294		2.088
26	2.167	764.535	0.294		2.088
27	2.250	793.940	0.294		2.088
28	2.333	823.345	0.208		1.474
			Sum = 100.000	Sum=	709.913

---

e 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	1.30	0.358	0.095	(0.166)	0.263
2	0.17	1.30	0.358	0.095	(0.166)	0.263
3	0.25	1.10	0.303	0.095	(0.140)	0.208
4	0.33	1.50	0.413	0.095	(0.191)	0.318
5	0.42	1.50	0.413	0.095	(0.191)	0.318
6	0.50	1.80	0.495	0.095	(0.229)	0.401
7	0.58	1.50	0.413	0.095	(0.191)	0.318
8	0.67	1.80	0.495	0.095	(0.229)	0.401
9	0.75	1.80	0.495	0.095	(0.229)	0.401
10	0.83	1.50	0.413	0.095	(0.191)	0.318
11	0.92	1.60	0.440	0.095	(0.204)	0.346
12	1.00	1.80	0.495	0.095	(0.229)	0.401
13	1.08	2.20	0.605	0.095	(0.280)	0.511
14	1.17	2.20	0.605	0.095	(0.280)	0.511
15	1.25	2.20	0.605	0.095	(0.280)	0.511
16	1.33	2.00	0.550	0.095	(0.255)	0.456
17	1.42	2.60	0.715	0.095	(0.331)	0.621
18	1.50	2.70	0.743	0.095	(0.344)	0.648
19	1.58	2.40	0.660	0.095	(0.306)	0.566
20	1.67	2.70	0.743	0.095	(0.344)	0.648
21	1.75	3.30	0.908	0.095	(0.420)	0.813
22	1.83	3.10	0.853	0.095	(0.395)	0.758
23	1.92	2.90	0.798	0.095	(0.369)	0.703
24	2.00	3.00	0.825	0.095	(0.382)	0.731
25	2.08	3.10	0.853	0.095	(0.395)	0.758
26	2.17	4.20	1.156	0.095	(0.535)	1.061

27	2.25	5.00	1.376	0.095	(0.637)	1.281
28	2.33	3.50	0.963	0.095	(0.446)	0.868
29	2.42	6.80	1.871	0.095	(0.866)	1.776
30	2.50	7.30	2.009	0.095	(0.930)	1.914
31	2.58	8.20	2.256	0.095	(1.045)	2.162
32	2.67	5.90	1.623	0.095	(0.752)	1.529
3	2.75	2.00	0.550	0.095	(0.255)	0.456
34	2.83	1.80	0.495	0.095	(0.229)	0.401
35	2.92	1.80	0.495	0.095	(0.229)	0.401
36	3.00	0.60	0.165	(0.095)	0.076	0.089

(Loss Rate Not Used)

Sum = 100.0 Sum = 24.1

Flood volume = Effective rainfall 2.01(In)
times area 704.4(Ac.)/[(In)/(Ft.)] = 118.0(Ac.Ft)
Total soil loss = 0.28(In)
Total soil loss = 16.589(Ac.Ft)
Total rainfall = 2.29(In)
Flood volume = 5140386.2 Cubic Feet
Total soil loss = 722608.5 Cubic Feet

Peak flow rate of this hydrograph = 1043.881(CFS)

++

3 - 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	275.0	550.0	825.0	1100.0
0+ 5	0.0363	5.27	Q	|	|	|	|
0+10	0.2045	24.42	Q	|	|	|	|
0+15	0.5965	56.92	V Q	|	|	|	|
0+20	1.2334	92.49	V Q	|	|	|	|
0+25	2.0464	118.03	V Q	|	|	|	|
0+30	3.0116	140.16	|V Q	|	|	|	|
0+35	4.1414	164.05	|V Q	|	|	|	|
0+40	5.4125	184.56	|V Q	|	|	|	|
0+45	6.8000	201.46	| V Q	|	|	|	|
0+50	8.2695	213.38	| V Q	|	|	|	|
0+55	9.7982	221.96	| V Q	|	|	|	|
1+ 0	11.3497	225.28	| V Q	|	|	|	|
1+ 5	12.9411	231.07	| V Q	|	|	|	|
1+10	14.6490	247.98	| V Q|	|	|	|	|
1+15	16.5262	272.57	| V Q|	|	|	|	|
1+20	18.5562	294.77	| V Q	|	|	|	|
1+25	20.6889	309.65	| V |Q	|	|	|	|
1+30	22.9263	324.88	| V |Q	|	|	|	|
1+35	25.3047	345.34	| V | Q	|	|	|	|
1+40	27.8419	368.40	| V| Q	|	|	|	|
1+45	30.5156	388.23	| V Q	|	|	|	|
1+50	33.3494	411.46	| V| Q	|	|	|	|
1+55	36.3823	440.38	| | V Q	|	|	|	|
2+ 0	39.5752	463.62	| | V Q	|	|	|	|
2+ 5	42.8404	474.10	| | V Q	|	|	|	|
2+10	46.1955	487.17	| | V Q	|	|	|	|
2+15	49.7977	523.03	| | V Q|	|	|	|	|
2+20	53.7871	579.26	| | V |Q	|	|	|	|
2+25	58.2347	645.79	| | V| Q	|	|	|	|
2+30	63.2400	726.77	| | |V Q	|	|	|	|
2+35	69.0258	840.10	| | | V Q	|	|	|	|
2+40	75.7691	979.14	| | | V | Q	|	|	|	|

| | | |

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 06/22/16 File: 3RDSTA6100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A (DESIGN POINT AT COLLIER AVE AND 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 704.41(Ac.) = 1.101 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 704.41(Ac.) = 1.101 Sq.
M

Length along longest watercourse = 16170.00(Ft.)
Length along longest watercourse measured to centroid = 6440.00(Ft.)
Length along longest watercourse = 3.063 Mi.
Length along longest watercourse measured to centroid = 1.220 Mi.
Difference in elevation = 416.50(Ft.)
Slope along watercourse = 136.0000 Ft./Mi.
Average Manning's 'N' = 0.018
Lag time = 0.283 Hr.
Lag time = 17.00 Min.
25% of lag time = 4.25 Min.
40% of lag time = 6.80 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
704.41	1.35	950.95

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
704.41	3.30	2324.55

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.76 %
Adjusted average point rain = 3.292(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.670	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
87.030	94.90	0.900
5.160	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.120	86.20	0.500
48.360	84.90	0.500
5.600	76.00	0.150
13.360	89.50	0.050
27.010	78.70	0.400
0.290	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 704.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.024	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.004	0.000
94.6	94.6	0.070	0.900	0.013	0.071	0.001
78.5	78.5	0.262	0.150	0.226	0.045	0.010
94.9	94.9	0.066	0.900	0.013	0.124	0.002
88.9	88.9	0.143	0.750	0.046	0.007	0.000
79.2	79.2	0.253	0.400	0.162	0.094	0.015
86.3	86.3	0.172	0.500	0.095	0.215	0.020
86.2	86.2	0.173	0.500	0.095	0.062	0.006
84.3	84.3	0.195	0.500	0.107	0.023	0.002
86.2	86.2	0.173	0.500	0.095	0.180	0.017
84.9	84.9	0.188	0.500	0.103	0.069	0.007
76.0	76.0	0.291	0.150	0.252	0.008	0.002
89.5	89.5	0.136	0.050	0.130	0.019	0.002
78.7	78.7	0.259	0.400	0.166	0.038	0.006
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.014	0.002
					Sum (F) =	0.095

Area averaged mean soil loss (F) (In/Hr) = 0.095
Minimum soil loss rate ((In/Hr)) = 0.047
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.463

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	29.405	2.823		20.043
2	0.167	58.810	10.248		72.754
3	0.250	88.216	17.990		127.716
4	0.333	117.621	20.005		142.017
5	0.417	147.026	13.151		93.364
6	0.500	176.431	7.614		54.053
7	0.583	205.836	4.839		34.356
8	0.667	235.241	3.757		26.674
9	0.750	264.647	3.022		21.451
10	0.833	294.052	2.533		17.985
11	0.917	323.457	2.034		14.440
12	1.000	352.862	1.769		12.561
13	1.083	382.267	1.486		10.546
14	1.167	411.673	1.266		8.988
15	1.250	441.078	1.005		7.136
16	1.333	470.483	0.927		6.579
17	1.417	499.888	0.885		6.282
18	1.500	529.293	0.765		5.434
19	1.583	558.698	0.642		4.556
20	1.667	588.104	0.558		3.965
21	1.750	617.509	0.508		3.610
22	1.833	646.914	0.421		2.991
23	1.917	676.319	0.365		2.588
24	2.000	705.724	0.295		2.092
25	2.083	735.130	0.294		2.088
26	2.167	764.535	0.294		2.088
27	2.250	793.940	0.294		2.088
28	2.333	823.345	0.208		1.474
			Sum = 100.000	Sum=	709.913

---

e 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	0.50	0.198	(0.095)	0.091	0.106
2	0.17	0.60	0.237	0.095	(0.110)	0.142
3	0.25	0.60	0.237	0.095	(0.110)	0.142
4	0.33	0.60	0.237	0.095	(0.110)	0.142
5	0.42	0.60	0.237	0.095	(0.110)	0.142
6	0.50	0.70	0.277	0.095	(0.128)	0.182
7	0.58	0.70	0.277	0.095	(0.128)	0.182
8	0.67	0.70	0.277	0.095	(0.128)	0.182
9	0.75	0.70	0.277	0.095	(0.128)	0.182
10	0.83	0.70	0.277	0.095	(0.128)	0.182
11	0.92	0.70	0.277	0.095	(0.128)	0.182
12	1.00	0.80	0.316	0.095	(0.146)	0.221
13	1.08	0.80	0.316	0.095	(0.146)	0.221
14	1.17	0.80	0.316	0.095	(0.146)	0.221
15	1.25	0.80	0.316	0.095	(0.146)	0.221
16	1.33	0.80	0.316	0.095	(0.146)	0.221
17	1.42	0.80	0.316	0.095	(0.146)	0.221
18	1.50	0.80	0.316	0.095	(0.146)	0.221
19	1.58	0.80	0.316	0.095	(0.146)	0.221
20	1.67	0.80	0.316	0.095	(0.146)	0.221
21	1.75	0.80	0.316	0.095	(0.146)	0.221
22	1.83	0.80	0.316	0.095	(0.146)	0.221
23	1.92	0.80	0.316	0.095	(0.146)	0.221
24	2.00	0.90	0.356	0.095	(0.165)	0.261
25	2.08	0.80	0.316	0.095	(0.146)	0.221
26	2.17	0.90	0.356	0.095	(0.165)	0.261

27	2.25	0.90	0.356	0.095	(0.165)	0.261
28	2.33	0.90	0.356	0.095	(0.165)	0.261
29	2.42	0.90	0.356	0.095	(0.165)	0.261
30	2.50	0.90	0.356	0.095	(0.165)	0.261
31	2.58	0.90	0.356	0.095	(0.165)	0.261
32	2.67	0.90	0.356	0.095	(0.165)	0.261
33	2.75	1.00	0.395	0.095	(0.183)	0.300
34	2.83	1.00	0.395	0.095	(0.183)	0.300
35	2.92	1.00	0.395	0.095	(0.183)	0.300
36	3.00	1.00	0.395	0.095	(0.183)	0.300
37	3.08	1.00	0.395	0.095	(0.183)	0.300
38	3.17	1.10	0.435	0.095	(0.201)	0.340
39	3.25	1.10	0.435	0.095	(0.201)	0.340
40	3.33	1.10	0.435	0.095	(0.201)	0.340
41	3.42	1.20	0.474	0.095	(0.219)	0.379
42	3.50	1.30	0.514	0.095	(0.238)	0.419
43	3.58	1.40	0.553	0.095	(0.256)	0.458
44	3.67	1.40	0.553	0.095	(0.256)	0.458
45	3.75	1.50	0.593	0.095	(0.274)	0.498
46	3.83	1.50	0.593	0.095	(0.274)	0.498
47	3.92	1.60	0.632	0.095	(0.293)	0.537
48	4.00	1.60	0.632	0.095	(0.293)	0.537
49	4.08	1.70	0.672	0.095	(0.311)	0.577
50	4.17	1.80	0.711	0.095	(0.329)	0.616
51	4.25	1.90	0.751	0.095	(0.348)	0.656
52	4.33	2.00	0.790	0.095	(0.366)	0.695
53	4.42	2.10	0.830	0.095	(0.384)	0.735
54	4.50	2.10	0.830	0.095	(0.384)	0.735
55	4.58	2.20	0.869	0.095	(0.402)	0.774
56	4.67	2.30	0.909	0.095	(0.421)	0.814
57	4.75	2.40	0.948	0.095	(0.439)	0.853
58	4.83	2.40	0.948	0.095	(0.439)	0.853
59	4.92	2.50	0.988	0.095	(0.457)	0.893
60	5.00	2.60	1.027	0.095	(0.476)	0.932
61	5.08	3.10	1.225	0.095	(0.567)	1.130
62	5.17	3.60	1.422	0.095	(0.658)	1.327
63	5.25	3.90	1.541	0.095	(0.713)	1.446
64	5.33	4.20	1.659	0.095	(0.768)	1.564
65	5.42	4.70	1.857	0.095	(0.860)	1.762
66	5.50	5.60	2.212	0.095	(1.024)	2.118
67	5.58	1.90	0.751	0.095	(0.348)	0.656
68	5.67	0.90	0.356	0.095	(0.165)	0.261
69	5.75	0.60	0.237	0.095	(0.110)	0.142
70	5.83	0.50	0.198	(0.095)	0.091	0.106
71	5.92	0.30	0.119	(0.095)	0.055	0.064
72	6.00	0.20	0.079	(0.095)	0.037	0.042

(Loss Rate Not Used)

Sum = 100.0 Sum = 32.8

Flood volume = Effective rainfall 2.73(In)
times area 704.4(Ac.)/[(In)/(Ft.)] = 160.4(Ac.Ft)
Total soil loss = 0.56(In)
Total soil loss = 32.845(Ac.Ft)
Total rainfall = 3.29(In)
Flood volume = 6986953.4 Cubic Feet
Total soil loss = 1430741.9 Cubic Feet

Peak flow rate of this hydrograph = 988.035(CFS)

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6 - 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	250.0	500.0	750.0	1000.0
0+ 5	0.0146	2.13	Q				
0+10	0.0875	10.57	Q				
0+15	0.2718	26.77	VQ				
0+20	0.5919	46.47	VQ				
0+25	1.0156	61.53	V Q				
0+30	1.5077	71.44	V Q				
0+35	2.0581	79.93	V Q				
0+40	2.6714	89.05	V Q				
0+45	3.3457	97.91	V Q				
0+50	4.0639	104.28	V Q				
0+55	4.8119	108.60	V Q				
1+ 0	5.5874	112.61	V Q				
1+ 5	6.4009	118.12	V Q				
1+10	7.2642	125.35	V Q				
1+15	8.1785	132.76	V Q				
1+20	9.1287	137.97	V Q				
1+25	10.1033	141.51	V Q				
1+30	11.0957	144.09	V Q				
1+35	12.1024	146.18	V Q				
1+40	13.1210	147.90	V Q				
1+45	14.1499	149.39	V Q				
1+50	15.1875	150.66	V Q				
1+55	16.2326	151.76	V Q				
2+ 0	17.2895	153.46	V Q				
2+ 5	18.3663	156.35	V Q				
2+10	19.4685	160.04	V Q				
2+15	20.5991	164.16	VQ				
2+20	21.7552	167.86	VQ				
2+25	22.9416	172.27	VQ				
2+30	24.1500	175.45	VQ				
2+35	25.3726	177.52	VQ				
2+40	26.6046	178.90	VQ				
2+45	27.8497	180.78	VQ				
2+50	29.1201	184.47	Q				
2+55	30.4303	190.24	Q				
3+ 0	31.7831	196.42	Q				
3+ 5	33.1648	200.63	Q				
3+10	34.5697	203.98	Q				
3+15	36.0064	208.61	Q				
3+20	37.4870	214.98	QV				
3+25	39.0191	222.46	QV				
3+30	40.6082	230.74	QV				
3+35	42.2774	242.36	QV				
3+40	44.0536	257.92	Q				
3+45	45.9453	274.66	QV				
3+50	47.9446	290.31	Q				
3+55	50.0412	304.42	Q				
4+ 0	52.2340	318.39	QV				
4+ 5	54.5206	332.01	Q				
4+10	56.9087	346.76	QV				
4+15	59.4104	363.24	Q				
4+20	62.0481	383.00	Q				
4+25	64.8386	405.17	Q				
4+30	67.7858	427.94	VQ				
4+35	70.8806	449.36	Q				
4+40	74.1123	469.25	Q				
4+45	77.4806	489.07	Q				
4+50	80.9965	510.51	Q				
4+55	84.6586	531.74	Q				

5+ 0	88.4593	551.86	Q
5+ 5	92.4197	575.06	Q
5+10	96.6355	612.13	Q
5+15	101.2477	669.69	VQ
5+20	106.3786	745.00	V Q
5+25	112.0747	827.08	V Q
5+30	118.3818	915.78	V Q
5+35	125.1864	988.03	V Q
5+40	131.9431	981.07	V Q
5+45	137.8365	855.73	Q
5+50	142.3140	650.13	Q V
5+55	145.6165	479.53	Q V
6+ 0	148.1533	368.34	Q V
6+ 5	150.1969	296.73	Q V
6+10	151.8662	242.38	Q V
6+15	153.2342	198.63	Q V
6+20	154.3572	163.06	Q V
6+25	155.2995	136.82	Q V
6+30	156.0984	116.01	Q V
6+35	156.7812	99.14	Q V
6+40	157.3662	84.94	Q V
6+45	157.8763	74.07	Q V
6+50	158.3213	64.61	Q V
6+55	158.7033	55.46	Q V
7+ 0	159.0283	47.19	Q V
7+ 5	159.3054	40.23	Q V
7+10	159.5419	34.35	Q V
7+15	159.7417	29.01	Q V
7+20	159.9102	24.46	Q V
7+25	160.0500	20.29	Q V
7+30	160.1657	16.81	Q V
7+35	160.2581	13.41	Q V
7+40	160.3259	9.85	Q V
7+45	160.3662	5.85	Q V
7+50	160.3818	2.27	Q V
7+55	160.3896	1.13	Q V
8+ 0	160.3941	0.65	Q V
8+ 5	160.3967	0.38	Q V
8+10	160.3979	0.18	Q V
8+15	160.3984	0.06	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 06/22/16 File: 3RDSTA24100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A (DESIGN POINT AT COLLIER AVE AND 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 704.41(Ac.) = 1.101 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 704.41(Ac.) = 1.101 Sq. Mi.

Length along longest watercourse = 16170.00(Ft.)
Length along longest watercourse measured to centroid = 6440.00(Ft.)
Length along longest watercourse = 3.063 Mi.
Length along longest watercourse measured to centroid = 1.220 Mi.
Difference in elevation = 416.50(Ft.)
Slope along watercourse = 136.0000 Ft./Mi.
Average Manning's 'N' = 0.018
Lag time = 0.283 Hr.
Lag time = 17.00 Min.
25% of lag time = 4.25 Min.
40% of lag time = 6.80 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]
704.41	2.50	1761.02

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
704.41	6.00	4226.46

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.86 %
Adjusted average point rain = 5.992(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.670	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
87.030	94.90	0.900
5.160	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.120	86.20	0.500
48.360	84.90	0.500
5.600	76.00	0.150
13.360	89.50	0.050
27.010	78.70	0.400
0.290	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 704.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.024	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.004	0.000
94.6	94.6	0.070	0.900	0.013	0.071	0.001
78.5	78.5	0.262	0.150	0.226	0.045	0.010
94.9	94.9	0.066	0.900	0.013	0.124	0.002
88.9	88.9	0.143	0.750	0.046	0.007	0.000
79.2	79.2	0.253	0.400	0.162	0.094	0.015
86.3	86.3	0.172	0.500	0.095	0.215	0.020
86.2	86.2	0.173	0.500	0.095	0.062	0.006
84.3	84.3	0.195	0.500	0.107	0.023	0.002
86.2	86.2	0.173	0.500	0.095	0.180	0.017
84.9	84.9	0.188	0.500	0.103	0.069	0.007
76.0	76.0	0.291	0.150	0.252	0.008	0.002
89.5	89.5	0.136	0.050	0.130	0.019	0.002
78.7	78.7	0.259	0.400	0.166	0.038	0.006
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.014	0.002
					Sum (F) =	0.095

Area averaged mean soil loss (F) (In/Hr) = 0.095
Minimum soil loss rate ((In/Hr)) = 0.047
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.463

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

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Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

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6	0.500	176.431	7.614		54.053
7	0.583	205.836	4.839		34.356
8	0.667	235.241	3.757		26.674
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16	1.333	470.483	0.927		6.579
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18	1.500	529.293	0.765		5.434
19	1.583	558.698	0.642		4.556
20	1.667	588.104	0.558		3.965
21	1.750	617.509	0.508		3.610
22	1.833	646.914	0.421		2.991
23	1.917	676.319	0.365		2.588
24	2.000	705.724	0.295		2.092
25	2.083	735.130	0.294		2.088
26	2.167	764.535	0.294		2.088
27	2.250	793.940	0.294		2.088
28	2.333	823.345	0.208		1.474
			Sum = 100.000	Sum=	709.913

---

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	0.048	(0.168)	0.022	0.026
2	0.17	0.07	0.048	(0.167)	0.022	0.026
3	0.25	0.07	0.048	(0.167)	0.022	0.026
4	0.33	0.10	0.072	(0.166)	0.033	0.039
5	0.42	0.10	0.072	(0.165)	0.033	0.039
6	0.50	0.10	0.072	(0.165)	0.033	0.039
7	0.58	0.10	0.072	(0.164)	0.033	0.039
8	0.67	0.10	0.072	(0.163)	0.033	0.039
9	0.75	0.10	0.072	(0.163)	0.033	0.039
10	0.83	0.13	0.096	(0.162)	0.044	0.051
11	0.92	0.13	0.096	(0.161)	0.044	0.051
12	1.00	0.13	0.096	(0.161)	0.044	0.051
13	1.08	0.10	0.072	(0.160)	0.033	0.039
14	1.17	0.10	0.072	(0.160)	0.033	0.039
15	1.25	0.10	0.072	(0.159)	0.033	0.039
16	1.33	0.10	0.072	(0.158)	0.033	0.039
17	1.42	0.10	0.072	(0.158)	0.033	0.039
18	1.50	0.10	0.072	(0.157)	0.033	0.039
19	1.58	0.10	0.072	(0.156)	0.033	0.039
20	1.67	0.10	0.072	(0.156)	0.033	0.039
21	1.75	0.10	0.072	(0.155)	0.033	0.039
22	1.83	0.13	0.096	(0.155)	0.044	0.051
23	1.92	0.13	0.096	(0.154)	0.044	0.051
24	2.00	0.13	0.096	(0.153)	0.044	0.051
25	2.08	0.13	0.096	(0.153)	0.044	0.051
26	2.17	0.13	0.096	(0.152)	0.044	0.051

27	2.25	0.13	0.096	(0.151)	0.044	0.051
28	2.33	0.13	0.096	(0.151)	0.044	0.051
29	2.42	0.13	0.096	(0.150)	0.044	0.051
30	2.50	0.13	0.096	(0.150)	0.044	0.051
31	2.58	0.17	0.120	(0.149)	0.055	0.064
32	2.67	0.17	0.120	(0.148)	0.055	0.064
33	2.75	0.17	0.120	(0.148)	0.055	0.064
34	2.83	0.17	0.120	(0.147)	0.055	0.064
35	2.92	0.17	0.120	(0.147)	0.055	0.064
36	3.00	0.17	0.120	(0.146)	0.055	0.064
37	3.08	0.17	0.120	(0.145)	0.055	0.064
38	3.17	0.17	0.120	(0.145)	0.055	0.064
39	3.25	0.17	0.120	(0.144)	0.055	0.064
40	3.33	0.17	0.120	(0.144)	0.055	0.064
41	3.42	0.17	0.120	(0.143)	0.055	0.064
42	3.50	0.17	0.120	(0.142)	0.055	0.064
43	3.58	0.17	0.120	(0.142)	0.055	0.064
44	3.67	0.17	0.120	(0.141)	0.055	0.064
45	3.75	0.17	0.120	(0.141)	0.055	0.064
46	3.83	0.20	0.144	(0.140)	0.067	0.077
47	3.92	0.20	0.144	(0.139)	0.067	0.077
48	4.00	0.20	0.144	(0.139)	0.067	0.077
49	4.08	0.20	0.144	(0.138)	0.067	0.077
50	4.17	0.20	0.144	(0.138)	0.067	0.077
51	4.25	0.20	0.144	(0.137)	0.067	0.077
52	4.33	0.23	0.168	(0.136)	0.078	0.090
53	4.42	0.23	0.168	(0.136)	0.078	0.090
54	4.50	0.23	0.168	(0.135)	0.078	0.090
55	4.58	0.23	0.168	(0.135)	0.078	0.090
56	4.67	0.23	0.168	(0.134)	0.078	0.090
57	4.75	0.23	0.168	(0.134)	0.078	0.090
58	4.83	0.27	0.192	(0.133)	0.089	0.103
59	4.92	0.27	0.192	(0.132)	0.089	0.103
60	5.00	0.27	0.192	(0.132)	0.089	0.103
61	5.08	0.20	0.144	(0.131)	0.067	0.077
62	5.17	0.20	0.144	(0.131)	0.067	0.077
63	5.25	0.20	0.144	(0.130)	0.067	0.077
64	5.33	0.23	0.168	(0.130)	0.078	0.090
65	5.42	0.23	0.168	(0.129)	0.078	0.090
66	5.50	0.23	0.168	(0.128)	0.078	0.090
67	5.58	0.27	0.192	(0.128)	0.089	0.103
68	5.67	0.27	0.192	(0.127)	0.089	0.103
69	5.75	0.27	0.192	(0.127)	0.089	0.103
70	5.83	0.27	0.192	(0.126)	0.089	0.103
71	5.92	0.27	0.192	(0.126)	0.089	0.103
72	6.00	0.27	0.192	(0.125)	0.089	0.103
73	6.08	0.30	0.216	(0.124)	0.100	0.116
74	6.17	0.30	0.216	(0.124)	0.100	0.116
75	6.25	0.30	0.216	(0.123)	0.100	0.116
76	6.33	0.30	0.216	(0.123)	0.100	0.116
77	6.42	0.30	0.216	(0.122)	0.100	0.116
78	6.50	0.30	0.216	(0.122)	0.100	0.116
79	6.58	0.33	0.240	(0.121)	0.111	0.129
80	6.67	0.33	0.240	(0.121)	0.111	0.129
81	6.75	0.33	0.240	(0.120)	0.111	0.129
82	6.83	0.33	0.240	(0.120)	0.111	0.129
83	6.92	0.33	0.240	(0.119)	0.111	0.129
84	7.00	0.33	0.240	(0.118)	0.111	0.129
85	7.08	0.33	0.240	(0.118)	0.111	0.129
86	7.17	0.33	0.240	(0.117)	0.111	0.129
87	7.25	0.33	0.240	(0.117)	0.111	0.129
88	7.33	0.37	0.264	0.116	(0.122)	0.147
89	7.42	0.37	0.264	0.116	(0.122)	0.148

90	7.50	0.37	0.264	0.115	(0.122)	0.148
91	7.58	0.40	0.288	0.115	(0.133)	0.173
92	7.67	0.40	0.288	0.114	(0.133)	0.173
93	7.75	0.40	0.288	0.114	(0.133)	0.174
94	7.83	0.43	0.312	0.113	(0.144)	0.198
95	7.92	0.43	0.312	0.113	(0.144)	0.199
96	8.00	0.43	0.312	0.112	(0.144)	0.199
97	8.08	0.50	0.360	0.112	(0.166)	0.248
98	8.17	0.50	0.360	0.111	(0.166)	0.248
99	8.25	0.50	0.360	0.111	(0.166)	0.249
100	8.33	0.50	0.360	0.110	(0.166)	0.249
101	8.42	0.50	0.360	0.109	(0.166)	0.250
102	8.50	0.50	0.360	0.109	(0.166)	0.251
103	8.58	0.53	0.383	0.108	(0.178)	0.275
104	8.67	0.53	0.383	0.108	(0.178)	0.276
105	8.75	0.53	0.383	0.107	(0.178)	0.276
106	8.83	0.57	0.407	0.107	(0.189)	0.300
107	8.92	0.57	0.407	0.106	(0.189)	0.301
108	9.00	0.57	0.407	0.106	(0.189)	0.302
109	9.08	0.63	0.455	0.105	(0.211)	0.350
110	9.17	0.63	0.455	0.105	(0.211)	0.350
111	9.25	0.63	0.455	0.104	(0.211)	0.351
112	9.33	0.67	0.479	0.104	(0.222)	0.375
113	9.42	0.67	0.479	0.103	(0.222)	0.376
114	9.50	0.67	0.479	0.103	(0.222)	0.376
115	9.58	0.70	0.503	0.102	(0.233)	0.401
116	9.67	0.70	0.503	0.102	(0.233)	0.401
117	9.75	0.70	0.503	0.101	(0.233)	0.402
118	9.83	0.73	0.527	0.101	(0.244)	0.426
119	9.92	0.73	0.527	0.100	(0.244)	0.427
120	10.00	0.73	0.527	0.100	(0.244)	0.427
121	10.08	0.50	0.360	0.100	(0.166)	0.260
122	10.17	0.50	0.360	0.099	(0.166)	0.260
123	10.25	0.50	0.360	0.099	(0.166)	0.261
124	10.33	0.50	0.360	0.098	(0.166)	0.261
125	10.42	0.50	0.360	0.098	(0.166)	0.262
126	10.50	0.50	0.360	0.097	(0.166)	0.262
127	10.58	0.67	0.479	0.097	(0.222)	0.383
128	10.67	0.67	0.479	0.096	(0.222)	0.383
129	10.75	0.67	0.479	0.096	(0.222)	0.384
130	10.83	0.67	0.479	0.095	(0.222)	0.384
131	10.92	0.67	0.479	0.095	(0.222)	0.385
132	11.00	0.67	0.479	0.094	(0.222)	0.385
133	11.08	0.63	0.455	0.094	(0.211)	0.362
134	11.17	0.63	0.455	0.093	(0.211)	0.362
135	11.25	0.63	0.455	0.093	(0.211)	0.362
136	11.33	0.63	0.455	0.092	(0.211)	0.363
137	11.42	0.63	0.455	0.092	(0.211)	0.363
138	11.50	0.63	0.455	0.092	(0.211)	0.364
139	11.58	0.57	0.407	0.091	(0.189)	0.316
140	11.67	0.57	0.407	0.091	(0.189)	0.317
141	11.75	0.57	0.407	0.090	(0.189)	0.317
142	11.83	0.60	0.431	0.090	(0.200)	0.342
143	11.92	0.60	0.431	0.089	(0.200)	0.342
144	12.00	0.60	0.431	0.089	(0.200)	0.343
145	12.08	0.83	0.599	0.088	(0.277)	0.511
146	12.17	0.83	0.599	0.088	(0.277)	0.511
147	12.25	0.83	0.599	0.088	(0.277)	0.512
148	12.33	0.87	0.623	0.087	(0.289)	0.536
149	12.42	0.87	0.623	0.087	(0.289)	0.536
150	12.50	0.87	0.623	0.086	(0.289)	0.537
151	12.58	0.93	0.671	0.086	(0.311)	0.585
152	12.67	0.93	0.671	0.085	(0.311)	0.586

153	12.75	0.93	0.671	0.085	(0.311)	0.586
154	12.83	0.97	0.695	0.084	(0.322)	0.611
155	12.92	0.97	0.695	0.084	(0.322)	0.611
156	13.00	0.97	0.695	0.084	(0.322)	0.611
157	13.08	1.13	0.815	0.083	(0.377)	0.732
158	13.17	1.13	0.815	0.083	(0.377)	0.732
9	13.25	1.13	0.815	0.082	(0.377)	0.733
160	13.33	1.13	0.815	0.082	(0.377)	0.733
161	13.42	1.13	0.815	0.082	(0.377)	0.733
162	13.50	1.13	0.815	0.081	(0.377)	0.734
163	13.58	0.77	0.551	0.081	(0.255)	0.471
164	13.67	0.77	0.551	0.080	(0.255)	0.471
165	13.75	0.77	0.551	0.080	(0.255)	0.471
166	13.83	0.77	0.551	0.079	(0.255)	0.472
167	13.92	0.77	0.551	0.079	(0.255)	0.472
168	14.00	0.77	0.551	0.079	(0.255)	0.473
169	14.08	0.90	0.647	0.078	(0.300)	0.569
170	14.17	0.90	0.647	0.078	(0.300)	0.569
171	14.25	0.90	0.647	0.077	(0.300)	0.570
172	14.33	0.87	0.623	0.077	(0.289)	0.546
173	14.42	0.87	0.623	0.077	(0.289)	0.546
174	14.50	0.87	0.623	0.076	(0.289)	0.547
175	14.58	0.87	0.623	0.076	(0.289)	0.547
176	14.67	0.87	0.623	0.076	(0.289)	0.548
177	14.75	0.87	0.623	0.075	(0.289)	0.548
178	14.83	0.83	0.599	0.075	(0.277)	0.524
179	14.92	0.83	0.599	0.074	(0.277)	0.525
180	15.00	0.83	0.599	0.074	(0.277)	0.525
181	15.08	0.80	0.575	0.074	(0.266)	0.502
182	15.17	0.80	0.575	0.073	(0.266)	0.502
183	15.25	0.80	0.575	0.073	(0.266)	0.502
184	15.33	0.77	0.551	0.072	(0.255)	0.479
5	15.42	0.77	0.551	0.072	(0.255)	0.479
186	15.50	0.77	0.551	0.072	(0.255)	0.480
187	15.58	0.63	0.455	0.071	(0.211)	0.384
188	15.67	0.63	0.455	0.071	(0.211)	0.384
189	15.75	0.63	0.455	0.071	(0.211)	0.385
190	15.83	0.63	0.455	0.070	(0.211)	0.385
191	15.92	0.63	0.455	0.070	(0.211)	0.385
192	16.00	0.63	0.455	0.070	(0.211)	0.386
193	16.08	0.13	0.096	(0.069)	0.044	0.051
194	16.17	0.13	0.096	(0.069)	0.044	0.051
195	16.25	0.13	0.096	(0.068)	0.044	0.051
196	16.33	0.13	0.096	(0.068)	0.044	0.051
197	16.42	0.13	0.096	(0.068)	0.044	0.051
198	16.50	0.13	0.096	(0.067)	0.044	0.051
199	16.58	0.10	0.072	(0.067)	0.033	0.039
200	16.67	0.10	0.072	(0.067)	0.033	0.039
201	16.75	0.10	0.072	(0.066)	0.033	0.039
202	16.83	0.10	0.072	(0.066)	0.033	0.039
203	16.92	0.10	0.072	(0.066)	0.033	0.039
204	17.00	0.10	0.072	(0.065)	0.033	0.039
205	17.08	0.17	0.120	(0.065)	0.055	0.064
206	17.17	0.17	0.120	(0.065)	0.055	0.064
207	17.25	0.17	0.120	(0.064)	0.055	0.064
208	17.33	0.17	0.120	(0.064)	0.055	0.064
209	17.42	0.17	0.120	(0.064)	0.055	0.064
0	17.50	0.17	0.120	(0.063)	0.055	0.064
211	17.58	0.17	0.120	(0.063)	0.055	0.064
212	17.67	0.17	0.120	(0.063)	0.055	0.064
213	17.75	0.17	0.120	(0.063)	0.055	0.064
214	17.83	0.13	0.096	(0.062)	0.044	0.051
215	17.92	0.13	0.096	(0.062)	0.044	0.051

216	18.00	0.13	0.096	(0.062)	0.044	0.051
217	18.08	0.13	0.096	(0.061)	0.044	0.051
218	18.17	0.13	0.096	(0.061)	0.044	0.051
219	18.25	0.13	0.096	(0.061)	0.044	0.051
220	18.33	0.13	0.096	(0.060)	0.044	0.051
221	18.42	0.13	0.096	(0.060)	0.044	0.051
2	18.50	0.13	0.096	(0.060)	0.044	0.051
223	18.58	0.10	0.072	(0.060)	0.033	0.039
224	18.67	0.10	0.072	(0.059)	0.033	0.039
225	18.75	0.10	0.072	(0.059)	0.033	0.039
226	18.83	0.07	0.048	(0.059)	0.022	0.026
227	18.92	0.07	0.048	(0.058)	0.022	0.026
228	19.00	0.07	0.048	(0.058)	0.022	0.026
229	19.08	0.10	0.072	(0.058)	0.033	0.039
230	19.17	0.10	0.072	(0.058)	0.033	0.039
231	19.25	0.10	0.072	(0.057)	0.033	0.039
232	19.33	0.13	0.096	(0.057)	0.044	0.051
233	19.42	0.13	0.096	(0.057)	0.044	0.051
234	19.50	0.13	0.096	(0.057)	0.044	0.051
235	19.58	0.10	0.072	(0.056)	0.033	0.039
236	19.67	0.10	0.072	(0.056)	0.033	0.039
237	19.75	0.10	0.072	(0.056)	0.033	0.039
238	19.83	0.07	0.048	(0.055)	0.022	0.026
239	19.92	0.07	0.048	(0.055)	0.022	0.026
240	20.00	0.07	0.048	(0.055)	0.022	0.026
241	20.08	0.10	0.072	(0.055)	0.033	0.039
242	20.17	0.10	0.072	(0.055)	0.033	0.039
243	20.25	0.10	0.072	(0.054)	0.033	0.039
244	20.33	0.10	0.072	(0.054)	0.033	0.039
245	20.42	0.10	0.072	(0.054)	0.033	0.039
246	20.50	0.10	0.072	(0.054)	0.033	0.039
247	20.58	0.10	0.072	(0.053)	0.033	0.039
3	20.67	0.10	0.072	(0.053)	0.033	0.039
249	20.75	0.10	0.072	(0.053)	0.033	0.039
250	20.83	0.07	0.048	(0.053)	0.022	0.026
251	20.92	0.07	0.048	(0.052)	0.022	0.026
252	21.00	0.07	0.048	(0.052)	0.022	0.026
253	21.08	0.10	0.072	(0.052)	0.033	0.039
254	21.17	0.10	0.072	(0.052)	0.033	0.039
255	21.25	0.10	0.072	(0.052)	0.033	0.039
256	21.33	0.07	0.048	(0.051)	0.022	0.026
257	21.42	0.07	0.048	(0.051)	0.022	0.026
258	21.50	0.07	0.048	(0.051)	0.022	0.026
259	21.58	0.10	0.072	(0.051)	0.033	0.039
260	21.67	0.10	0.072	(0.051)	0.033	0.039
261	21.75	0.10	0.072	(0.051)	0.033	0.039
262	21.83	0.07	0.048	(0.050)	0.022	0.026
263	21.92	0.07	0.048	(0.050)	0.022	0.026
264	22.00	0.07	0.048	(0.050)	0.022	0.026
265	22.08	0.10	0.072	(0.050)	0.033	0.039
266	22.17	0.10	0.072	(0.050)	0.033	0.039
267	22.25	0.10	0.072	(0.050)	0.033	0.039
268	22.33	0.07	0.048	(0.049)	0.022	0.026
269	22.42	0.07	0.048	(0.049)	0.022	0.026
270	22.50	0.07	0.048	(0.049)	0.022	0.026
271	22.58	0.07	0.048	(0.049)	0.022	0.026
272	22.67	0.07	0.048	(0.049)	0.022	0.026
3	22.75	0.07	0.048	(0.049)	0.022	0.026
4	22.83	0.07	0.048	(0.049)	0.022	0.026
275	22.92	0.07	0.048	(0.048)	0.022	0.026
276	23.00	0.07	0.048	(0.048)	0.022	0.026
277	23.08	0.07	0.048	(0.048)	0.022	0.026
278	23.17	0.07	0.048	(0.048)	0.022	0.026

279	23.25	0.07	0.048	(0.048)	0.022	0.026
280	23.33	0.07	0.048	(0.048)	0.022	0.026
281	23.42	0.07	0.048	(0.048)	0.022	0.026
282	23.50	0.07	0.048	(0.048)	0.022	0.026
283	23.58	0.07	0.048	(0.048)	0.022	0.026
284	23.67	0.07	0.048	(0.048)	0.022	0.026
285	23.75	0.07	0.048	(0.047)	0.022	0.026
286	23.83	0.07	0.048	(0.047)	0.022	0.026
287	23.92	0.07	0.048	(0.047)	0.022	0.026
288	24.00	0.07	0.048	(0.047)	0.022	0.026

(Loss Rate Not Used)

Sum = 100.0 Sum = 53.5

Flood volume = Effective rainfall 4.46(In)
times area 704.4(Ac.)/[(In)/(Ft.)] = 261.6(Ac.Ft)
Total soil loss = 1.54(In)
Total soil loss = 90.109(Ac.Ft)
Total rainfall = 5.99(In)
Flood volume = 11395785.6 Cubic Feet
Total soil loss = 3925156.6 Cubic Feet

Peak flow rate of this hydrograph = 484.612(CFS)

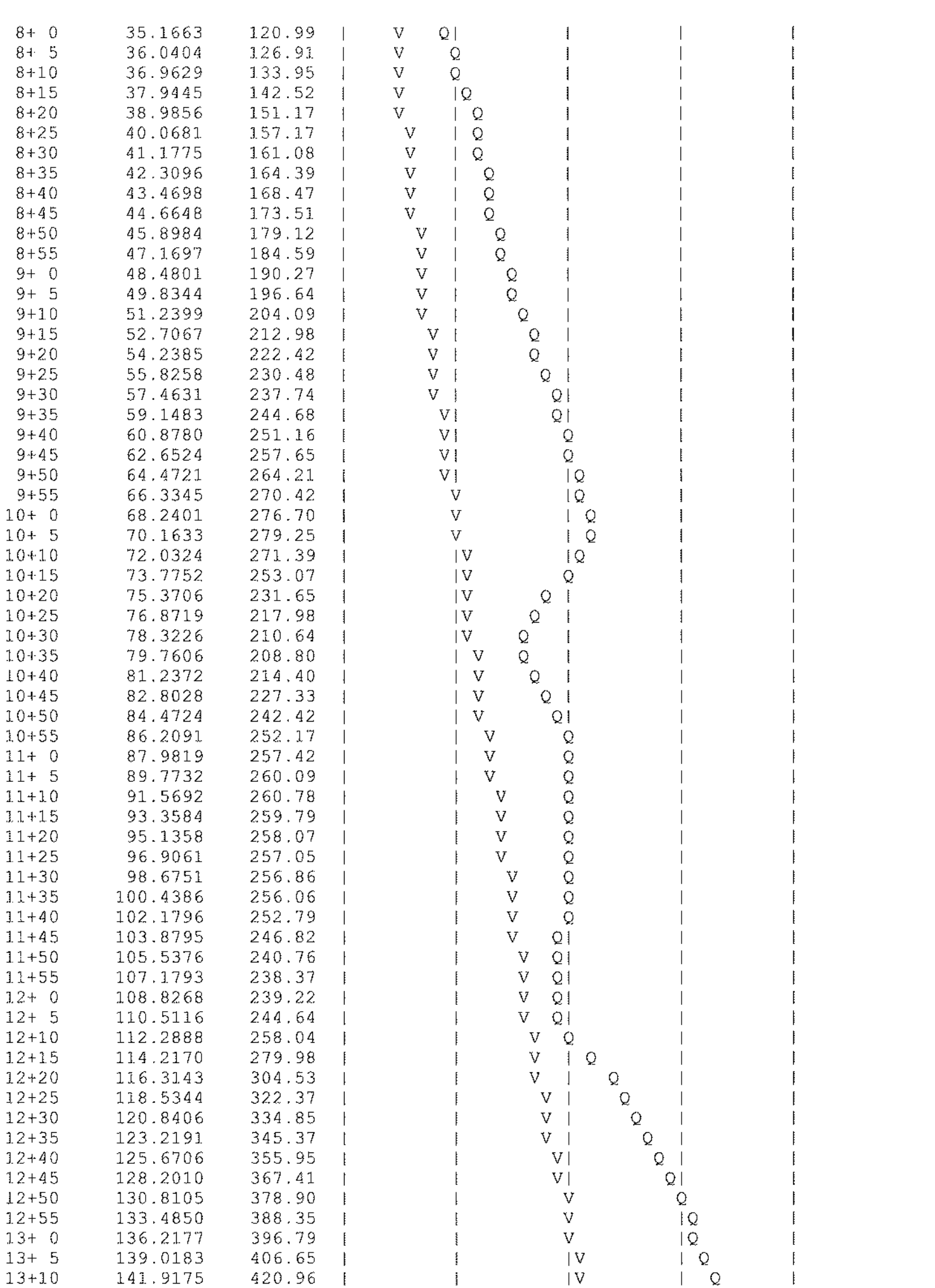
++

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

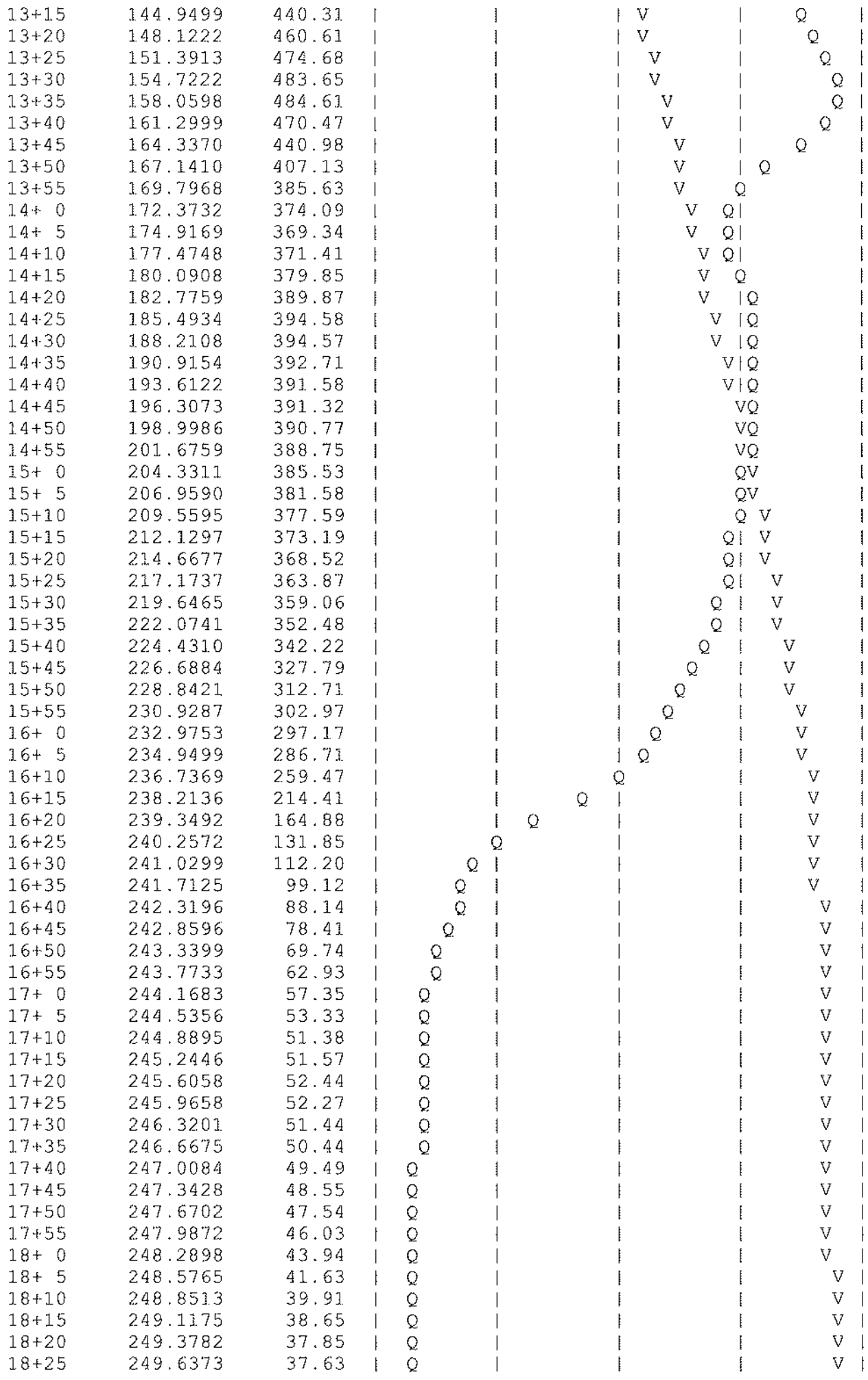
Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	125.0	250.0	375.0	500.0
0+ 5	0.0036	0.52	Q				
0+10	0.0200	2.39	Q				
0+15	0.0591	5.68	Q				
0+20	0.1252	9.59	Q				
0+25	0.2143	12.94	VQ				
0+30	0.3243	15.97	VQ				
0+35	0.4530	18.69	VQ				
0+40	0.5947	20.58	VQ				
0+45	0.7450	21.82	VQ				
0+50	0.9033	22.99	VQ				
0+55	1.0730	24.64	VQ				
1+ 0	1.2582	26.88	V Q				
1+ 5	1.4576	28.96	V Q				
1+10	1.6617	29.64	V Q				
1+15	1.8617	29.04	V Q				
1+20	2.0542	27.96	V Q				
1+25	2.2428	27.38	V Q				
1+30	2.4300	27.19	V Q				
1+35	2.6172	27.18	V Q				
1+40	2.8046	27.20	V Q				
1+45	2.9922	27.25	V Q				
1+50	3.1820	27.55	V Q				
1+55	3.3785	28.53	V Q				
2+ 0	3.5866	30.21	V Q				
2+ 5	3.8075	32.08	V Q				
2+10	4.0371	33.33	V Q				
2+15	4.2718	34.09	V Q				
2+20	4.5099	34.57	V Q				
2+25	4.7504	34.91	V Q				
2+30	4.9927	35.19	V Q				
2+35	5.2384	35.68	V Q				
2+40	5.4918	36.78	V Q				

2+45	5.7574	38.57	V Q	|	|	|	|
2+50	6.0365	40.52	V Q	|	|	|	|
2+55	6.3246	41.84	V Q	|	|	|	|
3+ 0	6.6182	42.62	|V Q	|	|	|	|
3+ 5	6.9153	43.14	|V Q	|	|	|	|
3+10	7.2152	43.54	|V Q	|	|	|	|
3+15	7.5172	43.86	|V Q	|	|	|	|
3+20	7.8211	44.13	|V Q	|	|	|	|
3+25	8.1267	44.37	|V Q	|	|	|	|
3+30	8.4337	44.58	|V Q	|	|	|	|
3+35	8.7419	44.75	|V Q	|	|	|	|
3+40	9.0511	44.90	|V Q	|	|	|	|
3+45	9.3611	45.02	|V Q	|	|	|	|
3+50	9.6737	45.39	|V Q	|	|	|	|
3+55	9.9935	46.43	|V Q	|	|	|	|
4+ 0	10.3253	48.17	|V Q	|	|	|	|
4+ 5	10.6702	50.08	|V Q	|	|	|	|
4+10	11.0237	51.33	|V Q	|	|	|	|
4+15	11.3824	52.08	|V Q	|	|	|	|
4+20	11.7461	52.81	|V Q	|	|	|	|
4+25	12.1189	54.13	|V Q	|	|	|	|
4+30	12.5051	56.08	|V Q	|	|	|	|
4+35	12.9057	58.16	|V Q	|	|	|	|
4+40	13.3160	59.58	| V Q	|	|	|	|
4+45	13.7324	60.46	| V Q	|	|	|	|
4+50	14.1547	61.32	| V Q	|	|	|	|
4+55	14.5866	62.71	| V Q	|	|	|	|
5+ 0	15.0324	64.73	| V Q	|	|	|	|
5+ 5	15.4894	66.36	| V Q	|	|	|	|
5+10	15.9436	65.95	| V Q	|	|	|	|
5+15	16.3815	63.59	| V Q	|	|	|	|
5+20	16.8005	60.83	| V Q	|	|	|	|
5+25	17.2128	59.87	| V Q	|	|	|	|
5+30	17.6297	60.54	| V Q	|	|	|	|
5+35	18.0574	62.09	| V Q	|	|	|	|
5+40	18.4971	63.85	| V Q	|	|	|	|
5+45	18.9509	65.89	| V Q	|	|	|	|
5+50	19.4187	67.92	| V Q	|	|	|	|
5+55	19.8959	69.29	| V Q	|	|	|	|
6+ 0	20.3787	70.10	| V Q	|	|	|	|
6+ 5	20.8670	70.91	| V Q	|	|	|	|
6+10	21.3646	72.26	| V Q	|	|	|	|
6+15	21.8760	74.25	| V Q	|	|	|	|
6+20	22.4019	76.36	| V Q	|	|	|	|
6+25	22.9376	77.78	| V Q	|	|	|	|
6+30	23.4794	78.67	| V Q	|	|	|	|
6+35	24.0271	79.53	| V Q	|	|	|	|
6+40	24.5845	80.94	| V Q	|	|	|	|
6+45	25.1558	82.95	| V Q	|	|	|	|
6+50	25.7419	85.11	| V Q	|	|	|	|
6+55	26.3383	86.59	| V Q	|	|	|	|
7+ 0	26.9411	87.53	| V Q	|	|	|	|
7+ 5	27.5484	88.17	| V Q	|	|	|	|
7+10	28.1590	88.66	| V Q	|	|	|	|
7+15	28.7723	89.05	| V Q	|	|	|	|
7+20	29.3906	89.77	| V Q	|	|	|	|
7+25	30.0205	91.46	| V Q	|	|	|	|
7+30	30.6691	94.18	| V Q	|	|	|	|
7+35	31.3417	97.67	| V Q	|	|	|	|
7+40	32.0410	101.54	| V Q	|	|	|	|
7+45	32.7711	106.01	| V Q	|	|	|	|
7+50	33.5353	110.95	| V Q	|	|	|	|
7+55	34.3331	115.84	| V Q|	|	|	|	|



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13+15	144.9499	440.31	
13+20	148.1222	460.61	
13+25	151.3913	474.68	
13+30	154.7222	483.65	
13+35	158.0598	484.61	
13+40	161.2999	470.47	
13+45	164.3370	440.98	
13+50	167.1410	407.13	
13+55	169.7968	385.63	
14+ 0	172.3732	374.09	
14+ 5	174.9169	369.34	
14+10	177.4748	371.41	
14+15	180.0908	379.85	
14+20	182.7759	389.87	
14+25	185.4934	394.58	
14+30	188.2108	394.57	
14+35	190.9154	392.71	
14+40	193.6122	391.58	
14+45	196.3073	391.32	
14+50	198.9986	390.77	
14+55	201.6759	388.75	
15+ 0	204.3311	385.53	
15+ 5	206.9590	381.58	
15+10	209.5595	377.59	
15+15	212.1297	373.19	
15+20	214.6677	368.52	
15+25	217.1737	363.87	
15+30	219.6465	359.06	
15+35	222.0741	352.48	
15+40	224.4310	342.22	
15+45	226.6884	327.79	
15+50	228.8421	312.71	
15+55	230.9287	302.97	
16+ 0	232.9753	297.17	
16+ 5	234.9499	286.71	
16+10	236.7369	259.47	
16+15	238.2136	214.41	
16+20	239.3492	164.88	
16+25	240.2572	131.85	
16+30	241.0299	112.20	
16+35	241.7125	99.12	
16+40	242.3196	88.14	
16+45	242.8596	78.41	
16+50	243.3399	69.74	
16+55	243.7733	62.93	
17+ 0	244.1683	57.35	
17+ 5	244.5356	53.33	
17+10	244.8895	51.38	
17+15	245.2446	51.57	
17+20	245.6058	52.44	
17+25	245.9658	52.27	
17+30	246.3201	51.44	
17+35	246.6675	50.44	
17+40	247.0084	49.49	
17+45	247.3428	48.55	
17+50	247.6702	47.54	
17+55	247.9872	46.03	
18+ 0	248.2898	43.94	
18+ 5	248.5765	41.63	
18+10	248.8513	39.91	
18+15	249.1175	38.65	
18+20	249.3782	37.85	
18+25	249.6373	37.63	

18+30	249.8954	37.47	Q				V
18+35	250.1507	37.07	Q				V
18+40	250.3988	36.02	Q				V
18+45	250.6349	34.28	Q				V
18+50	250.8561	32.12	Q				V
18+55	251.0622	29.93	Q				V
19+ 0	251.2520	27.55	Q				V
19+ 5	251.4276	25.51	Q				V
19+10	251.5989	24.87	Q				V
19+15	251.7747	25.53	Q				V
19+20	251.9601	26.92	Q				V
19+25	252.1562	28.48	Q				V
19+30	252.3652	30.33	Q				V
19+35	252.5851	31.94	Q				V
19+40	252.8070	32.21	Q				V
19+45	253.0223	31.26	Q				V
19+50	253.2262	29.60	Q				V
19+55	253.4174	27.77	Q				V
20+ 0	253.5943	25.68	Q				V
20+ 5	253.7586	23.87	Q				V
20+10	253.9200	23.43	Q				V
20+15	254.0869	24.24	Q				V
20+20	254.2627	25.52	Q				V
20+25	254.4438	26.30	Q				V
20+30	254.6274	26.65	Q				V
20+35	254.8120	26.80	Q				V
20+40	254.9973	26.92	Q				V
20+45	255.1833	27.00	Q				V
20+50	255.3679	26.81	Q				V
20+55	255.5464	25.92	Q				V
21+ 0	255.7138	24.32	Q				V
21+ 5	255.8708	22.79	Q				V
21+10	256.0262	22.56	Q				V
21+15	256.1883	23.54	Q				V
21+20	256.3584	24.70	Q				V
21+25	256.5282	24.65	Q				V
21+30	256.6897	23.45	Q				V
21+35	256.8419	22.10	Q				V
21+40	256.9933	21.98	Q				V
21+45	257.1519	23.04	Q				V
21+50	257.3190	24.26	Q				V
21+55	257.4860	24.25	Q				V
22+ 0	257.6451	23.10	Q				V
22+ 5	257.7952	21.80	Q				V
22+10	257.9450	21.75	Q				V
22+15	258.1025	22.86	Q				V
22+20	258.2687	24.13	Q				V
22+25	258.4351	24.15	Q				V
22+30	258.5936	23.02	Q				V
22+35	258.7415	21.48	Q				V
22+40	258.8826	20.48	Q				V
22+45	259.0200	19.94	Q				V
22+50	259.1552	19.64	Q				V
22+55	259.2888	19.40	Q				V
23+ 0	259.4211	19.22	Q				V
23+ 5	259.5524	19.06	Q				V
23+10	259.6830	18.96	Q				V
23+15	259.8129	18.86	Q				V
23+20	259.9423	18.78	Q				V
23+25	260.0711	18.70	Q				V
23+30	260.1994	18.64	Q				V
23+35	260.3274	18.58	Q				V
23+40	260.4551	18.54	Q				V

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23+45     260.5826     18.52  |Q        |         |         |         V|
23+50     260.7100     18.49  |Q        |         |         |         V|
23+55     260.8370     18.45  |Q        |         |         |         V|
24+ 0     260.9638     18.40  |Q        |         |         |         V|
24+ 5     261.0867     17.85  |Q        |         |         |         V|
24+10     261.1967     15.97  |Q        |         |         |         V|
24+15     261.2841     12.68  |Q        |         |         |         V|
24+20     261.3462      9.02  Q         |         |         |         V|
24+25     261.3916      6.59  Q         |         |         |         V|
24+30     261.4272      5.17  Q         |         |         |         V|
24+35     261.4566      4.27  Q         |         |         |         V|
24+40     261.4812      3.58  Q         |         |         |         V|
24+45     261.5020      3.03  Q         |         |         |         V|
24+50     261.5197      2.56  Q         |         |         |         V|
24+55     261.5348      2.19  Q         |         |         |         V|
25+ 0     261.5476      1.87  Q         |         |         |         V|
25+ 5     261.5586      1.60  Q         |         |         |         V|
25+10     261.5680      1.36  Q         |         |         |         V|
25+15     261.5761      1.18  Q         |         |         |         V|
25+20     261.5831      1.01  Q         |         |         |         V|
25+25     261.5890      0.85  Q         |         |         |         V|
25+30     261.5938      0.71  Q         |         |         |         V|
25+35     261.5979      0.59  Q         |         |         |         V|
25+40     261.6013      0.49  Q         |         |         |         V|
25+45     261.6040      0.40  Q         |         |         |         V|
25+50     261.6062      0.32  Q         |         |         |         V|
25+55     261.6080      0.25  Q         |         |         |         V|
26+ 0     261.6093      0.20  Q         |         |         |         V|
26+ 5     261.6103      0.15  Q         |         |         |         V|
26+10     261.6110      0.09  Q         |         |         |         V|
26+15     261.6112      0.04  Q         |         |         |          V
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TABLE 3.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.001	0.10		
	D	75.0%	75.0	92.3	16.33	0.023	2.14	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.000	0.04		
	B	90.0%	56.0	93.8	0.24	0.000	0.03		
	C	90.0%	69.0	95.1	0.42	0.001	0.06		
	D	90.0%	75.0	95.7	0.68	0.001	0.09	1.67	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.000	0.03		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.000	0.04		
	D	90.0%	75.0	95.7	2.69	0.004	0.37	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	20.10	0.029	2.68		
	C	90.0%	69.0	95.1	28.79	0.041	3.89		
	D	90.0%	75.0	95.7	0.89	0.001	0.12	49.78	94.6
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.58	0.045	3.52	31.58	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	14.66	0.021	1.95		
	C	90.0%	69.0	95.1	72.37	0.103	9.77		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	87.03	94.9
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.96	0.004	0.37		
	C	75.0%	69.0	90.8	2.20	0.003	0.28		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	5.16	88.9
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	13.61	0.019	1.41		
	C	40.0%	69.0	80.6	48.48	0.069	5.55		
	D	40.0%	75.0	84.2	4.03	0.006	0.48	66.12	79.2
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.30	0.000	0.03		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	7.80	0.011	0.92		
	D	50.0%	75.0	86.5	143.61	0.204	17.63	151.71	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.007	0.58		
	D	50.0%	75.0	86.5	38.57	0.055	4.74	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	2.05	0.003	0.22		
	C	50.0%	69.0	83.5	5.16	0.007	0.61		
	D	50.0%	75.0	86.5	8.82	0.013	1.08	16.03	84.3
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.005	0.42		
	C	50.0%	69.0	83.5	1.98	0.003	0.23		
	D	50.0%	75.0	86.5	121.29	0.172	14.89	127.12	86.2
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.63	0.005	0.40		
	C	50.0%	69.0	83.5	13.68	0.019	1.62		
	D	50.0%	75.0	86.5	31.05	0.044	3.81	48.36	84.9
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.35	0.000	0.03		
	C	15.0%	69.0	73.4	1.54	0.002	0.16		
	D	15.0%	75.0	78.5	3.71	0.005	0.41	5.60	76.0
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.019	1.70	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	6.59	0.009	0.68		
	C	40.0%	69.0	80.6	20.42	0.029	2.34		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	27.01	78.7
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.29	0.000	0.04	0.29	95.7
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.84	0.014	1.18	9.84	84.2
								704.41	
					704.41	1.000			
COMPOSITE RUN OFF INDEX - AMC II							86.6		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 3.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

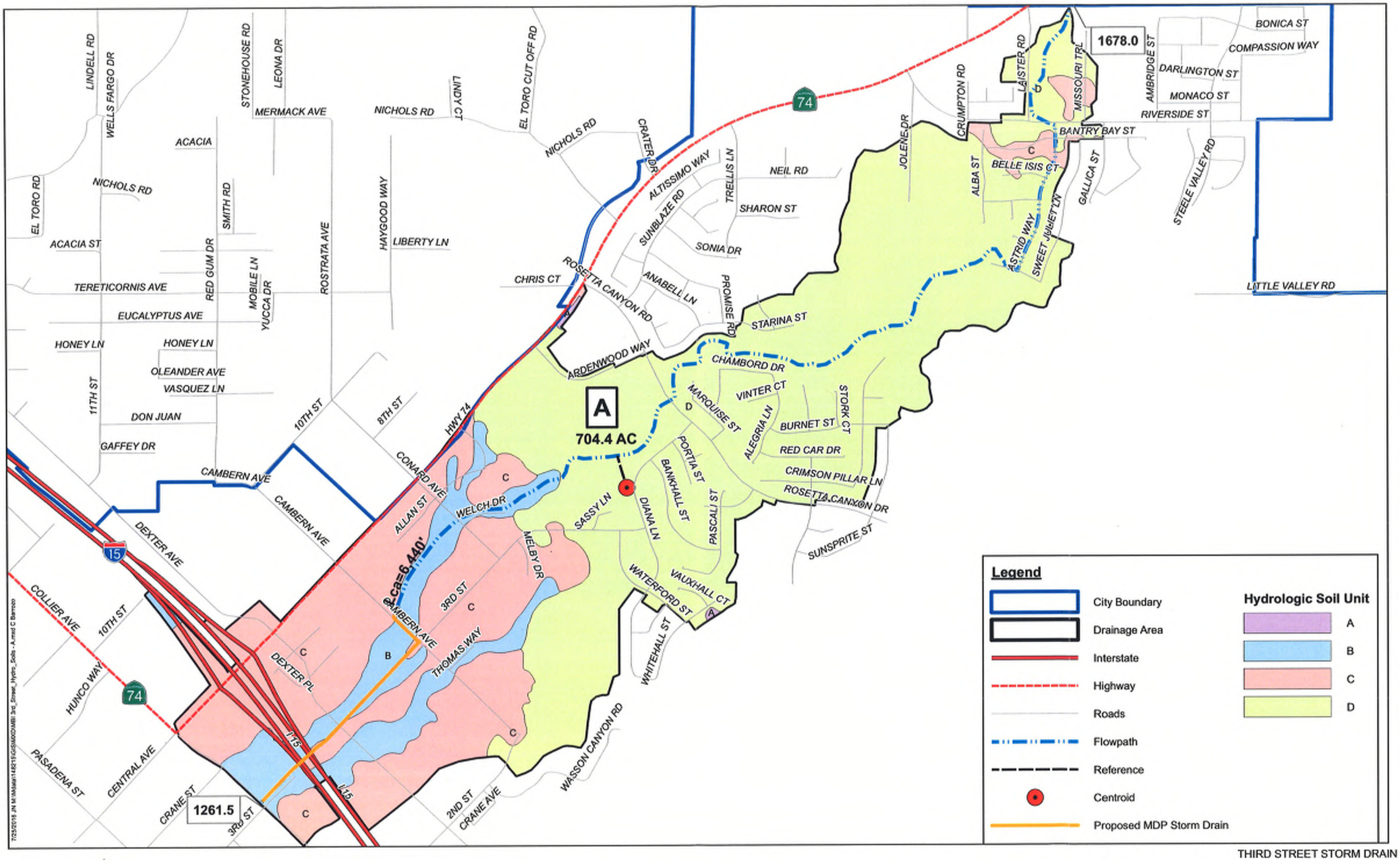
CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

WATERSHEAD "A"					
LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.024	0.007
BUSINESS PROFESSIONAL	0.9	0.18	1.67	0.002	0.000
COMMERCIAL	0.9	0.18	3.16	0.004	0.001
COMMERCIAL MIXED-USE	0.9	0.18	49.78	0.071	0.013
COMMUNITY PARK	0.15	0.78	31.58	0.045	0.035
GENERAL COMMERCIAL	0.9	0.18	87.03	0.124	0.022
HIGH DENSITY-R	0.75	0.3	5.16	0.007	0.002
LOW DENSITY-R	0.4	0.58	66.12	0.094	0.054
LOW-MEDIUM R	0.5	0.5	151.71	0.215	0.108
MEDIUM DENSITY	0.5	0.5	43.50	0.062	0.031
MEDIUM DENSITY-R	0.5	0.5	16.03	0.023	0.011
MEDIUM LOW DENSITY	0.5	0.5	127.12	0.180	0.090
MODIFIED MLD	0.5	0.5	48.36	0.069	0.034
NP - PARK	0.15	0.78	5.60	0.008	0.006
OPEN SPACE	0.05	0.86	13.36	0.019	0.016
PUBLIC INSTITUTIONAL	0.4	0.58	27.01	0.038	0.022
ROAD	0.9	0.18	0.29	0.000	0.000
SCHOOL	0.4	0.58	9.84	0.014	0.008
			704.41	1.000	
COMPOSITE LOW LOSS RATE					0.463

TABLE 3.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

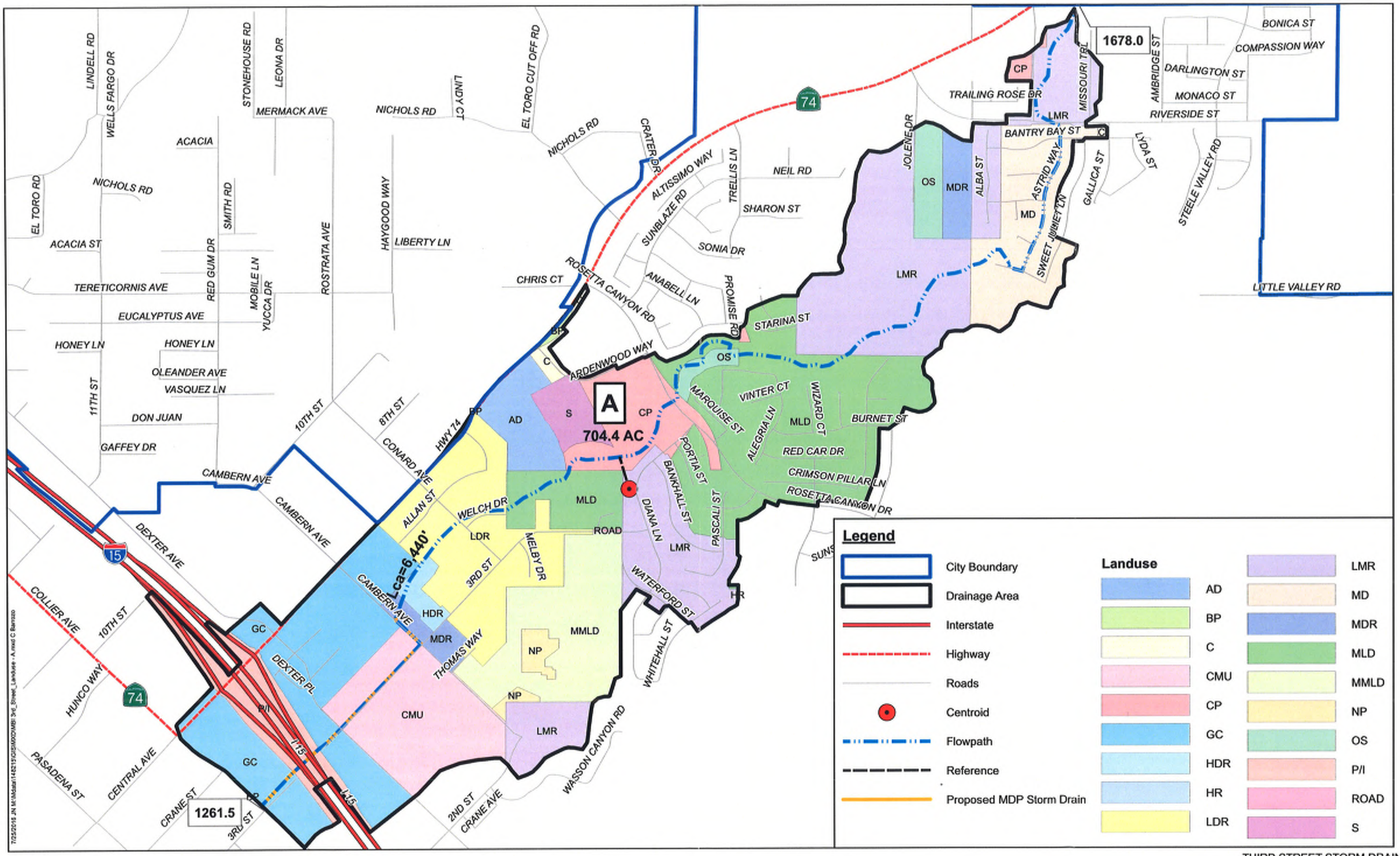
WATERSHEAD "A"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.024	0.0004
BUSINESS PROFESSIONAL	0.015	1.67	0.002	0.0000
COMMERCIAL	0.015	3.16	0.004	0.0001
COMMERCIAL MIXED-USE	0.015	49.78	0.071	0.0011
COMMUNITY PARK	0.035	31.58	0.045	0.0016
GENERAL COMMERCIAL	0.015	87.03	0.124	0.0019
HIGH DENSITY-R	0.015	5.16	0.007	0.0001
LOW DENSITY-R	0.02	66.12	0.094	0.0019
LOW-MEDIUM R	0.015	151.71	0.215	0.0032
MEDIUM DENSITY	0.015	43.50	0.062	0.0009
MEDIUM DENSITY-R	0.015	16.03	0.023	0.0003
MEDIUM LOW DENSITY	0.02	127.12	0.180	0.0036
MODIFIED MLD	0.02	48.36	0.069	0.0014
NP - PARK	0.035	5.60	0.008	0.0003
OPEN SPACE (Natural)	0.04	13.36	0.019	0.0008
PUBLIC INSTITUTIONAL	0.015	27.01	0.038	0.0006
ROAD	0.015	0.29	0.000	0.0000
SCHOOL	0.015	9.84	0.014	0.0002
		704.41	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0182**



THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map -WS A

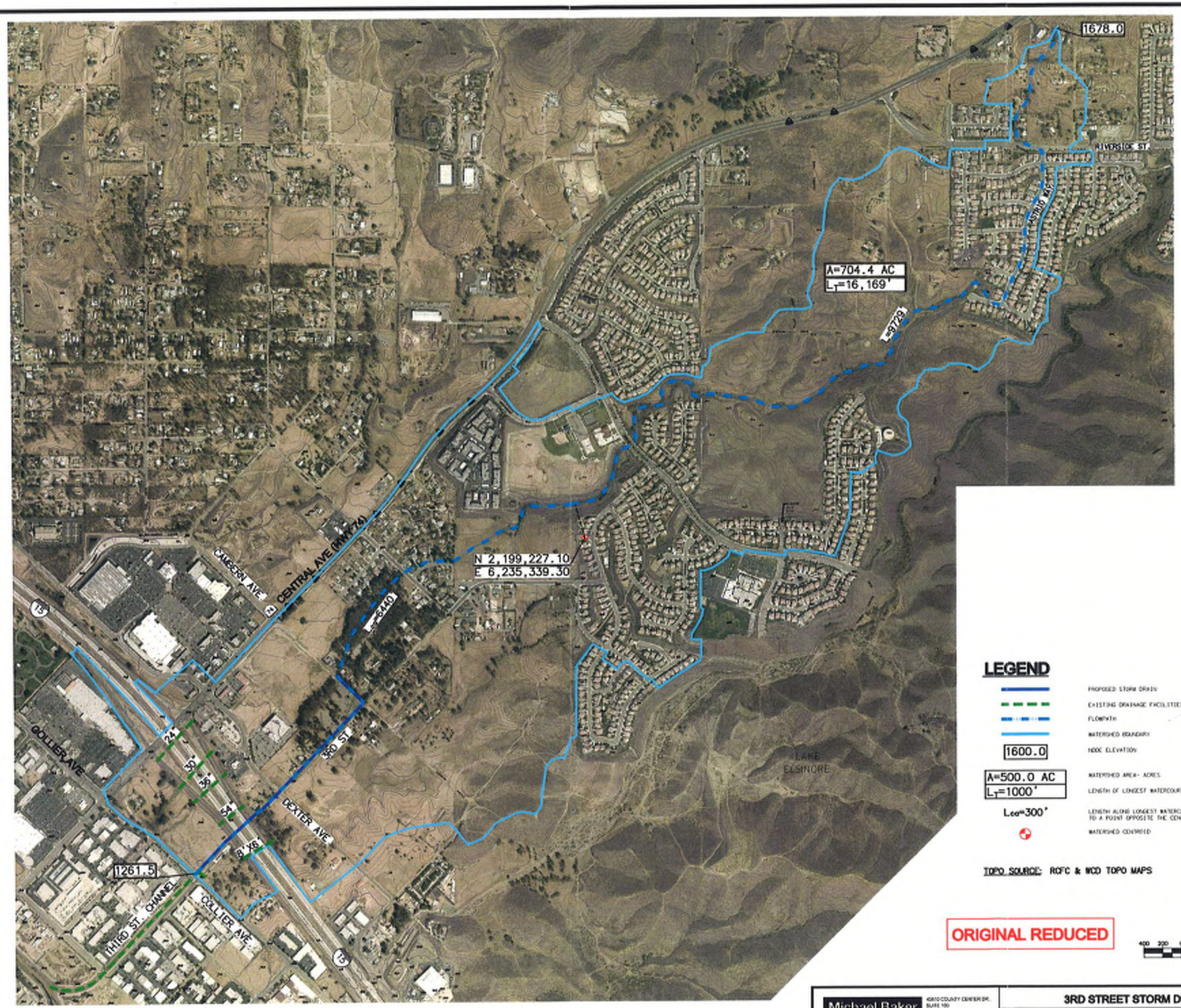
RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 1



THIRD STREET STORM DRAIN

Landuse Map -WS A

RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 2



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- L_{CG}=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

400 200 0 400 800 1200
SCALE: 1"=400'

Michael Baker INTERNATIONAL
41810 COUNTY CENTER DR. SUITE 100 TEMECULA, CA 92591
PHONE: (951) 695-6542
MBAKERINTL.COM

3RD STREET STORM DRAIN- EXHIBIT 3

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A'

H:\PDATA\1482\10\CADD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG 3RDSTR_LOC.MXD 7/28/16 11:58 am

APPENDIX 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 06/22/16 File: 3RDSTA13100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A1 (DESIGN POINT AT CAMBERN AVE)
100-YEAR STORM EVENT

Drainage Area = 383.41(Ac.) = 0.599 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 383.41(Ac.) = 0.599 Sq.

Length along longest watercourse = 13164.00(Ft.)
Length along longest watercourse measured to centroid = 6267.00(Ft.)
Length along longest watercourse = 2.493 Mi.
Length along longest watercourse measured to centroid = 1.187 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 148.6053 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.272 Hr.
Lag time = 16.31 Min.
25% of lag time = 4.08 Min.
40% of lag time = 6.53 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
383.41	0.95	364.24

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
383.41	2.30	881.84

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.83 %
Adjusted average point rain = 2.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
31.340	78.50	0.150
3.110	95.00	0.900
3.900	88.30	0.750
39.930	78.50	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.090	85.70	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 383.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.045	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
78.5	78.5	0.262	0.150	0.226	0.082	0.019
95.0	95.0	0.065	0.900	0.012	0.008	0.000
88.3	88.3	0.149	0.750	0.049	0.010	0.000
78.5	78.5	0.262	0.400	0.167	0.104	0.017
86.3	86.3	0.172	0.500	0.095	0.257	0.024
86.2	86.2	0.173	0.500	0.095	0.113	0.011
85.7	85.7	0.179	0.500	0.098	0.026	0.003
86.1	86.1	0.174	0.500	0.096	0.283	0.027
89.5	89.5	0.136	0.050	0.130	0.035	0.005
84.2	84.2	0.196	0.400	0.126	0.026	0.003
					Sum (F) =	0.111

Area averaged mean soil loss (F) (In/Hr) = 0.111
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.529

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	30.651	2.985	11.535
2	0.167	61.302	11.056	42.720
3	0.250	91.953	19.207	74.215
4	0.333	122.604	20.271	78.329
5	0.417	153.255	12.456	48.130
6	0.500	183.906	7.123	27.524
7	0.583	214.557	4.692	18.129
8	0.667	245.208	3.663	14.155
9	0.750	275.859	2.970	11.475
10	0.833	306.510	2.435	9.408

11	0.917	337.160	1.953	7.547
12	1.000	367.811	1.756	6.786
13	1.083	398.462	1.392	5.377
14	1.167	429.113	1.183	4.570
15	1.250	459.764	0.978	3.780
16	1.333	490.415	0.934	3.608
17	1.417	521.066	0.862	3.329
18	1.500	551.717	0.686	2.651
19	1.583	582.368	0.606	2.343
20	1.667	613.019	0.541	2.089
21	1.750	643.670	0.449	1.737
22	1.833	674.321	0.391	1.509
23	1.917	704.972	0.309	1.194
24	2.000	735.623	0.307	1.184
25	2.083	766.274	0.307	1.184
26	2.167	796.925	0.307	1.184
27	2.250	827.576	0.184	0.711
		Sum = 100.000	Sum=	386.405

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	1.30	0.358	0.111	(0.189)	0.247
2	0.17	1.30	0.358	0.111	(0.189)	0.247
3	0.25	1.10	0.303	0.111	(0.160)	0.192
4	0.33	1.50	0.413	0.111	(0.219)	0.303
5	0.42	1.50	0.413	0.111	(0.219)	0.303
6	0.50	1.80	0.496	0.111	(0.262)	0.385
7	0.58	1.50	0.413	0.111	(0.219)	0.303
8	0.67	1.80	0.496	0.111	(0.262)	0.385
9	0.75	1.80	0.496	0.111	(0.262)	0.385
10	0.83	1.50	0.413	0.111	(0.219)	0.303
11	0.92	1.60	0.441	0.111	(0.233)	0.330
12	1.00	1.80	0.496	0.111	(0.262)	0.385
13	1.08	2.20	0.606	0.111	(0.321)	0.495
14	1.17	2.20	0.606	0.111	(0.321)	0.495
15	1.25	2.20	0.606	0.111	(0.321)	0.495
16	1.33	2.00	0.551	0.111	(0.292)	0.440
17	1.42	2.60	0.716	0.111	(0.379)	0.606
18	1.50	2.70	0.744	0.111	(0.394)	0.633
19	1.58	2.40	0.661	0.111	(0.350)	0.551
20	1.67	2.70	0.744	0.111	(0.394)	0.633
21	1.75	3.30	0.909	0.111	(0.481)	0.799
22	1.83	3.10	0.854	0.111	(0.452)	0.743
23	1.92	2.90	0.799	0.111	(0.423)	0.688
24	2.00	3.00	0.827	0.111	(0.437)	0.716
25	2.08	3.10	0.854	0.111	(0.452)	0.743
26	2.17	4.20	1.157	0.111	(0.612)	1.046
27	2.25	5.00	1.378	0.111	(0.729)	1.267
28	2.33	3.50	0.964	0.111	(0.510)	0.854
29	2.42	6.80	1.874	0.111	(0.991)	1.763
30	2.50	7.30	2.011	0.111	(1.064)	1.901
31	2.58	8.20	2.259	0.111	(1.195)	2.149
`2	2.67	5.90	1.626	0.111	(0.860)	1.515
,3	2.75	2.00	0.551	0.111	(0.292)	0.440
34	2.83	1.80	0.496	0.111	(0.262)	0.385
35	2.92	1.80	0.496	0.111	(0.262)	0.385
36	3.00	0.60	0.165	(0.111)	0.087	0.078
		(Loss Rate Not Used)				

Sum = 100.0 Sum = 23.6

Flood volume = Effective rainfall 1.97(In)
times area 383.4(Ac.)/[(In)/(Ft.)] = 62.8(Ac.Ft)
Total soil loss = 0.33(In)
Total soil loss = 10.555(Ac.Ft)
Total rainfall = 2.30(In)
Flood volume = 2735946.5 Cubic Feet
Total soil loss = 459774.0 Cubic Feet

Peak flow rate of this hydrograph = 570.311(CFS)

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3 - 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	150.0	300.0	450.0	600.0
0+ 5	0.0197	2.86	Q				
0+10	0.1122	13.43	Q				
0+15	0.3268	31.17	V Q				
0+20	0.6676	49.48	V Q				
0+25	1.0946	62.01	V Q				
0+30	1.6018	73.64	V Q				
0+35	2.1989	86.69	V Q				
0+40	2.8707	97.55	V Q				
0+45	3.6028	106.30	V Q				
0+50	4.3778	112.53	V Q				
0+55	5.1828	116.89	V Q				
1+ 0	5.9968	118.19	V Q				
1+ 5	6.8321	121.29	V Q				
1+10	7.7352	131.14	V Q				
1+15	8.7344	145.08	V Q				
1+20	9.8158	157.02	V Q				
1+25	10.9492	164.56	V Q				
1+30	12.1386	172.71	V Q				
1+35	13.4093	184.50	V Q				
1+40	14.7675	197.22	V Q				
1+45	16.1966	207.51	V Q				
1+50	17.7151	220.48	V Q				
1+55	19.3466	236.89	V Q				
2+ 0	21.0624	249.14	V Q				
2+ 5	22.8115	253.97	V Q				
2+10	24.6099	261.12	V Q				
2+15	26.5513	281.89	V Q				
2+20	28.7153	314.21	V Q				
2+25	31.1324	350.96	V Q				
2+30	33.8546	395.27	V Q				
2+35	37.0237	460.16	V Q				
2+40	40.7317	538.40	V Q				
2+45	44.6595	570.31	V Q				
2+50	48.2965	528.09	V Q				
2+55	51.2511	429.01	Q V				
3+ 0	53.5202	329.47	Q V				
3+ 5	55.3078	259.56	Q V				
3+10	56.7131	204.04	Q V				
3+15	57.7841	155.51	Q V				
3+20	58.6176	121.03	Q V				
3+25	59.2917	97.87	Q V				
3+30	59.8551	81.81	Q V				
3+35	60.3293	68.85	Q V				

3+40	60.7296	58.13	| Q	|	|	|	V |
3+45	61.0740	50.00	| Q	|	|	|	V |
3+50	61.3723	43.32	| Q	|	|	|	V|
3+55	61.6299	37.39	| Q	|	|	|	V|
4+ 0	61.8491	31.83	| Q	|	|	|	V|
4+ 5	62.0352	27.02	|Q	|	|	|	V|
4+10	62.1956	23.29	|Q	|	|	|	V|
4+15	62.3318	19.78	|Q	|	|	|	V|
4+20	62.4461	16.60	|Q	|	|	|	V|
4+25	62.5411	13.79	Q	|	|	|	V|
4+30	62.6212	11.63	Q	|	|	|	V|
4+35	62.6886	9.79	Q	|	|	|	V|
4+40	62.7395	7.39	Q	|	|	|	V|
4+45	62.7731	4.88	Q	|	|	|	V|
4+50	62.7910	2.61	Q	|	|	|	V|
4+55	62.8001	1.32	Q	|	|	|	V|
5+ 0	62.8058	0.82	Q	|	|	|	V|
5+ 5	62.8083	0.37	Q	|	|	|	V|
5+10	62.8087	0.06	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 06/22/16 File: 3RDSTA16100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A1 (DESIGN POINT AT CAMBERN AVE)
100-YEAR STORM EVENT

Drainage Area = 383.41(Ac.) = 0.599 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 383.41(Ac.) = 0.599 Sq. M.

Length along longest watercourse = 13164.00(Ft.)
Length along longest watercourse measured to centroid = 6267.00(Ft.)
Length along longest watercourse = 2.493 Mi.
Length along longest watercourse measured to centroid = 1.187 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 148.6053 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.272 Hr.
Lag time = 16.31 Min.
25% of lag time = 4.08 Min.
40% of lag time = 6.53 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
383.41	1.35	517.60

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
383.41	3.30	1265.25

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.87 %
Adjusted average point rain = 3.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
31.340	78.50	0.150
3.110	95.00	0.900
3.900	88.30	0.750
39.930	78.50	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.090	85.70	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 383.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.045	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
78.5	78.5	0.262	0.150	0.226	0.082	0.019
95.0	95.0	0.065	0.900	0.012	0.008	0.000
88.3	88.3	0.149	0.750	0.049	0.010	0.000
78.5	78.5	0.262	0.400	0.167	0.104	0.017
86.3	86.3	0.172	0.500	0.095	0.257	0.024
86.2	86.2	0.173	0.500	0.095	0.113	0.011
85.7	85.7	0.179	0.500	0.098	0.026	0.003
86.1	86.1	0.174	0.500	0.096	0.283	0.027
89.5	89.5	0.136	0.050	0.130	0.035	0.005
84.2	84.2	0.196	0.400	0.126	0.026	0.003
					Sum (F) =	0.111

Area averaged mean soil loss (F) (In/Hr) = 0.111
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.529

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	30.651	2.985	11.535
2	0.167	61.302	11.056	42.720
3	0.250	91.953	19.207	74.215
4	0.333	122.604	20.271	78.329
5	0.417	153.255	12.456	48.130
6	0.500	183.906	7.123	27.524
7	0.583	214.557	4.692	18.129
8	0.667	245.208	3.663	14.155
9	0.750	275.859	2.970	11.475
10	0.833	306.510	2.435	9.408

11	0.917	337.160	1.953	7.547
12	1.000	367.811	1.756	6.786
13	1.083	398.462	1.392	5.377
14	1.167	429.113	1.183	4.570
15	1.250	459.764	0.978	3.780
16	1.333	490.415	0.934	3.608
17	1.417	521.066	0.862	3.329
18	1.500	551.717	0.686	2.651
19	1.583	582.368	0.606	2.343
20	1.667	613.019	0.541	2.089
21	1.750	643.670	0.449	1.737
22	1.833	674.321	0.391	1.509
23	1.917	704.972	0.309	1.194
24	2.000	735.623	0.307	1.184
25	2.083	766.274	0.307	1.184
26	2.167	796.925	0.307	1.184
27	2.250	827.576	0.184	0.711
		Sum = 100.000	Sum=	386.405

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	0.50	0.198	(0.111)	0.105	0.093
2	0.17	0.60	0.237	0.111	(0.126)	0.127
3	0.25	0.60	0.237	0.111	(0.126)	0.127
4	0.33	0.60	0.237	0.111	(0.126)	0.127
5	0.42	0.60	0.237	0.111	(0.126)	0.127
6	0.50	0.70	0.277	0.111	(0.146)	0.166
7	0.58	0.70	0.277	0.111	(0.146)	0.166
8	0.67	0.70	0.277	0.111	(0.146)	0.166
9	0.75	0.70	0.277	0.111	(0.146)	0.166
10	0.83	0.70	0.277	0.111	(0.146)	0.166
11	0.92	0.70	0.277	0.111	(0.146)	0.166
12	1.00	0.80	0.316	0.111	(0.167)	0.206
13	1.08	0.80	0.316	0.111	(0.167)	0.206
14	1.17	0.80	0.316	0.111	(0.167)	0.206
15	1.25	0.80	0.316	0.111	(0.167)	0.206
16	1.33	0.80	0.316	0.111	(0.167)	0.206
17	1.42	0.80	0.316	0.111	(0.167)	0.206
18	1.50	0.80	0.316	0.111	(0.167)	0.206
19	1.58	0.80	0.316	0.111	(0.167)	0.206
20	1.67	0.80	0.316	0.111	(0.167)	0.206
21	1.75	0.80	0.316	0.111	(0.167)	0.206
22	1.83	0.80	0.316	0.111	(0.167)	0.206
23	1.92	0.80	0.316	0.111	(0.167)	0.206
24	2.00	0.90	0.356	0.111	(0.188)	0.245
25	2.08	0.80	0.316	0.111	(0.167)	0.206
26	2.17	0.90	0.356	0.111	(0.188)	0.245
27	2.25	0.90	0.356	0.111	(0.188)	0.245
28	2.33	0.90	0.356	0.111	(0.188)	0.245
29	2.42	0.90	0.356	0.111	(0.188)	0.245
30	2.50	0.90	0.356	0.111	(0.188)	0.245
31	2.58	0.90	0.356	0.111	(0.188)	0.245
32	2.67	0.90	0.356	0.111	(0.188)	0.245
33	2.75	1.00	0.395	0.111	(0.209)	0.285
34	2.83	1.00	0.395	0.111	(0.209)	0.285
35	2.92	1.00	0.395	0.111	(0.209)	0.285
36	3.00	1.00	0.395	0.111	(0.209)	0.285
37	3.08	1.00	0.395	0.111	(0.209)	0.285

38	3.17	1.10	0.435	0.111	(0.230)	0.324
39	3.25	1.10	0.435	0.111	(0.230)	0.324
40	3.33	1.10	0.435	0.111	(0.230)	0.324
41	3.42	1.20	0.475	0.111	(0.251)	0.364
42	3.50	1.30	0.514	0.111	(0.272)	0.403
43	3.58	1.40	0.554	0.111	(0.293)	0.443
4	3.67	1.40	0.554	0.111	(0.293)	0.443
45	3.75	1.50	0.593	0.111	(0.314)	0.482
46	3.83	1.50	0.593	0.111	(0.314)	0.482
47	3.92	1.60	0.633	0.111	(0.335)	0.522
48	4.00	1.60	0.633	0.111	(0.335)	0.522
49	4.08	1.70	0.672	0.111	(0.356)	0.562
50	4.17	1.80	0.712	0.111	(0.377)	0.601
51	4.25	1.90	0.751	0.111	(0.397)	0.641
52	4.33	2.00	0.791	0.111	(0.418)	0.680
53	4.42	2.10	0.831	0.111	(0.439)	0.720
54	4.50	2.10	0.831	0.111	(0.439)	0.720
55	4.58	2.20	0.870	0.111	(0.460)	0.759
56	4.67	2.30	0.910	0.111	(0.481)	0.799
57	4.75	2.40	0.949	0.111	(0.502)	0.838
58	4.83	2.40	0.949	0.111	(0.502)	0.838
59	4.92	2.50	0.989	0.111	(0.523)	0.878
60	5.00	2.60	1.028	0.111	(0.544)	0.917
61	5.08	3.10	1.226	0.111	(0.649)	1.115
62	5.17	3.60	1.424	0.111	(0.753)	1.313
63	5.25	3.90	1.542	0.111	(0.816)	1.432
64	5.33	4.20	1.661	0.111	(0.879)	1.550
65	5.42	4.70	1.859	0.111	(0.983)	1.748
66	5.50	5.60	2.215	0.111	(1.172)	2.104
67	5.58	1.90	0.751	0.111	(0.397)	0.641
68	5.67	0.90	0.356	0.111	(0.188)	0.245
69	5.75	0.60	0.237	0.111	(0.126)	0.127
0	5.83	0.50	0.198	(0.111)	0.105	0.093
71	5.92	0.30	0.119	(0.111)	0.063	0.056
72	6.00	0.20	0.079	(0.111)	0.042	0.037

(Loss Rate Not Used)

Sum = 100.0 Sum = 31.7

Flood volume = Effective rainfall 2.64(In)
times area 383.4(Ac.)/[(In)/(Ft.)] = 84.4(Ac.Ft)
Total soil loss = 0.65(In)
Total soil loss = 20.890(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 3676850.3 Cubic Feet
Total soil loss = 909964.8 Cubic Feet

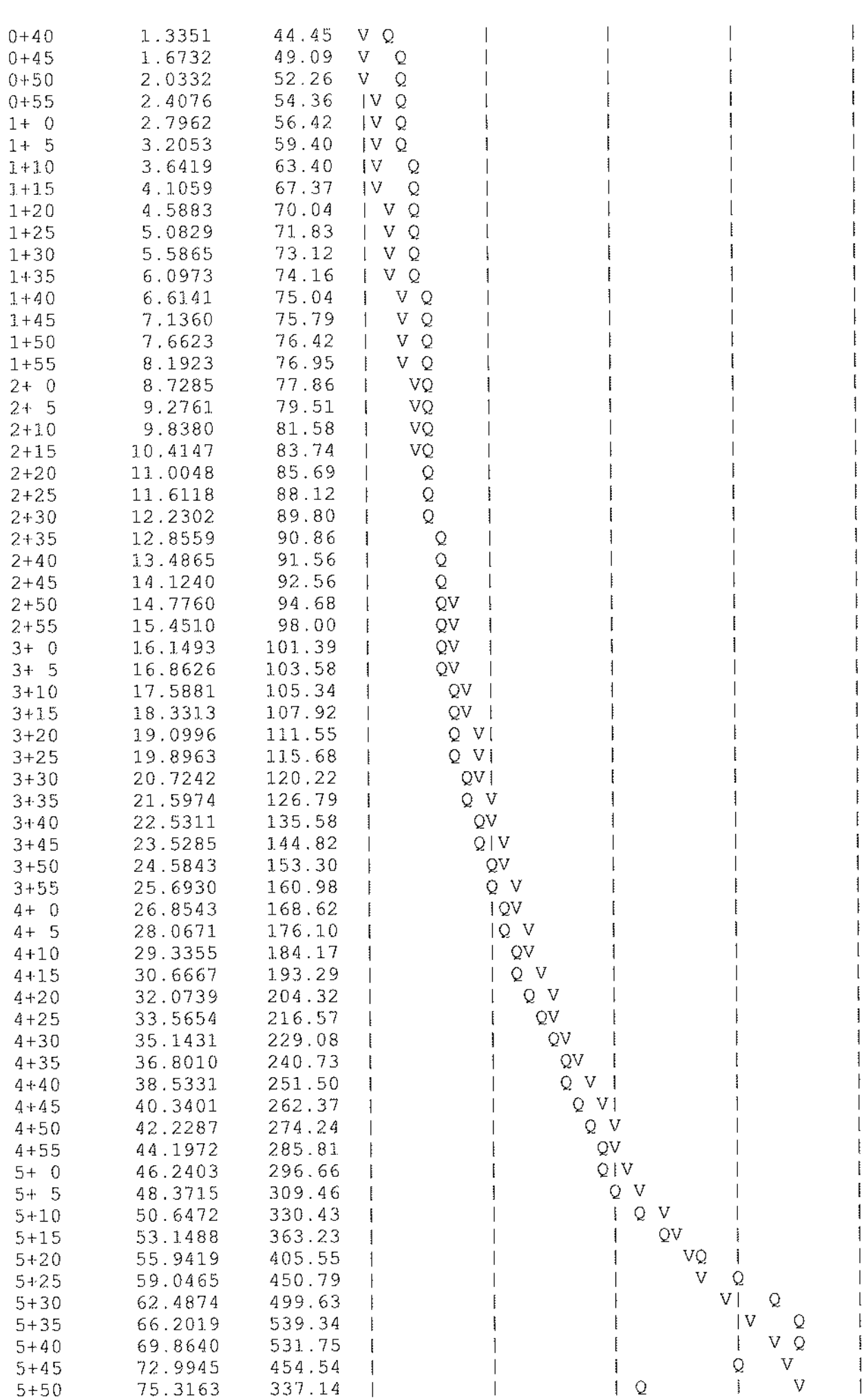
Peak flow rate of this hydrograph = 539.335(CFS)

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6 - 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	150.0	300.0	450.0	600.0
0+ 5	0.0074	1.07	Q				
0+10	0.0449	5.44	Q				
0+15	0.1398	13.78	Q				
0+20	0.3021	23.56	VQ				
0+25	0.5133	30.66	V Q				
0+30	0.7563	35.29	V Q				
0+35	1.0290	39.59	V Q				


0+40 1.3351 44.45
0+45 1.6732 49.09
0+50 2.0332 52.26
0+55 2.4076 54.36
1+ 0 2.7962 56.42
1+ 5 3.2053 59.40
1+10 3.6419 63.40
1+15 4.1059 67.37
1+20 4.5883 70.04
1+25 5.0829 71.83
1+30 5.5865 73.12
1+35 6.0973 74.16
1+40 6.6141 75.04
1+45 7.1360 75.79
1+50 7.6623 76.42
1+55 8.1923 76.95
2+ 0 8.7285 77.86
2+ 5 9.2761 79.51
2+10 9.8380 81.58
2+15 10.4147 83.74
2+20 11.0048 85.69
2+25 11.6118 88.12
2+30 12.2302 89.80
2+35 12.8559 90.86
2+40 13.4865 91.56
2+45 14.1240 92.56
2+50 14.7760 94.68
2+55 15.4510 98.00
3+ 0 16.1493 101.39
3+ 5 16.8626 103.58
3+10 17.5881 105.34
3+15 18.3313 107.92
3+20 19.0996 111.55
3+25 19.8963 115.68
3+30 20.7242 120.22
3+35 21.5974 126.79
3+40 22.5311 135.58
3+45 23.5285 144.82
3+50 24.5843 153.30
3+55 25.6930 160.98
4+ 0 26.8543 168.62
4+ 5 28.0671 176.10
4+10 29.3355 184.17
4+15 30.6667 193.29
4+20 32.0739 204.32
4+25 33.5654 216.57
4+30 35.1431 229.08
4+35 36.8010 240.73
4+40 38.5331 251.50
4+45 40.3401 262.37
4+50 42.2287 274.24
4+55 44.1972 285.81
5+ 0 46.2403 296.66
5+ 5 48.3715 309.46
5+10 50.6472 330.43
5+15 53.1488 363.23
5+20 55.9419 405.55
5+25 59.0465 450.79
5+30 62.4874 499.63
5+35 66.2019 539.34
5+40 69.8640 531.75
5+45 72.9945 454.54
5+50 75.3163 337.14

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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 06/22/16 File: 3RDSTA124100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A1 (DESIGN POINT AT CAMBERN AVE)
100-YEAR STORM EVENT

Drainage Area = 383.41(Ac.) = 0.599 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 383.41(Ac.) = 0.599 Sq.

Length along longest watercourse = 13164.00(Ft.)
Length along longest watercourse measured to centroid = 6267.00(Ft.)
Length along longest watercourse = 2.493 Mi.
Length along longest watercourse measured to centroid = 1.187 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 148.6053 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.272 Hr.
Lag time = 16.31 Min.
25% of lag time = 4.08 Min.
40% of lag time = 6.53 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]
383.41	2.50	958.53

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
383.41	6.00	2300.46

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.93 %
Adjusted average point rain = 5.996(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
31.340	78.50	0.150
3.110	95.00	0.900
3.900	88.30	0.750
39.930	78.50	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.090	85.70	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 383.41(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.045	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
78.5	78.5	0.262	0.150	0.226	0.082	0.019
95.0	95.0	0.065	0.900	0.012	0.008	0.000
88.3	88.3	0.149	0.750	0.049	0.010	0.000
78.5	78.5	0.262	0.400	0.167	0.104	0.017
86.3	86.3	0.172	0.500	0.095	0.257	0.024
86.2	86.2	0.173	0.500	0.095	0.113	0.011
85.7	85.7	0.179	0.500	0.098	0.026	0.003
86.1	86.1	0.174	0.500	0.096	0.283	0.027
89.5	89.5	0.136	0.050	0.130	0.035	0.005
84.2	84.2	0.196	0.400	0.126	0.026	0.003
					Sum (F) =	0.111

Area averaged mean soil loss (F) (In/Hr) = 0.111
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.529

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	30.651	2.985	11.535
2	0.167	61.302	11.056	42.720
3	0.250	91.953	19.207	74.215
4	0.333	122.604	20.271	78.329
5	0.417	153.255	12.456	48.130
6	0.500	183.906	7.123	27.524
7	0.583	214.557	4.692	18.129
8	0.667	245.208	3.663	14.155
9	0.750	275.859	2.970	11.475
10	0.833	306.510	2.435	9.408

11	0.917	337.160	1.953	7.547
12	1.000	367.811	1.756	6.786
13	1.083	398.462	1.392	5.377
14	1.167	429.113	1.183	4.570
15	1.250	459.764	0.978	3.780
16	1.333	490.415	0.934	3.608
17	1.417	521.066	0.862	3.329
18	1.500	551.717	0.686	2.651
19	1.583	582.368	0.606	2.343
20	1.667	613.019	0.541	2.089
21	1.750	643.670	0.449	1.737
22	1.833	674.321	0.391	1.509
23	1.917	704.972	0.309	1.194
24	2.000	735.623	0.307	1.184
25	2.083	766.274	0.307	1.184
26	2.167	796.925	0.307	1.184
27	2.250	827.576	0.184	0.711
		Sum = 100.000	Sum=	386.405

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	0.048	(0.196)	0.025	0.023
2	0.17	0.07	0.048	(0.196)	0.025	0.023
3	0.25	0.07	0.048	(0.195)	0.025	0.023
4	0.33	0.10	0.072	(0.194)	0.038	0.034
5	0.42	0.10	0.072	(0.193)	0.038	0.034
6	0.50	0.10	0.072	(0.193)	0.038	0.034
7	0.58	0.10	0.072	(0.192)	0.038	0.034
8	0.67	0.10	0.072	(0.191)	0.038	0.034
9	0.75	0.10	0.072	(0.190)	0.038	0.034
10	0.83	0.13	0.096	(0.190)	0.051	0.045
11	0.92	0.13	0.096	(0.189)	0.051	0.045
12	1.00	0.13	0.096	(0.188)	0.051	0.045
13	1.08	0.10	0.072	(0.187)	0.038	0.034
14	1.17	0.10	0.072	(0.187)	0.038	0.034
15	1.25	0.10	0.072	(0.186)	0.038	0.034
16	1.33	0.10	0.072	(0.185)	0.038	0.034
17	1.42	0.10	0.072	(0.184)	0.038	0.034
18	1.50	0.10	0.072	(0.184)	0.038	0.034
19	1.58	0.10	0.072	(0.183)	0.038	0.034
20	1.67	0.10	0.072	(0.182)	0.038	0.034
21	1.75	0.10	0.072	(0.181)	0.038	0.034
22	1.83	0.13	0.096	(0.181)	0.051	0.045
23	1.92	0.13	0.096	(0.180)	0.051	0.045
24	2.00	0.13	0.096	(0.179)	0.051	0.045
25	2.08	0.13	0.096	(0.179)	0.051	0.045
26	2.17	0.13	0.096	(0.178)	0.051	0.045
27	2.25	0.13	0.096	(0.177)	0.051	0.045
28	2.33	0.13	0.096	(0.176)	0.051	0.045
29	2.42	0.13	0.096	(0.176)	0.051	0.045
30	2.50	0.13	0.096	(0.175)	0.051	0.045
31	2.58	0.17	0.120	(0.174)	0.063	0.056
32	2.67	0.17	0.120	(0.174)	0.063	0.056
33	2.75	0.17	0.120	(0.173)	0.063	0.056
34	2.83	0.17	0.120	(0.172)	0.063	0.056
35	2.92	0.17	0.120	(0.171)	0.063	0.056
36	3.00	0.17	0.120	(0.171)	0.063	0.056
37	3.08	0.17	0.120	(0.170)	0.063	0.056

38	3.17	0.17	0.120	(0.169)	0.063	0.056
39	3.25	0.17	0.120	(0.169)	0.063	0.056
40	3.33	0.17	0.120	(0.168)	0.063	0.056
41	3.42	0.17	0.120	(0.167)	0.063	0.056
42	3.50	0.17	0.120	(0.166)	0.063	0.056
43	3.58	0.17	0.120	(0.166)	0.063	0.056
44	3.67	0.17	0.120	(0.165)	0.063	0.056
45	3.75	0.17	0.120	(0.164)	0.063	0.056
46	3.83	0.20	0.144	(0.164)	0.076	0.068
47	3.92	0.20	0.144	(0.163)	0.076	0.068
48	4.00	0.20	0.144	(0.162)	0.076	0.068
49	4.08	0.20	0.144	(0.162)	0.076	0.068
50	4.17	0.20	0.144	(0.161)	0.076	0.068
51	4.25	0.20	0.144	(0.160)	0.076	0.068
52	4.33	0.23	0.168	(0.160)	0.089	0.079
53	4.42	0.23	0.168	(0.159)	0.089	0.079
54	4.50	0.23	0.168	(0.158)	0.089	0.079
55	4.58	0.23	0.168	(0.157)	0.089	0.079
56	4.67	0.23	0.168	(0.157)	0.089	0.079
57	4.75	0.23	0.168	(0.156)	0.089	0.079
58	4.83	0.27	0.192	(0.155)	0.101	0.090
59	4.92	0.27	0.192	(0.155)	0.101	0.090
60	5.00	0.27	0.192	(0.154)	0.101	0.090
61	5.08	0.20	0.144	(0.153)	0.076	0.068
62	5.17	0.20	0.144	(0.153)	0.076	0.068
63	5.25	0.20	0.144	(0.152)	0.076	0.068
64	5.33	0.23	0.168	(0.151)	0.089	0.079
65	5.42	0.23	0.168	(0.151)	0.089	0.079
66	5.50	0.23	0.168	(0.150)	0.089	0.079
67	5.58	0.27	0.192	(0.149)	0.101	0.090
68	5.67	0.27	0.192	(0.149)	0.101	0.090
69	5.75	0.27	0.192	(0.148)	0.101	0.090
70	5.83	0.27	0.192	(0.148)	0.101	0.090
71	5.92	0.27	0.192	(0.147)	0.101	0.090
72	6.00	0.27	0.192	(0.146)	0.101	0.090
73	6.08	0.30	0.216	(0.146)	0.114	0.102
74	6.17	0.30	0.216	(0.145)	0.114	0.102
75	6.25	0.30	0.216	(0.144)	0.114	0.102
76	6.33	0.30	0.216	(0.144)	0.114	0.102
77	6.42	0.30	0.216	(0.143)	0.114	0.102
78	6.50	0.30	0.216	(0.142)	0.114	0.102
79	6.58	0.33	0.240	(0.142)	0.127	0.113
80	6.67	0.33	0.240	(0.141)	0.127	0.113
81	6.75	0.33	0.240	(0.140)	0.127	0.113
82	6.83	0.33	0.240	(0.140)	0.127	0.113
83	6.92	0.33	0.240	(0.139)	0.127	0.113
84	7.00	0.33	0.240	(0.139)	0.127	0.113
85	7.08	0.33	0.240	(0.138)	0.127	0.113
86	7.17	0.33	0.240	(0.137)	0.127	0.113
87	7.25	0.33	0.240	(0.137)	0.127	0.113
88	7.33	0.37	0.264	0.136	(0.140)	0.128
89	7.42	0.37	0.264	0.135	(0.140)	0.128
90	7.50	0.37	0.264	0.135	(0.140)	0.129
91	7.58	0.40	0.288	0.134	(0.152)	0.154
92	7.67	0.40	0.288	0.134	(0.152)	0.154
93	7.75	0.40	0.288	0.133	(0.152)	0.155
94	7.83	0.43	0.312	0.132	(0.165)	0.179
95	7.92	0.43	0.312	0.132	(0.165)	0.180
96	8.00	0.43	0.312	0.131	(0.165)	0.181
97	8.08	0.50	0.360	0.130	(0.190)	0.229
98	8.17	0.50	0.360	0.130	(0.190)	0.230
99	8.25	0.50	0.360	0.129	(0.190)	0.230
100	8.33	0.50	0.360	0.129	(0.190)	0.231

101	8.42	0.50	0.360	0.128	(0.190)	0.232
102	8.50	0.50	0.360	0.127	(0.190)	0.232
103	8.58	0.53	0.384	0.127	(0.203)	0.257
104	8.67	0.53	0.384	0.126	(0.203)	0.257
105	8.75	0.53	0.384	0.126	(0.203)	0.258
106	8.83	0.57	0.408	0.125	(0.216)	0.283
7	8.92	0.57	0.408	0.124	(0.216)	0.283
108	9.00	0.57	0.408	0.124	(0.216)	0.284
109	9.08	0.63	0.456	0.123	(0.241)	0.332
110	9.17	0.63	0.456	0.123	(0.241)	0.333
111	9.25	0.63	0.456	0.122	(0.241)	0.334
112	9.33	0.67	0.480	0.122	(0.254)	0.358
113	9.42	0.67	0.480	0.121	(0.254)	0.359
114	9.50	0.67	0.480	0.120	(0.254)	0.359
115	9.58	0.70	0.504	0.120	(0.266)	0.384
116	9.67	0.70	0.504	0.119	(0.266)	0.384
117	9.75	0.70	0.504	0.119	(0.266)	0.385
118	9.83	0.73	0.528	0.118	(0.279)	0.410
119	9.92	0.73	0.528	0.118	(0.279)	0.410
120	10.00	0.73	0.528	0.117	(0.279)	0.411
121	10.08	0.50	0.360	0.116	(0.190)	0.243
122	10.17	0.50	0.360	0.116	(0.190)	0.244
123	10.25	0.50	0.360	0.115	(0.190)	0.244
124	10.33	0.50	0.360	0.115	(0.190)	0.245
125	10.42	0.50	0.360	0.114	(0.190)	0.246
126	10.50	0.50	0.360	0.114	(0.190)	0.246
127	10.58	0.67	0.480	0.113	(0.254)	0.367
128	10.67	0.67	0.480	0.112	(0.254)	0.367
129	10.75	0.67	0.480	0.112	(0.254)	0.368
130	10.83	0.67	0.480	0.111	(0.254)	0.368
131	10.92	0.67	0.480	0.111	(0.254)	0.369
132	11.00	0.67	0.480	0.110	(0.254)	0.369
3	11.08	0.63	0.456	0.110	(0.241)	0.346
134	11.17	0.63	0.456	0.109	(0.241)	0.346
135	11.25	0.63	0.456	0.109	(0.241)	0.347
136	11.33	0.63	0.456	0.108	(0.241)	0.348
137	11.42	0.63	0.456	0.108	(0.241)	0.348
138	11.50	0.63	0.456	0.107	(0.241)	0.349
139	11.58	0.57	0.408	0.107	(0.216)	0.301
140	11.67	0.57	0.408	0.106	(0.216)	0.302
141	11.75	0.57	0.408	0.105	(0.216)	0.302
142	11.83	0.60	0.432	0.105	(0.228)	0.327
143	11.92	0.60	0.432	0.104	(0.228)	0.327
144	12.00	0.60	0.432	0.104	(0.228)	0.328
145	12.08	0.83	0.600	0.103	(0.317)	0.496
146	12.17	0.83	0.600	0.103	(0.317)	0.497
147	12.25	0.83	0.600	0.102	(0.317)	0.497
148	12.33	0.87	0.624	0.102	(0.330)	0.522
149	12.42	0.87	0.624	0.101	(0.330)	0.522
150	12.50	0.87	0.624	0.101	(0.330)	0.523
151	12.58	0.93	0.671	0.100	(0.355)	0.571
152	12.67	0.93	0.671	0.100	(0.355)	0.572
153	12.75	0.93	0.671	0.099	(0.355)	0.572
154	12.83	0.97	0.695	0.099	(0.368)	0.597
155	12.92	0.97	0.695	0.098	(0.368)	0.597
156	13.00	0.97	0.695	0.098	(0.368)	0.598
157	13.08	1.13	0.815	0.097	(0.431)	0.718
8	13.17	1.13	0.815	0.097	(0.431)	0.719
9	13.25	1.13	0.815	0.096	(0.431)	0.719
160	13.33	1.13	0.815	0.096	(0.431)	0.720
161	13.42	1.13	0.815	0.095	(0.431)	0.720
162	13.50	1.13	0.815	0.095	(0.431)	0.721
163	13.58	0.77	0.552	0.094	(0.292)	0.457

164	13.67	0.77	0.552	0.094	(0.292)	0.458
165	13.75	0.77	0.552	0.093	(0.292)	0.458
166	13.83	0.77	0.552	0.093	(0.292)	0.459
167	13.92	0.77	0.552	0.092	(0.292)	0.459
168	14.00	0.77	0.552	0.092	(0.292)	0.460
169	14.08	0.90	0.648	0.092	(0.343)	0.556
0	14.17	0.90	0.648	0.091	(0.343)	0.556
171	14.25	0.90	0.648	0.091	(0.343)	0.557
172	14.33	0.87	0.624	0.090	(0.330)	0.533
173	14.42	0.87	0.624	0.090	(0.330)	0.534
174	14.50	0.87	0.624	0.089	(0.330)	0.534
175	14.58	0.87	0.624	0.089	(0.330)	0.535
176	14.67	0.87	0.624	0.088	(0.330)	0.535
177	14.75	0.87	0.624	0.088	(0.330)	0.536
178	14.83	0.83	0.600	0.087	(0.317)	0.512
179	14.92	0.83	0.600	0.087	(0.317)	0.513
180	15.00	0.83	0.600	0.087	(0.317)	0.513
181	15.08	0.80	0.576	0.086	(0.304)	0.490
182	15.17	0.80	0.576	0.086	(0.304)	0.490
183	15.25	0.80	0.576	0.085	(0.304)	0.490
184	15.33	0.77	0.552	0.085	(0.292)	0.467
185	15.42	0.77	0.552	0.084	(0.292)	0.467
186	15.50	0.77	0.552	0.084	(0.292)	0.468
187	15.58	0.63	0.456	0.083	(0.241)	0.372
188	15.67	0.63	0.456	0.083	(0.241)	0.373
189	15.75	0.63	0.456	0.083	(0.241)	0.373
190	15.83	0.63	0.456	0.082	(0.241)	0.373
191	15.92	0.63	0.456	0.082	(0.241)	0.374
192	16.00	0.63	0.456	0.081	(0.241)	0.374
193	16.08	0.13	0.096	(0.081)	0.051	0.045
194	16.17	0.13	0.096	(0.081)	0.051	0.045
195	16.25	0.13	0.096	(0.080)	0.051	0.045
6	16.33	0.13	0.096	(0.080)	0.051	0.045
197	16.42	0.13	0.096	(0.079)	0.051	0.045
198	16.50	0.13	0.096	(0.079)	0.051	0.045
199	16.58	0.10	0.072	(0.078)	0.038	0.034
200	16.67	0.10	0.072	(0.078)	0.038	0.034
201	16.75	0.10	0.072	(0.078)	0.038	0.034
202	16.83	0.10	0.072	(0.077)	0.038	0.034
203	16.92	0.10	0.072	(0.077)	0.038	0.034
204	17.00	0.10	0.072	(0.077)	0.038	0.034
205	17.08	0.17	0.120	(0.076)	0.063	0.056
206	17.17	0.17	0.120	(0.076)	0.063	0.056
207	17.25	0.17	0.120	(0.075)	0.063	0.056
208	17.33	0.17	0.120	(0.075)	0.063	0.056
209	17.42	0.17	0.120	(0.075)	0.063	0.056
210	17.50	0.17	0.120	(0.074)	0.063	0.056
211	17.58	0.17	0.120	(0.074)	0.063	0.056
212	17.67	0.17	0.120	(0.073)	0.063	0.056
213	17.75	0.17	0.120	(0.073)	0.063	0.056
214	17.83	0.13	0.096	(0.073)	0.051	0.045
215	17.92	0.13	0.096	(0.072)	0.051	0.045
216	18.00	0.13	0.096	(0.072)	0.051	0.045
217	18.08	0.13	0.096	(0.072)	0.051	0.045
218	18.17	0.13	0.096	(0.071)	0.051	0.045
219	18.25	0.13	0.096	(0.071)	0.051	0.045
220	18.33	0.13	0.096	(0.071)	0.051	0.045
21	18.42	0.13	0.096	(0.070)	0.051	0.045
22	18.50	0.13	0.096	(0.070)	0.051	0.045
223	18.58	0.10	0.072	(0.070)	0.038	0.034
224	18.67	0.10	0.072	(0.069)	0.038	0.034
225	18.75	0.10	0.072	(0.069)	0.038	0.034
226	18.83	0.07	0.048	(0.069)	0.025	0.023

227	18.92	0.07	0.048	(0.068)	0.025	0.023
228	19.00	0.07	0.048	(0.068)	0.025	0.023
229	19.08	0.10	0.072	(0.068)	0.038	0.034
230	19.17	0.10	0.072	(0.067)	0.038	0.034
231	19.25	0.10	0.072	(0.067)	0.038	0.034
232	19.33	0.13	0.096	(0.067)	0.051	0.045
3	19.42	0.13	0.096	(0.066)	0.051	0.045
234	19.50	0.13	0.096	(0.066)	0.051	0.045
235	19.58	0.10	0.072	(0.066)	0.038	0.034
236	19.67	0.10	0.072	(0.065)	0.038	0.034
237	19.75	0.10	0.072	(0.065)	0.038	0.034
238	19.83	0.07	0.048	(0.065)	0.025	0.023
239	19.92	0.07	0.048	(0.065)	0.025	0.023
240	20.00	0.07	0.048	(0.064)	0.025	0.023
241	20.08	0.10	0.072	(0.064)	0.038	0.034
242	20.17	0.10	0.072	(0.064)	0.038	0.034
243	20.25	0.10	0.072	(0.063)	0.038	0.034
244	20.33	0.10	0.072	(0.063)	0.038	0.034
245	20.42	0.10	0.072	(0.063)	0.038	0.034
246	20.50	0.10	0.072	(0.063)	0.038	0.034
247	20.58	0.10	0.072	(0.062)	0.038	0.034
248	20.67	0.10	0.072	(0.062)	0.038	0.034
249	20.75	0.10	0.072	(0.062)	0.038	0.034
250	20.83	0.07	0.048	(0.062)	0.025	0.023
251	20.92	0.07	0.048	(0.061)	0.025	0.023
252	21.00	0.07	0.048	(0.061)	0.025	0.023
253	21.08	0.10	0.072	(0.061)	0.038	0.034
254	21.17	0.10	0.072	(0.061)	0.038	0.034
255	21.25	0.10	0.072	(0.060)	0.038	0.034
256	21.33	0.07	0.048	(0.060)	0.025	0.023
257	21.42	0.07	0.048	(0.060)	0.025	0.023
258	21.50	0.07	0.048	(0.060)	0.025	0.023
9	21.58	0.10	0.072	(0.060)	0.038	0.034
260	21.67	0.10	0.072	(0.059)	0.038	0.034
261	21.75	0.10	0.072	(0.059)	0.038	0.034
262	21.83	0.07	0.048	(0.059)	0.025	0.023
263	21.92	0.07	0.048	(0.059)	0.025	0.023
264	22.00	0.07	0.048	(0.058)	0.025	0.023
265	22.08	0.10	0.072	(0.058)	0.038	0.034
266	22.17	0.10	0.072	(0.058)	0.038	0.034
267	22.25	0.10	0.072	(0.058)	0.038	0.034
268	22.33	0.07	0.048	(0.058)	0.025	0.023
269	22.42	0.07	0.048	(0.058)	0.025	0.023
270	22.50	0.07	0.048	(0.057)	0.025	0.023
271	22.58	0.07	0.048	(0.057)	0.025	0.023
272	22.67	0.07	0.048	(0.057)	0.025	0.023
273	22.75	0.07	0.048	(0.057)	0.025	0.023
274	22.83	0.07	0.048	(0.057)	0.025	0.023
275	22.92	0.07	0.048	(0.057)	0.025	0.023
276	23.00	0.07	0.048	(0.056)	0.025	0.023
277	23.08	0.07	0.048	(0.056)	0.025	0.023
278	23.17	0.07	0.048	(0.056)	0.025	0.023
279	23.25	0.07	0.048	(0.056)	0.025	0.023
280	23.33	0.07	0.048	(0.056)	0.025	0.023
281	23.42	0.07	0.048	(0.056)	0.025	0.023
282	23.50	0.07	0.048	(0.056)	0.025	0.023
283	23.58	0.07	0.048	(0.056)	0.025	0.023
4	23.67	0.07	0.048	(0.056)	0.025	0.023
5	23.75	0.07	0.048	(0.056)	0.025	0.023
286	23.83	0.07	0.048	(0.055)	0.025	0.023
287	23.92	0.07	0.048	(0.055)	0.025	0.023
288	24.00	0.07	0.048	(0.055)	0.025	0.023

(Loss Rate Not Used)

Sum = 100.0 Sum = 50.6

Flood volume = Effective rainfall 4.22(In)
times area 383.4(Ac.)/[(In)/(Ft.)] = 134.8(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 56.745(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 5872620.5 Cubic Feet
Total soil loss = 2471795.9 Cubic Feet

Peak flow rate of this hydrograph = 259.447(CFS)

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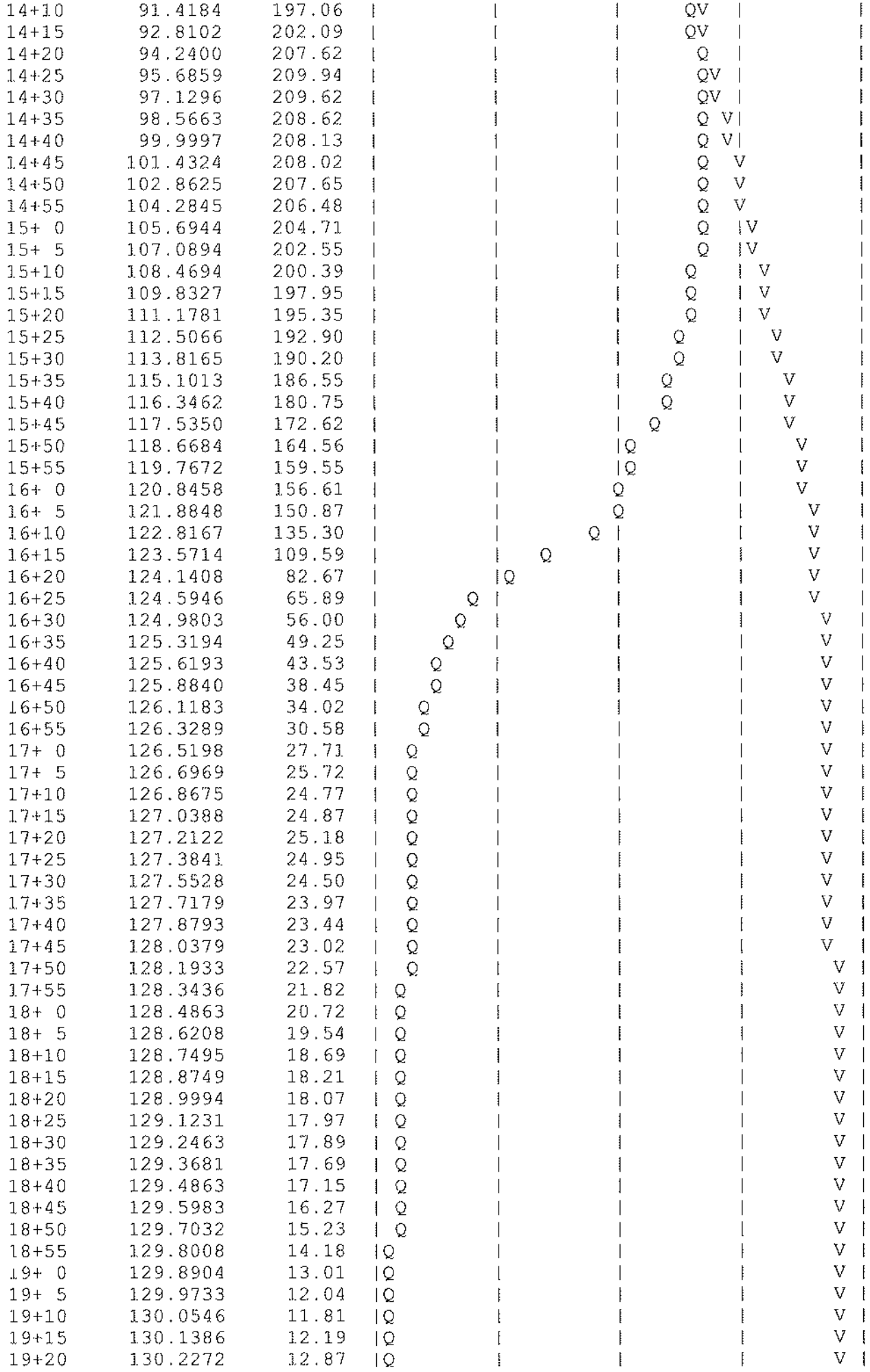
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0018	0.26	Q				
0+10	0.0102	1.23	Q				
0+15	0.0302	2.90	Q				
0+20	0.0633	4.80	Q				
0+25	0.1072	6.38	Q				
0+30	0.1612	7.84	VQ				
0+35	0.2241	9.13	VQ				
0+40	0.2929	9.99	VQ				
0+45	0.3657	10.57	VQ				
0+50	0.4422	11.11	VQ				
0+55	0.5244	11.93	VQ				
1+ 0	0.6142	13.05	VQ				
1+ 5	0.7109	14.03	VQ				
1+10	0.8092	14.28	VQ				
1+15	0.9051	13.92	VQ				
1+20	0.9972	13.38	VQ				
1+25	1.0875	13.12	VQ				
1+30	1.1774	13.04	VQ				
1+35	1.2671	13.04	VQ				
1+40	1.3570	13.05	VQ				
1+45	1.4470	13.06	VQ				
1+50	1.5379	13.21	VQ				
1+55	1.6323	13.71	VQ				
2+ 0	1.7326	14.56	VQ				
2+ 5	1.8392	15.47	V Q				
2+10	1.9496	16.04	V Q				
2+15	2.0623	16.37	V Q				
2+20	2.1764	16.57	V Q				
2+25	2.2917	16.73	V Q				
2+30	2.4078	16.86	V Q				
2+35	2.5254	17.08	V Q				
2+40	2.6469	17.64	V Q				
2+45	2.7747	18.55	V Q				
2+50	2.9089	19.49	V Q				
2+55	3.0473	20.09	V Q				
3+ 0	3.1881	20.44	V Q				
3+ 5	3.3304	20.67	V Q				
3+10	3.4740	20.85	|VQ				
3+15	3.6187	21.01	|VQ				
3+20	3.7643	21.14	|VQ				
3+25	3.9106	21.25	|VQ				
3+30	4.0576	21.34	|VQ				
3+35	4.2052	21.42	|VQ				

3+40	4.3531	21.49	VQ				
3+45	4.5015	21.54	VQ				
3+50	4.6511	21.73	VQ				
3+55	4.8045	22.26	VQ				
4+ 0	4.9638	23.14	V Q				
4+ 5	5.1294	24.05	V Q				
4+10	5.2990	24.62	V Q				
4+15	5.4708	24.95	V Q				
4+20	5.6450	25.30	V Q				
4+25	5.8238	25.96	V Q				
4+30	6.0093	26.94	V Q				
4+35	6.2018	27.94	V Q				
4+40	6.3986	28.59	V Q				
4+45	6.5982	28.98	V Q				
4+50	6.8006	29.38	VQ				
4+55	7.0077	30.07	V Q				
5+ 0	7.2217	31.08	V Q				
5+ 5	7.4411	31.85	V Q				
5+10	7.6585	31.56	V Q				
5+15	7.8671	30.30	V Q				
5+20	8.0665	28.95	VQ				
5+25	8.2633	28.58	VQ				
5+30	8.4629	28.99	VQ				
5+35	8.6679	29.76	VQ				
5+40	8.8786	30.60	V Q				
5+45	9.0963	31.61	V Q				
5+50	9.3208	32.59	V Q				
5+55	9.5495	33.21	V Q				
6+ 0	9.7807	33.57	V Q				
6+ 5	10.0145	33.95	V Q				
6+10	10.2529	34.62	VQ				
6+15	10.4983	35.63	VQ				
6+20	10.7506	36.64	VQ				
6+25	11.0073	37.28	VQ				
6+30	11.2668	37.68	V Q				
6+35	11.5291	38.08	V Q				
6+40	11.7961	38.78	V Q				
6+45	12.0701	39.79	V Q				
6+50	12.3513	40.83	V Q				
6+55	12.6372	41.51	V Q				
7+ 0	12.9259	41.92	V Q				
7+ 5	13.2166	42.21	V Q				
7+10	13.5088	42.43	VQ				
7+15	13.8023	42.62	VQ				
7+20	14.0983	42.97	VQ				
7+25	14.3996	43.76	VQ				
7+30	14.7097	45.02	V Q				
7+35	15.0309	46.64	V Q				
7+40	15.3656	48.60	V Q				
7+45	15.7169	51.01	V Q				
7+50	16.0866	53.67	V Q				
7+55	16.4743	56.30	V Q				
8+ 0	16.8817	59.15	V Q				
8+ 5	17.3114	62.40	V Q				
8+10	17.7680	66.30	V Q				
8+15	18.2579	71.13	V Q				
8+20	18.7803	75.86	V Q				
8+25	19.3243	78.99	V Q				
8+30	19.8824	81.04	V Q				
8+35	20.4528	82.82	V Q				
8+40	21.0389	85.10	V Q				
8+45	21.6447	87.96	V Q				
8+50	22.2717	91.04	V Q				

8+55	22.9193	94.03	V	Q			
9+ 0	23.5887	97.20	V	Q			
9+ 5	24.2824	100.72	V	Q			
9+10	25.0046	104.86	V	Q			
9+15	25.7614	109.89	V	Q			
9+20	26.5540	115.09	V	Q			
9+25	27.3765	119.43	V	Q			
9+30	28.2264	123.40	V	Q			
9+35	29.1024	127.19	V	Q			
9+40	30.0026	130.72	V	Q			
9+45	30.9277	134.32	V	Q			
9+50	31.8775	137.90	V	Q			
9+55	32.8505	141.28	V	Q			
10+ 0	33.8476	144.78	V	Q			
10+ 5	34.8535	146.06	V	Q			
10+10	35.8259	141.19	V	Q			
10+15	36.7237	130.36	V	Q			
10+20	37.5397	118.48	V	Q			
10+25	38.3075	111.49	V	Q			
10+30	39.0500	107.81	V	Q			
10+35	39.7868	106.98	V	Q			
10+40	40.5476	110.48	V	Q			
10+45	41.3611	118.11	V	Q			
10+50	42.2324	126.52	V	Q			
10+55	43.1385	131.57	V	Q			
11+ 0	44.0629	134.21	V	Q			
11+ 5	44.9972	135.66	V	Q			
11+10	45.9337	135.99	V	Q			
11+15	46.8658	135.33	V	Q			
11+20	47.7908	134.31	V	Q			
11+25	48.7124	133.82	V	Q			
11+30	49.6340	133.82	V	Q			
11+35	50.5525	133.36	V	Q			
11+40	51.4576	131.43	V	Q			
11+45	52.3393	128.01	V	Q			
11+50	53.1982	124.72	V	Q			
11+55	54.0500	123.68	V	Q			
12+ 0	54.9062	124.32	V	Q			
12+ 5	55.7839	127.43	V	Q			
12+10	56.7152	135.23	V	Q			
12+15	57.7344	148.00	V	Q			
12+20	58.8482	161.71	V	Q			
12+25	60.0263	171.07	V	Q			
12+30	61.2501	177.70	V	Q			
12+35	62.5134	183.43	V	Q			
12+40	63.8169	189.27	V	Q			
12+45	65.1643	195.64	V	Q			
12+50	66.5542	201.81	V	Q			
12+55	67.9789	206.87	V	Q			
13+ 0	69.4356	211.51	V	Q			
13+ 5	70.9295	216.92	V	Q			
13+10	72.4789	224.97	V	Q			
13+15	74.1045	236.04	V	Q			
13+20	75.8073	247.24	V	Q			
13+25	77.5605	254.57	V	Q			
13+30	79.3455	259.18	V	Q			
13+35	81.1323	259.45	V	Q			
13+40	82.8600	250.86	V	Q			
13+45	84.4683	233.53	V	Q			
13+50	85.9478	214.82	V	Q			
13+55	87.3511	203.75	V	Q			
14+ 0	88.7145	197.97	V	Q			
14+ 5	90.0613	195.55	V	Q			



14+10	91.4184	197.06	
14+15	92.8102	202.09	
14+20	94.2400	207.62	
14+25	95.6859	209.94	
14+30	97.1296	209.62	
14+35	98.5663	208.62	
14+40	99.9997	208.13	
14+45	101.4324	208.02	
14+50	102.8625	207.65	
14+55	104.2845	206.48	
15+ 0	105.6944	204.71	
15+ 5	107.0894	202.55	
15+10	108.4694	200.39	
15+15	109.8327	197.95	
15+20	111.1781	195.35	
15+25	112.5066	192.90	
15+30	113.8165	190.20	
15+35	115.1013	186.55	
15+40	116.3462	180.75	
15+45	117.5350	172.62	
15+50	118.6684	164.56	
15+55	119.7672	159.55	
16+ 0	120.8458	156.61	
16+ 5	121.8848	150.87	
16+10	122.8167	135.30	
16+15	123.5714	109.59	
16+20	124.1408	82.67	
16+25	124.5946	65.89	
16+30	124.9803	56.00	
16+35	125.3194	49.25	
16+40	125.6193	43.53	
16+45	125.8840	38.45	
16+50	126.1183	34.02	
16+55	126.3289	30.58	
17+ 0	126.5198	27.71	
17+ 5	126.6969	25.72	
17+10	126.8675	24.77	
17+15	127.0388	24.87	
17+20	127.2122	25.18	
17+25	127.3841	24.95	
17+30	127.5528	24.50	
17+35	127.7179	23.97	
17+40	127.8793	23.44	
17+45	128.0379	23.02	
17+50	128.1933	22.57	
17+55	128.3436	21.82	
18+ 0	128.4863	20.72	
18+ 5	128.6208	19.54	
18+10	128.7495	18.69	
18+15	128.8749	18.21	
18+20	128.9994	18.07	
18+25	129.1231	17.97	
18+30	129.2463	17.89	
18+35	129.3681	17.69	
18+40	129.4863	17.15	
18+45	129.5983	16.27	
18+50	129.7032	15.23	
18+55	129.8008	14.18	
19+ 0	129.8904	13.01	
19+ 5	129.9733	12.04	
19+10	130.0546	11.81	
19+15	130.1386	12.19	
19+20	130.2272	12.87	

19+25	130.3210	13.63	|Q	|	|	|	V |
19+30	130.4212	14.55	|Q	|	|	|	V |
19+35	130.5268	15.32	| Q	|	|	|	V |
19+40	130.6328	15.40	| Q	|	|	|	V |
19+45	130.7352	14.86	|Q	|	|	|	V |
19+50	130.8319	14.04	|Q	|	|	|	V |
19+55	130.9225	13.16	|Q	|	|	|	V |
20+ 0	131.0061	12.14	|Q	|	|	|	V |
20+ 5	131.0838	11.28	|Q	|	|	|	V |
20+10	131.1605	11.13	|Q	|	|	|	V |
20+15	131.2403	11.60	|Q	|	|	|	V |
20+20	131.3246	12.23	|Q	|	|	|	V |
20+25	131.4112	12.58	|Q	|	|	|	V |
20+30	131.4989	12.73	|Q	|	|	|	V|
20+35	131.5870	12.80	|Q	|	|	|	V|
20+40	131.6756	12.86	|Q	|	|	|	V|
20+45	131.7644	12.90	|Q	|	|	|	V|
20+50	131.8526	12.80	|Q	|	|	|	V|
20+55	131.9376	12.34	|Q	|	|	|	V|
21+ 0	132.0170	11.53	|Q	|	|	|	V|
21+ 5	132.0913	10.80	|Q	|	|	|	V|
21+10	132.1654	10.75	|Q	|	|	|	V|
21+15	132.2432	11.30	|Q	|	|	|	V|
21+20	132.3248	11.86	|Q	|	|	|	V|
21+25	132.4059	11.77	|Q	|	|	|	V|
21+30	132.4825	11.12	|Q	|	|	|	V|
21+35	132.5545	10.46	|Q	|	|	|	V|
21+40	132.6266	10.47	|Q	|	|	|	V|
21+45	132.7027	11.05	|Q	|	|	|	V|
21+50	132.7829	11.65	|Q	|	|	|	V|
21+55	132.8627	11.58	|Q	|	|	|	V|
22+ 0	132.9382	10.96	|Q	|	|	|	V|
22+ 5	133.0094	10.34	|Q	|	|	|	V|
22+10	133.0809	10.38	|Q	|	|	|	V|
22+15	133.1566	10.98	|Q	|	|	|	V|
22+20	133.2364	11.59	|Q	|	|	|	V|
22+25	133.3159	11.54	|Q	|	|	|	V|
22+30	133.3912	10.93	|Q	|	|	|	V|
22+35	133.4613	10.17	|Q	|	|	|	V|
22+40	133.5282	9.73	|Q	|	|	|	V|
22+45	133.5936	9.49	|Q	|	|	|	V|
22+50	133.6580	9.35	|Q	|	|	|	V|
22+55	133.7216	9.23	|Q	|	|	|	V|
23+ 0	133.7846	9.15	|Q	|	|	|	V|
23+ 5	133.8472	9.09	|Q	|	|	|	V|
23+10	133.9095	9.04	|Q	|	|	|	V|
23+15	133.9714	8.99	|Q	|	|	|	V|
23+20	134.0331	8.95	|Q	|	|	|	V|
23+25	134.0945	8.91	|Q	|	|	|	V|
23+30	134.1557	8.89	|Q	|	|	|	V|
23+35	134.2167	8.87	|Q	|	|	|	V|
23+40	134.2777	8.85	|Q	|	|	|	V|
23+45	134.3386	8.84	|Q	|	|	|	V|
23+50	134.3993	8.82	|Q	|	|	|	V|
23+55	134.4599	8.79	|Q	|	|	|	V|
24+ 0	134.5203	8.78	|Q	|	|	|	V|
24+ 5	134.5789	8.51	|Q	|	|	|	V|
24+10	134.6309	7.55	|Q	|	|	|	V|
24+15	134.6713	5.86	Q	|	|	|	V|
24+20	134.6994	4.08	Q	|	|	|	V|
24+25	134.7199	2.98	Q	|	|	|	V|
24+30	134.7361	2.35	Q	|	|	|	V|
24+35	134.7495	1.94	Q	|	|	|	V|

24+40	134.7606	1.62	Q	|	|	|	V|
24+45	134.7700	1.36	Q	|	|	|	V|
24+50	134.7779	1.15	Q	|	|	|	V|
24+55	134.7846	0.98	Q	|	|	|	V|
25+ 0	134.7903	0.82	Q	|	|	|	V|
25+ 5	134.7952	0.70	Q	|	|	|	V|
25+10	134.7993	0.60	Q	|	|	|	V|
25+15	134.8028	0.51	Q	|	|	|	V|
25+20	134.8058	0.43	Q	|	|	|	V|
25+25	134.8083	0.36	Q	|	|	|	V|
25+30	134.8103	0.30	Q	|	|	|	V|
25+35	134.8120	0.24	Q	|	|	|	V|
25+40	134.8133	0.20	Q	|	|	|	V|
25+45	134.8144	0.16	Q	|	|	|	V|
25+50	134.8153	0.12	Q	|	|	|	V|
25+55	134.8159	0.10	Q	|	|	|	V|
26+ 0	134.8164	0.07	Q	|	|	|	V|
26+ 5	134.8167	0.04	Q	|	|	|	V|
26+10	134.8168	0.02	Q	|	|	|	V|

TABLE 4.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A1"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.002	0.18		
	D	75.0%	75.0	92.3	16.33	0.043	3.93	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.001	0.08		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.10	0.000	0.02		
	D	90.0%	75.0	95.7	0.68	0.002	0.17	1.11	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.001	0.05		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.001	0.06		
	D	90.0%	75.0	95.7	2.69	0.007	0.67	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.34	0.082	6.41	31.34	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.14	0.000	0.03		
	C	90.0%	69.0	95.1	2.97	0.008	0.74		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	3.11	95.0
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.95	0.008	0.67		
	C	75.0%	69.0	90.8	0.95	0.002	0.22		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	3.90	88.3
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	12.03	0.031	2.28		
	C	40.0%	69.0	80.6	25.44	0.066	5.35		
	D	40.0%	75.0	84.2	2.46	0.006	0.54	39.93	78.5
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.013	1.10		
	D	50.0%	75.0	86.5	93.29	0.243	21.05	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.013	1.07		
	D	50.0%	75.0	86.5	38.57	0.101	8.70	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.60	0.002	0.12		
	C	50.0%	69.0	83.5	0.67	0.002	0.15		
	D	50.0%	75.0	86.5	8.82	0.023	1.99	10.09	85.7
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.010	0.77		
	C	50.0%	69.0	83.5	1.77	0.005	0.39		
	D	50.0%	75.0	86.5	103.01	0.269	23.24	108.63	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.035	3.12	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.84	0.026	2.16	9.84	84.2
					383.41	1.000			
COMPOSITE RUN OFF INDEX - AMC II							85.3		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 4.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

WATERSHEAD "A1"					
LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.045	0.013
BUSINESS PROFESSIONAL	0.9	0.18	1.11	0.003	0.001
COMMERCIAL	0.9	0.18	3.16	0.008	0.001
COMMERCIAL MIXED-USE	0.9	0.18	0.00	0.000	0.000
COMMUNITY PARK	0.15	0.78	31.34	0.082	0.064
GENERAL COMMERCIAL	0.9	0.18	3.11	0.008	0.001
HIGH DENSITY-R	0.75	0.3	3.90	0.010	0.003
LOW DENSITY-R	0.4	0.58	39.93	0.104	0.060
LOW-MEDIUM R	0.5	0.5	98.35	0.257	0.128
MEDIUM DENSITY	0.5	0.5	43.50	0.113	0.057
MEDIUM DENSITY-R	0.5	0.5	10.09	0.026	0.013
MEDIUM LOW DENSITY	0.5	0.5	108.63	0.283	0.142
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.035	0.030
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	9.84	0.026	0.015
			383.41	1.000	
COMPOSITE LOW LOSS RATE					**0.529**

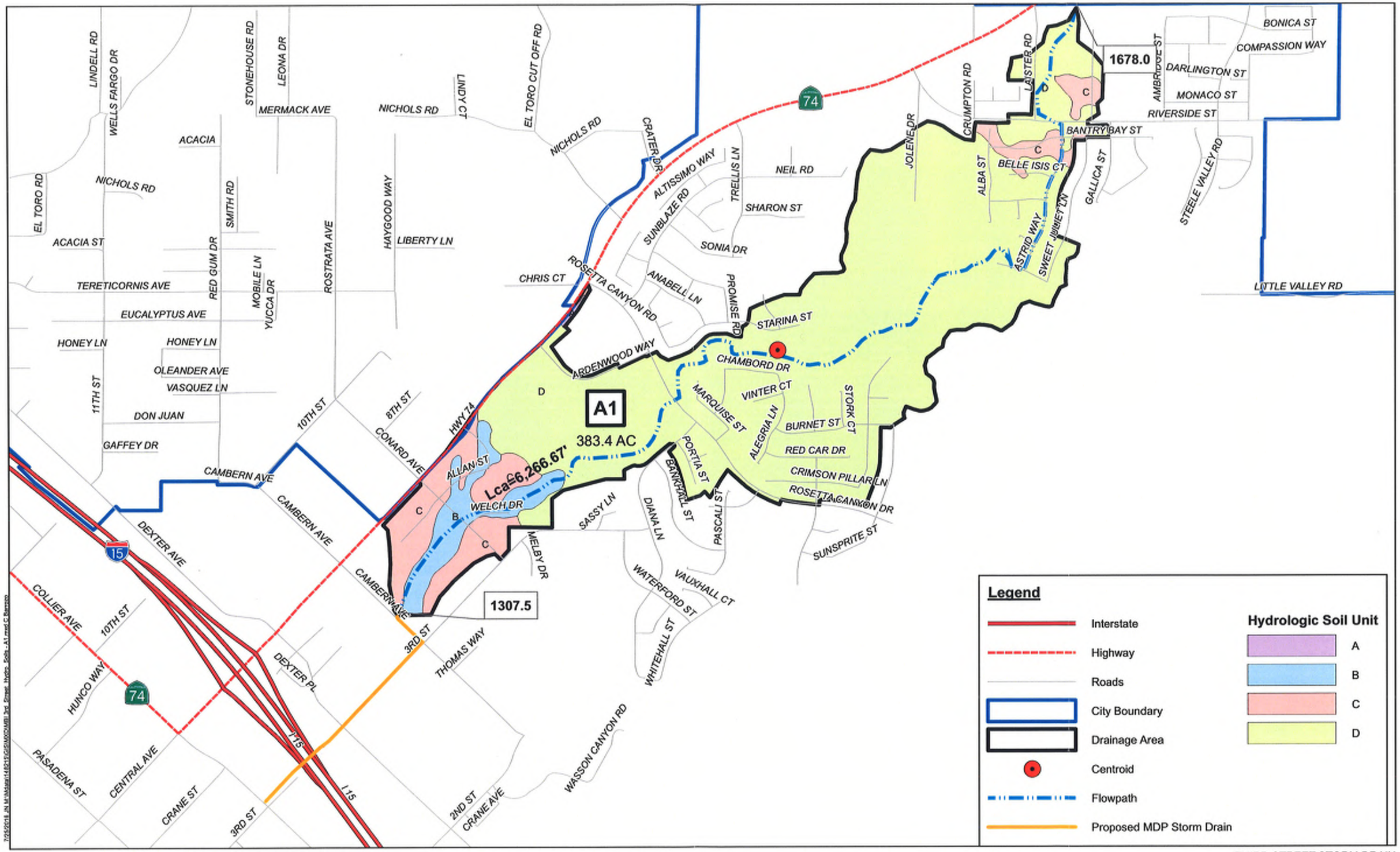
TABLE 4.3

PROJECT NAME

POST-DEVELOPMENT

COMPOSITE MANNING'S "n" VALUE

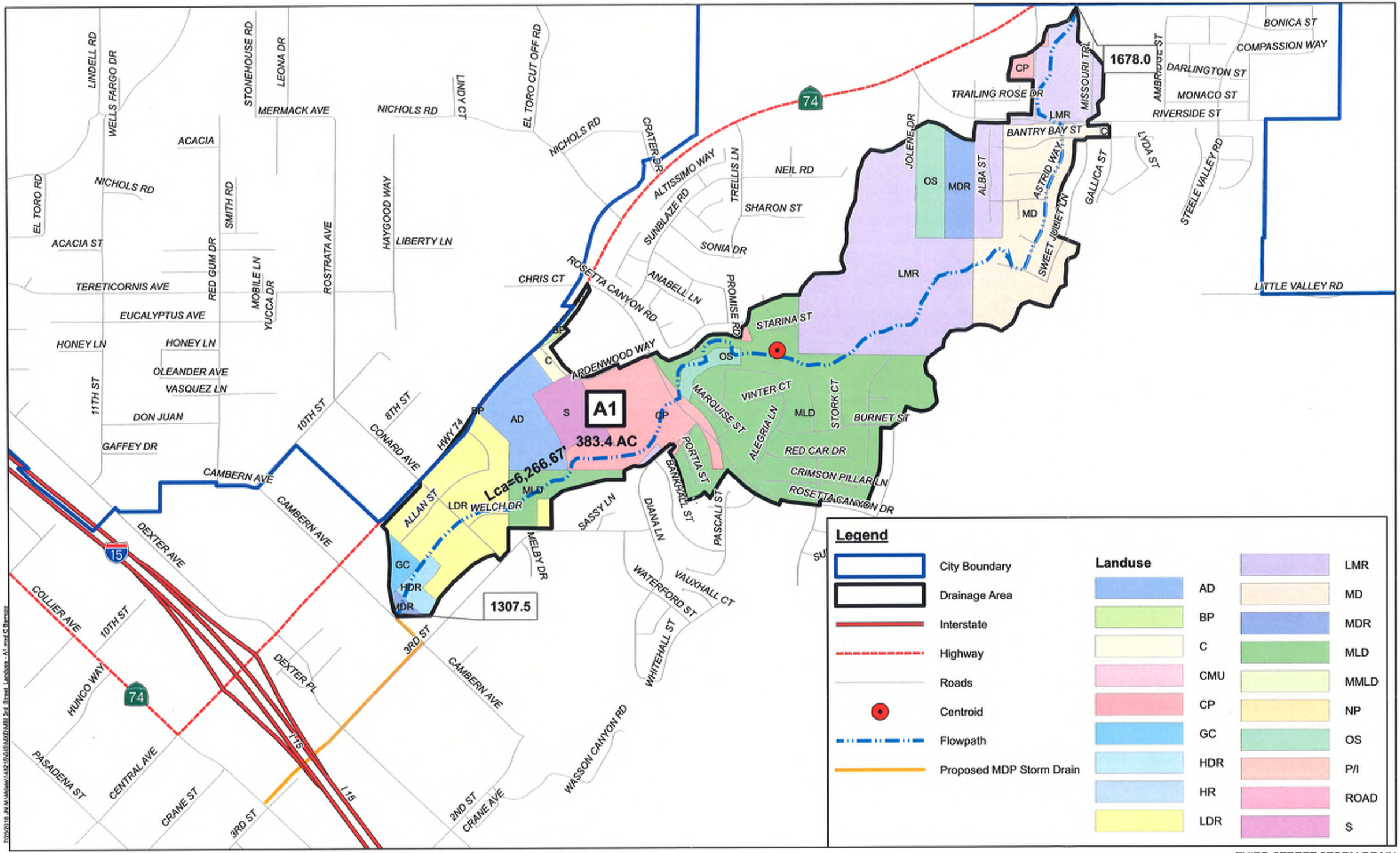
WATERSHEAD "A1"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.045	0.0007
BUSINESS PROFESSIONAL	0.015	1.11	0.003	0.0000
COMMERCIAL	0.015	3.16	0.008	0.0001
COMMERCIAL MIXED-USE	0.015	0.00	0.000	0.0000
COMMUNITY PARK	0.035	31.34	0.082	0.0029
GENERAL COMMERCIAL	0.015	3.11	0.008	0.0001
HIGH DENSITY-R	0.015	3.90	0.010	0.0002
LOW DENSITY-R	0.02	39.93	0.104	0.0021
LOW-MEDIUM R	0.015	98.35	0.257	0.0038
MEDIUM DENSITY	0.015	43.50	0.113	0.0017
MEDIUM DENSITY-R	0.015	10.09	0.026	0.0004
MEDIUM LOW DENSITY	0.02	108.63	0.283	0.0057
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.035	0.0014
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	9.84	0.026	0.0004
		383.41	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0194**



THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map - WS A1

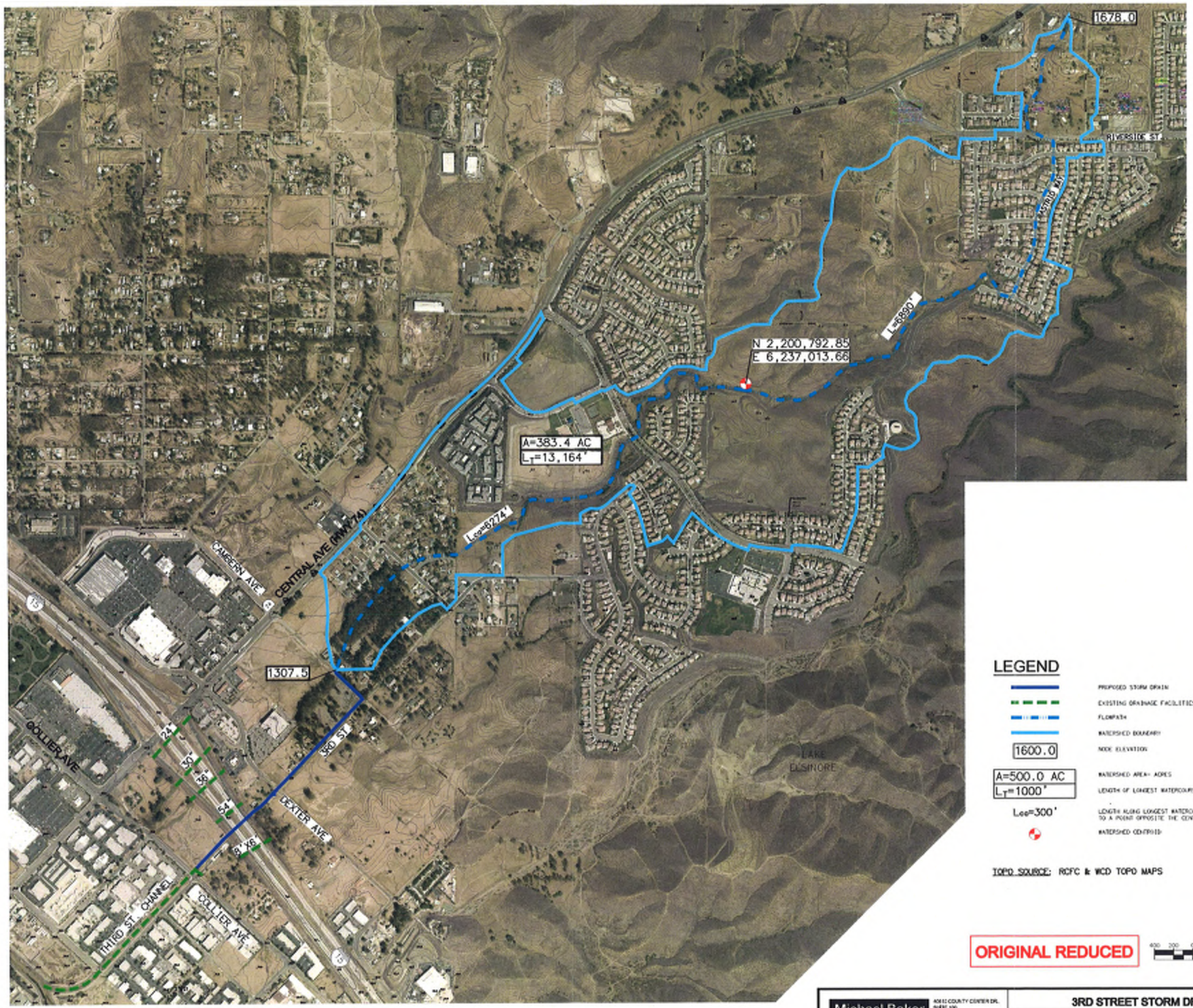
RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 4



THIRD STREET STORM DRAIN

Landuse Map - WS A1

RCFC&WCD ZONE3 STAGE 2 STORM DRAIN - EXHIBIT 5



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA= ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE= FEET
- Loe=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA= FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

SCALE: 1"=400'

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR.
SUITE 100
TEMECULA, CA 92591
PHONE: (951) 579-9052
MBAI@MBVI.COM

3RD STREET STORM DRAIN - EXHIBIT 6

SYNTHETIC UNIT HYDROGRAPH
HYDROLOGY MAP
WATERSHED AREA 'A1'

H:\PROJECTS\162251\CADD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG 11/3/16 9:01 am

APPENDIX C

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 06/22/16 File: 3RDSTA23100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A2 (DESIGN POINT AT CAMBERN/PIPE CONFLUENCE)
100-YEAR STORM EVENT

Drainage Area = 393.84(Ac.) = 0.615 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 393.84(Ac.) = 0.615 Sq. Mi.

Length along longest watercourse = 13247.00(Ft.)
Length along longest watercourse measured to centroid = 6240.00(Ft.)
Length along longest watercourse = 2.509 Mi.
Length along longest watercourse measured to centroid = 1.182 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 147.6742 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.271 Hr.
Lag time = 16.26 Min.
25% of lag time = 4.07 Min.
40% of lag time = 6.50 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
393.84	0.95	374.15

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
393.84	2.30	905.83

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.83 %
Adjusted average point rain = 2.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.220	93.90	0.900
31.340	78.50	0.150
11.010	95.10	0.900
4.010	88.40	0.750
40.700	78.50	0.400
98.350	86.30	0.500
43.500	86.20	0.500
11.530	84.90	0.500
108.620	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 393.84(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.043	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
93.9	93.9	0.079	0.900	0.015	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.080	0.018
95.1	95.1	0.064	0.900	0.012	0.028	0.000
88.4	88.4	0.148	0.750	0.048	0.010	0.000
78.5	78.5	0.262	0.400	0.167	0.103	0.017
86.3	86.3	0.172	0.500	0.095	0.250	0.024
86.2	86.2	0.173	0.500	0.095	0.110	0.011
84.9	84.9	0.188	0.500	0.103	0.029	0.003
86.1	86.1	0.174	0.500	0.096	0.276	0.026
89.5	89.5	0.136	0.050	0.130	0.034	0.004
84.2	84.2	0.196	0.400	0.126	0.025	0.003
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.054
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.521

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	30.750	2.998	11.901
2	0.167	61.500	11.121	44.142
3	0.250	92.250	19.303	76.617
4	0.333	123.000	20.283	80.507
5	0.417	153.750	12.400	49.219
6	0.500	184.500	7.088	28.132
7	0.583	215.250	4.682	18.584
8	0.667	246.000	3.656	14.511

9	0.750	276.750	2.965	11.771
10	0.833	307.500	2.425	9.625
11	0.917	338.250	1.950	7.742
12	1.000	369.000	1.751	6.950
13	1.083	399.750	1.389	5.513
14	1.167	430.500	1.171	4.650
15	1.250	461.250	0.980	3.889
16	1.333	492.000	0.935	3.711
17	1.417	522.750	0.855	3.394
18	1.500	553.500	0.684	2.715
19	1.583	584.250	0.602	2.389
20	1.667	615.000	0.539	2.139
21	1.750	645.750	0.447	1.773
22	1.833	676.500	0.385	1.527
23	1.917	707.250	0.309	1.225
24	2.000	738.000	0.307	1.221
25	2.083	768.750	0.307	1.221
26	2.167	799.500	0.307	1.221
27	2.250	830.250	0.159	0.630
			Sum = 100.000	Sum= 396.917

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	1.30	0.358	0.109	(0.187)	0.249
2	0.17	1.30	0.358	0.109	(0.187)	0.249
3	0.25	1.10	0.303	0.109	(0.158)	0.194
4	0.33	1.50	0.413	0.109	(0.215)	0.304
5	0.42	1.50	0.413	0.109	(0.215)	0.304
6	0.50	1.80	0.496	0.109	(0.258)	0.387
7	0.58	1.50	0.413	0.109	(0.215)	0.304
8	0.67	1.80	0.496	0.109	(0.258)	0.387
9	0.75	1.80	0.496	0.109	(0.258)	0.387
10	0.83	1.50	0.413	0.109	(0.215)	0.304
11	0.92	1.60	0.441	0.109	(0.230)	0.332
12	1.00	1.80	0.496	0.109	(0.258)	0.387
13	1.08	2.20	0.606	0.109	(0.316)	0.497
14	1.17	2.20	0.606	0.109	(0.316)	0.497
15	1.25	2.20	0.606	0.109	(0.316)	0.497
16	1.33	2.00	0.551	0.109	(0.287)	0.442
17	1.42	2.60	0.716	0.109	(0.373)	0.607
18	1.50	2.70	0.744	0.109	(0.388)	0.635
19	1.58	2.40	0.661	0.109	(0.345)	0.552
20	1.67	2.70	0.744	0.109	(0.388)	0.635
21	1.75	3.30	0.909	0.109	(0.474)	0.800
22	1.83	3.10	0.854	0.109	(0.445)	0.745
23	1.92	2.90	0.799	0.109	(0.416)	0.690
24	2.00	3.00	0.827	0.109	(0.431)	0.718
25	2.08	3.10	0.854	0.109	(0.445)	0.745
26	2.17	4.20	1.157	0.109	(0.603)	1.048
27	2.25	5.00	1.378	0.109	(0.718)	1.269
28	2.33	3.50	0.964	0.109	(0.502)	0.855
29	2.42	6.80	1.874	0.109	(0.976)	1.765
30	2.50	7.30	2.011	0.109	(1.048)	1.902
31	2.58	8.20	2.259	0.109	(1.177)	2.150
32	2.67	5.90	1.626	0.109	(0.847)	1.517
33	2.75	2.00	0.551	0.109	(0.287)	0.442
34	2.83	1.80	0.496	0.109	(0.258)	0.387
35	2.92	1.80	0.496	0.109	(0.258)	0.387

```
36   3.00      0.60       0.165        (  0.109)        0.086         0.079
          (Loss Rate Not Used)
   Sum =      100.0                                      Sum =      23.7
    Flood volume = Effective rainfall       1.97(In)
     times area      393.8(Ac.)/[(In)/(Ft.)] =       64.7(Ac.Ft)
    Total soil loss =       0.32(In)
    Total soil loss =     10.662(Ac.Ft)
    Total rainfall =       2.30(In)
    Flood volume =      2818063.8 Cubic Feet
    Total soil loss =       464440.7 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =     587.104(CFS)
    ---------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          3 - 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        150.0      300.0      450.0      600.0
-------------------------------------------------------------------------------
  0+ 5        0.0204       2.97  Q          |          |          |          |
  0+10        0.1167      13.98  Q          |          |          |          |
  0+15        0.3400      32.43  V Q        |          |          |          |
  0+20        0.6939      51.38  V  Q       |          |          |          |
  0+25        1.1368      64.30  V   Q      |          |          |          |
  0+30        1.6623      76.31  |V   Q     |          |          |          |
  0+35        2.2806      89.78  |V   Q     |          |          |          |
  0+40        2.9758     100.94  |V    Q    |          |          |          |
  0+45        3.7329     109.93  | V    Q   |          |          |          |
  0+50        4.5341     116.34  | V    Q   |          |          |          |
  0+55        5.3662     120.81  |  V    Q  |          |          |          |
  1+ 0        6.2073     122.13  |  V    Q  |          |          |          |
  1+ 5        7.0704     125.33  |   V   Q  |          |          |          |
  1+10        8.0037     135.51  |   V    Q |          |          |          |
  1+15        9.0360     149.88  |    V   Q |          |          |          |
  1+20       10.1527     162.15  |     V  Q |          |          |          |
  1+25       11.3225     169.85  |      V  |Q          |          |          |
  1+30       12.5500     178.23  |      V  |Q          |          |          |
  1+35       13.8613     190.40  |       V | Q         |          |          |
  1+40       15.2626     203.47  |        V|  Q        |          |          |
  1+45       16.7365     214.01  |         V  Q        |          |          |
  1+50       18.3024     227.36  |         |V  Q       |          |          |
  1+55       19.9848     244.28  |         | V  Q      |          |          |
  2+ 0       21.7535     256.82  |         |  V  Q     |          |          |
  2+ 5       23.5560     261.72  |         |   V Q     |          |          |
  2+10       25.4092     269.08  |         |    V Q    |          |          |
  2+15       27.4099     290.50  |         |     V  Q  |          |          |
  2+20       29.6402     323.85  |         |       V |Q          |          |
  2+25       32.1308     361.63  |         |        V|  Q        |          |
  2+30       34.9347     407.14  |         |         |V    Q     |          |
  2+35       38.1997     474.07  |         |         |  V       |Q         |
  2+40       42.0193     554.61  |         |         |    V     |    Q     |
  2+45       46.0628     587.10  |         |         |       V  |       Q  |
  2+50       49.8028     543.05  |         |         |         V|    Q     |
  2+55       52.8380     440.72  |         |         |        Q | V        |
  3+ 0       55.1690     338.46  |         |         | Q        |   V      |
  3+ 5       57.0066     266.82  |         |       Q |          |    V     |
  3+10       58.4507     209.68  |         |  Q      |          |     V    |
  3+15       59.5504     159.67  |         Q         |          |     V    |
  3+20       60.4058     124.21  |       Q |         |          |      V   |
  3+25       61.0976     100.45  |     Q   |         |          |      V   |
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   3+30      61.6756     83.92  |     Q     |           |           |         V |
   3+35      62.1617     70.58  |    Q      |           |           |         V |
   3+40      62.5720     59.58  |   Q       |           |           |         V |
   3+45      62.9249     51.24  |   Q       |           |           |         V |
   3+50      63.2307     44.40  |  Q        |           |           |          V|
   3+55      63.4942     38.25  |  Q        |           |           |          V|
   4+ 0      63.7183     32.54  |  Q        |           |           |          V|
   4+ 5      63.9086     27.64  |Q          |           |           |          V|
   4+10      64.0725     23.80  |Q          |           |           |          V|
   4+15      64.2116     20.19  |Q          |           |           |          V|
   4+20      64.3280     16.91  |Q          |           |           |          V|
   4+25      64.4246     14.03  Q           |           |           |          V|
   4+30      64.5065     11.88  Q           |           |           |          V|
   4+35      64.5747      9.90  Q           |           |           |          V|
   4+40      64.6258      7.42  Q           |           |           |          V|
   4+45      64.6590      4.82  Q           |           |           |          V|
   4+50      64.6765      2.54  Q           |           |           |          V|
   4+55      64.6856      1.32  Q           |           |           |          V|
   5+ 0      64.6912      0.81  Q           |           |           |          V|
   5+ 5      64.6935      0.34  Q           |           |           |          V|
   5+10      64.6938      0.05  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 06/22/16 File: 3RDSTA26100.out

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

Program License Serial Number 6341

English (in-lb) Input Units Used
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English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A2 (DESIGN POINT AT CAMBERN/PIPE CONFLUENCE)
100-YEAR STORM EVENT

Drainage Area = 393.84(Ac.) = 0.615 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 393.84(Ac.) = 0.615 Sq. Mi.

Length along longest watercourse = 13247.00(Ft.)
Length along longest watercourse measured to centroid = 6240.00(Ft.)
Length along longest watercourse = 2.509 Mi.
Length along longest watercourse measured to centroid = 1.182 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 147.6742 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.271 Hr.
Lag time = 16.26 Min.
25% of lag time = 4.07 Min.
40% of lag time = 6.50 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
393.84	1.35	531.68

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
393.84	3.30	1299.67

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.86 %
Adjusted average point rain = 3.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.220	93.90	0.900
31.340	78.50	0.150
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98.350	86.30	0.500
43.500	86.20	0.500
11.530	84.90	0.500
108.620	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 393.84(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.043	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
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93.9	93.9	0.079	0.900	0.015	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.080	0.018
95.1	95.1	0.064	0.900	0.012	0.028	0.000
88.4	88.4	0.148	0.750	0.048	0.010	0.000
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84.9	84.9	0.188	0.500	0.103	0.029	0.003
86.1	86.1	0.174	0.500	0.096	0.276	0.026
89.5	89.5	0.136	0.050	0.130	0.034	0.004
84.2	84.2	0.196	0.400	0.126	0.025	0.003
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.054
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.521

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

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19	1.583	584.250	0.602	2.389
20	1.667	615.000	0.539	2.139
21	1.750	645.750	0.447	1.773
22	1.833	676.500	0.385	1.527
23	1.917	707.250	0.309	1.225
24	2.000	738.000	0.307	1.221
25	2.083	768.750	0.307	1.221
26	2.167	799.500	0.307	1.221
27	2.250	830.250	0.159	0.630
			Sum = 100.000	Sum= 396.917

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	0.50	0.198	(0.109)	0.103	0.095
2	0.17	0.60	0.237	0.109	(0.124)	0.128
3	0.25	0.60	0.237	0.109	(0.124)	0.128
4	0.33	0.60	0.237	0.109	(0.124)	0.128
5	0.42	0.60	0.237	0.109	(0.124)	0.128
6	0.50	0.70	0.277	0.109	(0.144)	0.168
7	0.58	0.70	0.277	0.109	(0.144)	0.168
8	0.67	0.70	0.277	0.109	(0.144)	0.168
9	0.75	0.70	0.277	0.109	(0.144)	0.168
10	0.83	0.70	0.277	0.109	(0.144)	0.168
11	0.92	0.70	0.277	0.109	(0.144)	0.168
12	1.00	0.80	0.316	0.109	(0.165)	0.207
13	1.08	0.80	0.316	0.109	(0.165)	0.207
14	1.17	0.80	0.316	0.109	(0.165)	0.207
15	1.25	0.80	0.316	0.109	(0.165)	0.207
16	1.33	0.80	0.316	0.109	(0.165)	0.207
17	1.42	0.80	0.316	0.109	(0.165)	0.207
18	1.50	0.80	0.316	0.109	(0.165)	0.207
19	1.58	0.80	0.316	0.109	(0.165)	0.207
20	1.67	0.80	0.316	0.109	(0.165)	0.207
21	1.75	0.80	0.316	0.109	(0.165)	0.207
22	1.83	0.80	0.316	0.109	(0.165)	0.207
23	1.92	0.80	0.316	0.109	(0.165)	0.207
24	2.00	0.90	0.356	0.109	(0.185)	0.247
25	2.08	0.80	0.316	0.109	(0.165)	0.207
26	2.17	0.90	0.356	0.109	(0.185)	0.247
27	2.25	0.90	0.356	0.109	(0.185)	0.247
28	2.33	0.90	0.356	0.109	(0.185)	0.247
29	2.42	0.90	0.356	0.109	(0.185)	0.247
30	2.50	0.90	0.356	0.109	(0.185)	0.247
31	2.58	0.90	0.356	0.109	(0.185)	0.247
32	2.67	0.90	0.356	0.109	(0.185)	0.247
33	2.75	1.00	0.395	0.109	(0.206)	0.287
34	2.83	1.00	0.395	0.109	(0.206)	0.287
35	2.92	1.00	0.395	0.109	(0.206)	0.287

36	3.00	1.00	0.395	0.109	(0.206)	0.287
37	3.08	1.00	0.395	0.109	(0.206)	0.287
38	3.17	1.10	0.435	0.109	(0.227)	0.326
39	3.25	1.10	0.435	0.109	(0.227)	0.326
40	3.33	1.10	0.435	0.109	(0.227)	0.326
41	3.42	1.20	0.475	0.109	(0.247)	0.366
2	3.50	1.30	0.514	0.109	(0.268)	0.405
43	3.58	1.40	0.554	0.109	(0.288)	0.445
44	3.67	1.40	0.554	0.109	(0.288)	0.445
45	3.75	1.50	0.593	0.109	(0.309)	0.484
46	3.83	1.50	0.593	0.109	(0.309)	0.484
47	3.92	1.60	0.633	0.109	(0.330)	0.524
48	4.00	1.60	0.633	0.109	(0.330)	0.524
49	4.08	1.70	0.672	0.109	(0.350)	0.563
50	4.17	1.80	0.712	0.109	(0.371)	0.603
51	4.25	1.90	0.751	0.109	(0.391)	0.642
52	4.33	2.00	0.791	0.109	(0.412)	0.682
53	4.42	2.10	0.830	0.109	(0.433)	0.722
54	4.50	2.10	0.830	0.109	(0.433)	0.722
55	4.58	2.20	0.870	0.109	(0.453)	0.761
56	4.67	2.30	0.910	0.109	(0.474)	0.801
57	4.75	2.40	0.949	0.109	(0.494)	0.840
58	4.83	2.40	0.949	0.109	(0.494)	0.840
59	4.92	2.50	0.989	0.109	(0.515)	0.880
60	5.00	2.60	1.028	0.109	(0.536)	0.919
61	5.08	3.10	1.226	0.109	(0.639)	1.117
62	5.17	3.60	1.424	0.109	(0.742)	1.315
63	5.25	3.90	1.542	0.109	(0.804)	1.433
64	5.33	4.20	1.661	0.109	(0.865)	1.552
65	5.42	4.70	1.859	0.109	(0.968)	1.750
66	5.50	5.60	2.215	0.109	(1.154)	2.106
67	5.58	1.90	0.751	0.109	(0.391)	0.642
3	5.67	0.90	0.356	0.109	(0.185)	0.247
69	5.75	0.60	0.237	0.109	(0.124)	0.128
70	5.83	0.50	0.198	(0.109)	0.103	0.095
71	5.92	0.30	0.119	(0.109)	0.062	0.057
72	6.00	0.20	0.079	(0.109)	0.041	0.038

(Loss Rate Not Used)

Sum = 100.0 Sum = 31.8

Flood volume = Effective rainfall 2.65(In)
times area 393.8(Ac.)/[(In)/(Ft.)] = 87.1(Ac.Ft)
Total soil loss = 0.64(In)
Total soil loss = 21.103(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 3792196.4 Cubic Feet
Total soil loss = 919225.9 Cubic Feet

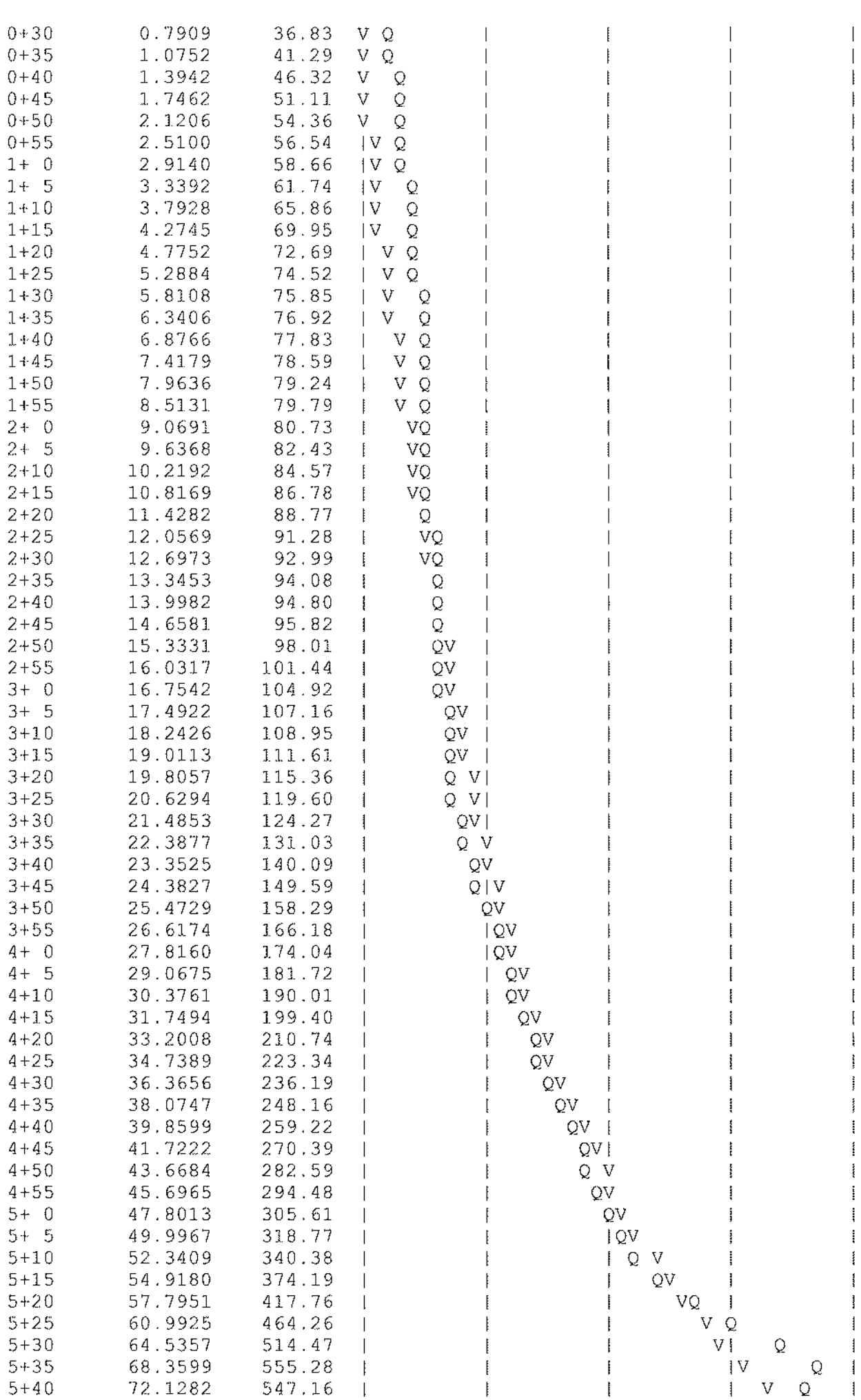
Peak flow rate of this hydrograph = 555.281(CFS)

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6 - 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	150.0	300.0	450.0	600.0
0+ 5	0.0078	1.13	Q				
0+10	0.0471	5.71	Q				
0+15	0.1467	14.46	Q				
0+20	0.3165	24.67	VQ				
0+25	0.5372	32.04	V Q				



0+30	0.7909	36.83	V Q				
0+35	1.0752	41.29	V Q				
0+40	1.3942	46.32	V Q				
0+45	1.7462	51.11	V Q				
0+50	2.1206	54.36	V Q				
0+55	2.5100	56.54	V Q				
1+ 0	2.9140	58.66	V Q				
1+ 5	3.3392	61.74	V Q				
1+10	3.7928	65.86	V Q				
1+15	4.2745	69.95	V Q				
1+20	4.7752	72.69	V Q				
1+25	5.2884	74.52	V Q				
1+30	5.8108	75.85	V Q				
1+35	6.3406	76.92	V Q				
1+40	6.8766	77.83	V Q				
1+45	7.4179	78.59	V Q				
1+50	7.9636	79.24	V Q				
1+55	8.5131	79.79	V Q				
2+ 0	9.0691	80.73	VQ				
2+ 5	9.6368	82.43	VQ				
2+10	10.2192	84.57	VQ				
2+15	10.8169	86.78	VQ				
2+20	11.4282	88.77	Q				
2+25	12.0569	91.28	VQ				
2+30	12.6973	92.99	VQ				
2+35	13.3453	94.08	Q				
2+40	13.9982	94.80	Q				
2+45	14.6581	95.82	Q				
2+50	15.3331	98.01	QV				
2+55	16.0317	101.44	QV				
3+ 0	16.7542	104.92	QV				
3+ 5	17.4922	107.16	QV				
3+10	18.2426	108.95	QV				
3+15	19.0113	111.61	QV				
3+20	19.8057	115.36	Q V				
3+25	20.6294	119.60	Q V				
3+30	21.4853	124.27	QV				
3+35	22.3877	131.03	Q V				
3+40	23.3525	140.09	QV				
3+45	24.3827	149.59	Q V				
3+50	25.4729	158.29	QV				
3+55	26.6174	166.18	QV				
4+ 0	27.8160	174.04	QV				
4+ 5	29.0675	181.72	QV				
4+10	30.3761	190.01	QV				
4+15	31.7494	199.40	QV				
4+20	33.2008	210.74	QV				
4+25	34.7389	223.34	QV				
4+30	36.3656	236.19	QV				
4+35	38.0747	248.16	QV				
4+40	39.8599	259.22	QV				
4+45	41.7222	270.39	QV				
4+50	43.6684	282.59	Q V				
4+55	45.6965	294.48	QV				
5+ 0	47.8013	305.61	QV				
5+ 5	49.9967	318.77	QV				
5+10	52.3409	340.38	Q V				
5+15	54.9180	374.19	QV				
5+20	57.7951	417.76	VQ				
5+25	60.9925	464.26	V Q				
5+30	64.5357	514.47	V Q				
5+35	68.3599	555.28	V Q				
5+40	72.1282	547.16	V Q				

5+45	75.3453	467.13	|	|	|	Q V	|
5+50	77.7293	346.14	|	|	Q |	V	|
5+55	79.4704	252.81	|	| Q	|	V	|
6+ 0	80.8079	194.21	|	Q |	|	V	|
6+ 5	81.8831	156.12	|	Q |	|	V	|
6+10	82.7581	127.04	| Q	|	|	V	|
6+15	83.4708	103.50	| Q	|	|	V	|
6+20	84.0550	84.82	| Q	|	|	V	|
6+25	84.5452	71.18	| Q	|	|	V	|
6+30	84.9573	59.83	| Q	|	|	|	V|
6+35	85.3081	50.95	| Q	|	|	|	V|
6+40	85.6095	43.75	| Q	|	|	|	V|
6+45	85.8712	38.01	| Q	|	|	|	V|
6+50	86.0960	32.63	| Q	|	|	|	V|
6+55	86.2855	27.51	|Q	|	|	|	V|
7+ 0	86.4461	23.32	|Q	|	|	|	V|
7+ 5	86.5823	19.78	|Q	|	|	|	V|
7+10	86.6967	16.60	|Q	|	|	|	V|
7+15	86.7923	13.88	Q	|	|	|	V|
7+20	86.8708	11.40	Q	|	|	|	V|
7+25	86.9351	9.34	Q	|	|	|	V|
7+30	86.9857	7.35	Q	|	|	|	V|
7+35	87.0218	5.24	Q	|	|	|	V|
7+40	87.0414	2.84	Q	|	|	|	V|
7+45	87.0490	1.11	Q	|	|	|	V|
7+50	87.0528	0.54	Q	|	|	|	V|
7+55	87.0549	0.31	Q	|	|	|	V|
8+ 0	87.0561	0.18	Q	|	|	|	V|
8+ 5	87.0567	0.08	Q	|	|	|	V|
8+10	87.0569	0.02	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 06/22/16 File: 3RDSTA224100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A2 (DESIGN POINT AT CAMBERN/PIPE CONFLUENCE)
100-YEAR STORM EVENT

Drainage Area = 393.84(Ac.) = 0.615 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 393.84(Ac.) = 0.615 Sq.

Length along longest watercourse = 13247.00(Ft.)
Length along longest watercourse measured to centroid = 6240.00(Ft.)
Length along longest watercourse = 2.509 Mi.
Length along longest watercourse measured to centroid = 1.182 Mi.
Difference in elevation = 370.50(Ft.)
Slope along watercourse = 147.6742 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.271 Hr.
Lag time = 16.26 Min.
25% of lag time = 4.07 Min.
40% of lag time = 6.50 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]
393.84	2.50	984.60

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
393.84	6.00	2363.04

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.92 %
Adjusted average point rain = 5.995(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.220	93.90	0.900
31.340	78.50	0.150
11.010	95.10	0.900
4.010	88.40	0.750
40.700	78.50	0.400
98.350	86.30	0.500
43.500	86.20	0.500
11.530	84.90	0.500
108.620	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 393.84(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.043	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
93.9	93.9	0.079	0.900	0.015	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.080	0.018
95.1	95.1	0.064	0.900	0.012	0.028	0.000
88.4	88.4	0.148	0.750	0.048	0.010	0.000
78.5	78.5	0.262	0.400	0.167	0.103	0.017
86.3	86.3	0.172	0.500	0.095	0.250	0.024
86.2	86.2	0.173	0.500	0.095	0.110	0.011
84.9	84.9	0.188	0.500	0.103	0.029	0.003
86.1	86.1	0.174	0.500	0.096	0.276	0.026
89.5	89.5	0.136	0.050	0.130	0.034	0.004
84.2	84.2	0.196	0.400	0.126	0.025	0.003
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.054
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.521

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	30.750	2.998	11.901
2	0.167	61.500	11.121	44.142
3	0.250	92.250	19.303	76.617
4	0.333	123.000	20.283	80.507
5	0.417	153.750	12.400	49.219
6	0.500	184.500	7.088	28.132
7	0.583	215.250	4.682	18.584
8	0.667	246.000	3.656	14.511

9	0.750	276.750	2.965	11.771
10	0.833	307.500	2.425	9.625
11	0.917	338.250	1.950	7.742
12	1.000	369.000	1.751	6.950
13	1.083	399.750	1.389	5.513
14	1.167	430.500	1.171	4.650
15	1.250	461.250	0.980	3.889
16	1.333	492.000	0.935	3.711
17	1.417	522.750	0.855	3.394
18	1.500	553.500	0.684	2.715
19	1.583	584.250	0.602	2.389
20	1.667	615.000	0.539	2.139
21	1.750	645.750	0.447	1.773
22	1.833	676.500	0.385	1.527
23	1.917	707.250	0.309	1.225
24	2.000	738.000	0.307	1.221
25	2.083	768.750	0.307	1.221
26	2.167	799.500	0.307	1.221
27	2.250	830.250	0.159	0.630
			Sum = 100.000	Sum= 396.917

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	0.048	(0.193)	0.025	0.023
2	0.17	0.07	0.048	(0.192)	0.025	0.023
3	0.25	0.07	0.048	(0.192)	0.025	0.023
4	0.33	0.10	0.072	(0.191)	0.037	0.034
5	0.42	0.10	0.072	(0.190)	0.037	0.034
6	0.50	0.10	0.072	(0.189)	0.037	0.034
7	0.58	0.10	0.072	(0.189)	0.037	0.034
8	0.67	0.10	0.072	(0.188)	0.037	0.034
9	0.75	0.10	0.072	(0.187)	0.037	0.034
10	0.83	0.13	0.096	(0.186)	0.050	0.046
11	0.92	0.13	0.096	(0.186)	0.050	0.046
12	1.00	0.13	0.096	(0.185)	0.050	0.046
13	1.08	0.10	0.072	(0.184)	0.037	0.034
14	1.17	0.10	0.072	(0.183)	0.037	0.034
15	1.25	0.10	0.072	(0.183)	0.037	0.034
16	1.33	0.10	0.072	(0.182)	0.037	0.034
17	1.42	0.10	0.072	(0.181)	0.037	0.034
18	1.50	0.10	0.072	(0.181)	0.037	0.034
19	1.58	0.10	0.072	(0.180)	0.037	0.034
20	1.67	0.10	0.072	(0.179)	0.037	0.034
21	1.75	0.10	0.072	(0.178)	0.037	0.034
22	1.83	0.13	0.096	(0.178)	0.050	0.046
23	1.92	0.13	0.096	(0.177)	0.050	0.046
24	2.00	0.13	0.096	(0.176)	0.050	0.046
25	2.08	0.13	0.096	(0.176)	0.050	0.046
26	2.17	0.13	0.096	(0.175)	0.050	0.046
27	2.25	0.13	0.096	(0.174)	0.050	0.046
28	2.33	0.13	0.096	(0.173)	0.050	0.046
29	2.42	0.13	0.096	(0.173)	0.050	0.046
30	2.50	0.13	0.096	(0.172)	0.050	0.046
31	2.58	0.17	0.120	(0.171)	0.062	0.057
32	2.67	0.17	0.120	(0.171)	0.062	0.057
33	2.75	0.17	0.120	(0.170)	0.062	0.057
34	2.83	0.17	0.120	(0.169)	0.062	0.057
35	2.92	0.17	0.120	(0.169)	0.062	0.057

36	3.00	0.17	0.120	(0.168)	0.062	0.057
37	3.08	0.17	0.120	(0.167)	0.062	0.057
38	3.17	0.17	0.120	(0.166)	0.062	0.057
39	3.25	0.17	0.120	(0.166)	0.062	0.057
40	3.33	0.17	0.120	(0.165)	0.062	0.057
41	3.42	0.17	0.120	(0.164)	0.062	0.057
2	3.50	0.17	0.120	(0.164)	0.062	0.057
43	3.58	0.17	0.120	(0.163)	0.062	0.057
44	3.67	0.17	0.120	(0.162)	0.062	0.057
45	3.75	0.17	0.120	(0.162)	0.062	0.057
46	3.83	0.20	0.144	(0.161)	0.075	0.069
47	3.92	0.20	0.144	(0.160)	0.075	0.069
48	4.00	0.20	0.144	(0.160)	0.075	0.069
49	4.08	0.20	0.144	(0.159)	0.075	0.069
50	4.17	0.20	0.144	(0.158)	0.075	0.069
51	4.25	0.20	0.144	(0.158)	0.075	0.069
52	4.33	0.23	0.168	(0.157)	0.087	0.080
53	4.42	0.23	0.168	(0.156)	0.087	0.080
54	4.50	0.23	0.168	(0.156)	0.087	0.080
55	4.58	0.23	0.168	(0.155)	0.087	0.080
56	4.67	0.23	0.168	(0.154)	0.087	0.080
57	4.75	0.23	0.168	(0.154)	0.087	0.080
58	4.83	0.27	0.192	(0.153)	0.100	0.092
59	4.92	0.27	0.192	(0.152)	0.100	0.092
60	5.00	0.27	0.192	(0.152)	0.100	0.092
61	5.08	0.20	0.144	(0.151)	0.075	0.069
62	5.17	0.20	0.144	(0.150)	0.075	0.069
63	5.25	0.20	0.144	(0.150)	0.075	0.069
64	5.33	0.23	0.168	(0.149)	0.087	0.080
65	5.42	0.23	0.168	(0.148)	0.087	0.080
66	5.50	0.23	0.168	(0.148)	0.087	0.080
67	5.58	0.27	0.192	(0.147)	0.100	0.092
8	5.67	0.27	0.192	(0.146)	0.100	0.092
69	5.75	0.27	0.192	(0.146)	0.100	0.092
70	5.83	0.27	0.192	(0.145)	0.100	0.092
71	5.92	0.27	0.192	(0.144)	0.100	0.092
72	6.00	0.27	0.192	(0.144)	0.100	0.092
73	6.08	0.30	0.216	(0.143)	0.112	0.103
74	6.17	0.30	0.216	(0.142)	0.112	0.103
75	6.25	0.30	0.216	(0.142)	0.112	0.103
76	6.33	0.30	0.216	(0.141)	0.112	0.103
77	6.42	0.30	0.216	(0.141)	0.112	0.103
78	6.50	0.30	0.216	(0.140)	0.112	0.103
79	6.58	0.33	0.240	(0.139)	0.125	0.115
80	6.67	0.33	0.240	(0.139)	0.125	0.115
81	6.75	0.33	0.240	(0.138)	0.125	0.115
82	6.83	0.33	0.240	(0.137)	0.125	0.115
83	6.92	0.33	0.240	(0.137)	0.125	0.115
84	7.00	0.33	0.240	(0.136)	0.125	0.115
85	7.08	0.33	0.240	(0.136)	0.125	0.115
86	7.17	0.33	0.240	(0.135)	0.125	0.115
87	7.25	0.33	0.240	(0.134)	0.125	0.115
88	7.33	0.37	0.264	0.134	(0.137)	0.130
89	7.42	0.37	0.264	0.133	(0.137)	0.131
90	7.50	0.37	0.264	0.133	(0.137)	0.131
91	7.58	0.40	0.288	0.132	(0.150)	0.156
92	7.67	0.40	0.288	0.131	(0.150)	0.156
93	7.75	0.40	0.288	0.131	(0.150)	0.157
94	7.83	0.43	0.312	0.130	(0.162)	0.182
95	7.92	0.43	0.312	0.130	(0.162)	0.182
96	8.00	0.43	0.312	0.129	(0.162)	0.183
97	8.08	0.50	0.360	0.128	(0.187)	0.231
98	8.17	0.50	0.360	0.128	(0.187)	0.232

99	8.25	0.50	0.360	0.127	(0.187)	0.233
100	8.33	0.50	0.360	0.127	(0.187)	0.233
101	8.42	0.50	0.360	0.126	(0.187)	0.234
102	8.50	0.50	0.360	0.125	(0.187)	0.234
103	8.58	0.53	0.384	0.125	(0.200)	0.259
104	8.67	0.53	0.384	0.124	(0.200)	0.260
5	8.75	0.53	0.384	0.124	(0.200)	0.260
106	8.83	0.57	0.408	0.123	(0.212)	0.285
107	8.92	0.57	0.408	0.122	(0.212)	0.285
108	9.00	0.57	0.408	0.122	(0.212)	0.286
109	9.08	0.63	0.456	0.121	(0.237)	0.334
110	9.17	0.63	0.456	0.121	(0.237)	0.335
111	9.25	0.63	0.456	0.120	(0.237)	0.336
112	9.33	0.67	0.480	0.120	(0.250)	0.360
113	9.42	0.67	0.480	0.119	(0.250)	0.361
114	9.50	0.67	0.480	0.118	(0.250)	0.361
115	9.58	0.70	0.504	0.118	(0.262)	0.386
116	9.67	0.70	0.504	0.117	(0.262)	0.386
117	9.75	0.70	0.504	0.117	(0.262)	0.387
118	9.83	0.73	0.528	0.116	(0.275)	0.411
119	9.92	0.73	0.528	0.116	(0.275)	0.412
120	10.00	0.73	0.528	0.115	(0.275)	0.413
121	10.08	0.50	0.360	0.114	(0.187)	0.245
122	10.17	0.50	0.360	0.114	(0.187)	0.246
123	10.25	0.50	0.360	0.113	(0.187)	0.246
124	10.33	0.50	0.360	0.113	(0.187)	0.247
125	10.42	0.50	0.360	0.112	(0.187)	0.247
126	10.50	0.50	0.360	0.112	(0.187)	0.248
127	10.58	0.67	0.480	0.111	(0.250)	0.368
128	10.67	0.67	0.480	0.111	(0.250)	0.369
129	10.75	0.67	0.480	0.110	(0.250)	0.370
130	10.83	0.67	0.480	0.110	(0.250)	0.370
1	10.92	0.67	0.480	0.109	(0.250)	0.371
132	11.00	0.67	0.480	0.108	(0.250)	0.371
133	11.08	0.63	0.456	0.108	(0.237)	0.348
134	11.17	0.63	0.456	0.107	(0.237)	0.348
135	11.25	0.63	0.456	0.107	(0.237)	0.349
136	11.33	0.63	0.456	0.106	(0.237)	0.349
137	11.42	0.63	0.456	0.106	(0.237)	0.350
138	11.50	0.63	0.456	0.105	(0.237)	0.350
139	11.58	0.57	0.408	0.105	(0.212)	0.303
140	11.67	0.57	0.408	0.104	(0.212)	0.303
141	11.75	0.57	0.408	0.104	(0.212)	0.304
142	11.83	0.60	0.432	0.103	(0.225)	0.328
143	11.92	0.60	0.432	0.103	(0.225)	0.329
144	12.00	0.60	0.432	0.102	(0.225)	0.329
145	12.08	0.83	0.600	0.102	(0.312)	0.498
146	12.17	0.83	0.600	0.101	(0.312)	0.498
147	12.25	0.83	0.600	0.101	(0.312)	0.499
148	12.33	0.87	0.624	0.100	(0.325)	0.523
149	12.42	0.87	0.624	0.100	(0.325)	0.524
150	12.50	0.87	0.624	0.099	(0.325)	0.524
151	12.58	0.93	0.671	0.099	(0.350)	0.573
152	12.67	0.93	0.671	0.098	(0.350)	0.573
153	12.75	0.93	0.671	0.098	(0.350)	0.574
154	12.83	0.97	0.695	0.097	(0.362)	0.598
155	12.92	0.97	0.695	0.097	(0.362)	0.599
156	13.00	0.97	0.695	0.096	(0.362)	0.599
157	13.08	1.13	0.815	0.096	(0.425)	0.720
158	13.17	1.13	0.815	0.095	(0.425)	0.720
159	13.25	1.13	0.815	0.095	(0.425)	0.721
160	13.33	1.13	0.815	0.094	(0.425)	0.721
161	13.42	1.13	0.815	0.094	(0.425)	0.722

162	13.50	1.13	0.815	0.093	(0.425)	0.722
163	13.58	0.77	0.552	0.093	(0.287)	0.459
164	13.67	0.77	0.552	0.092	(0.287)	0.459
165	13.75	0.77	0.552	0.092	(0.287)	0.460
166	13.83	0.77	0.552	0.091	(0.287)	0.460
167	13.92	0.77	0.552	0.091	(0.287)	0.461
3	14.00	0.77	0.552	0.090	(0.287)	0.461
169	14.08	0.90	0.648	0.090	(0.337)	0.557
170	14.17	0.90	0.648	0.090	(0.337)	0.558
171	14.25	0.90	0.648	0.089	(0.337)	0.558
172	14.33	0.87	0.624	0.089	(0.325)	0.535
173	14.42	0.87	0.624	0.088	(0.325)	0.535
174	14.50	0.87	0.624	0.088	(0.325)	0.536
175	14.58	0.87	0.624	0.087	(0.325)	0.536
176	14.67	0.87	0.624	0.087	(0.325)	0.537
177	14.75	0.87	0.624	0.086	(0.325)	0.537
178	14.83	0.83	0.600	0.086	(0.312)	0.514
179	14.92	0.83	0.600	0.086	(0.312)	0.514
180	15.00	0.83	0.600	0.085	(0.312)	0.514
181	15.08	0.80	0.576	0.085	(0.300)	0.491
182	15.17	0.80	0.576	0.084	(0.300)	0.491
183	15.25	0.80	0.576	0.084	(0.300)	0.492
184	15.33	0.77	0.552	0.083	(0.287)	0.468
185	15.42	0.77	0.552	0.083	(0.287)	0.469
186	15.50	0.77	0.552	0.082	(0.287)	0.469
187	15.58	0.63	0.456	0.082	(0.237)	0.374
188	15.67	0.63	0.456	0.082	(0.237)	0.374
189	15.75	0.63	0.456	0.081	(0.237)	0.374
190	15.83	0.63	0.456	0.081	(0.237)	0.375
191	15.92	0.63	0.456	0.080	(0.237)	0.375
192	16.00	0.63	0.456	0.080	(0.237)	0.376
193	16.08	0.13	0.096	(0.080)	0.050	0.046
4	16.17	0.13	0.096	(0.079)	0.050	0.046
195	16.25	0.13	0.096	(0.079)	0.050	0.046
196	16.33	0.13	0.096	(0.078)	0.050	0.046
197	16.42	0.13	0.096	(0.078)	0.050	0.046
198	16.50	0.13	0.096	(0.078)	0.050	0.046
199	16.58	0.10	0.072	(0.077)	0.037	0.034
200	16.67	0.10	0.072	(0.077)	0.037	0.034
201	16.75	0.10	0.072	(0.076)	0.037	0.034
202	16.83	0.10	0.072	(0.076)	0.037	0.034
203	16.92	0.10	0.072	(0.076)	0.037	0.034
204	17.00	0.10	0.072	(0.075)	0.037	0.034
205	17.08	0.17	0.120	(0.075)	0.062	0.057
206	17.17	0.17	0.120	(0.074)	0.062	0.057
207	17.25	0.17	0.120	(0.074)	0.062	0.057
208	17.33	0.17	0.120	(0.074)	0.062	0.057
209	17.42	0.17	0.120	(0.073)	0.062	0.057
210	17.50	0.17	0.120	(0.073)	0.062	0.057
211	17.58	0.17	0.120	(0.073)	0.062	0.057
212	17.67	0.17	0.120	(0.072)	0.062	0.057
213	17.75	0.17	0.120	(0.072)	0.062	0.057
214	17.83	0.13	0.096	(0.072)	0.050	0.046
215	17.92	0.13	0.096	(0.071)	0.050	0.046
216	18.00	0.13	0.096	(0.071)	0.050	0.046
217	18.08	0.13	0.096	(0.070)	0.050	0.046
218	18.17	0.13	0.096	(0.070)	0.050	0.046
9	18.25	0.13	0.096	(0.070)	0.050	0.046
220	18.33	0.13	0.096	(0.069)	0.050	0.046
221	18.42	0.13	0.096	(0.069)	0.050	0.046
222	18.50	0.13	0.096	(0.069)	0.050	0.046
223	18.58	0.10	0.072	(0.068)	0.037	0.034
224	18.67	0.10	0.072	(0.068)	0.037	0.034

225	18.75	0.10	0.072	(0.068)	0.037	0.034
226	18.83	0.07	0.048	(0.067)	0.025	0.023
227	18.92	0.07	0.048	(0.067)	0.025	0.023
228	19.00	0.07	0.048	(0.067)	0.025	0.023
229	19.08	0.10	0.072	(0.067)	0.037	0.034
230	19.17	0.10	0.072	(0.066)	0.037	0.034
1	19.25	0.10	0.072	(0.066)	0.037	0.034
232	19.33	0.13	0.096	(0.066)	0.050	0.046
233	19.42	0.13	0.096	(0.065)	0.050	0.046
234	19.50	0.13	0.096	(0.065)	0.050	0.046
235	19.58	0.10	0.072	(0.065)	0.037	0.034
236	19.67	0.10	0.072	(0.064)	0.037	0.034
237	19.75	0.10	0.072	(0.064)	0.037	0.034
238	19.83	0.07	0.048	(0.064)	0.025	0.023
239	19.92	0.07	0.048	(0.064)	0.025	0.023
240	20.00	0.07	0.048	(0.063)	0.025	0.023
241	20.08	0.10	0.072	(0.063)	0.037	0.034
242	20.17	0.10	0.072	(0.063)	0.037	0.034
243	20.25	0.10	0.072	(0.062)	0.037	0.034
244	20.33	0.10	0.072	(0.062)	0.037	0.034
245	20.42	0.10	0.072	(0.062)	0.037	0.034
246	20.50	0.10	0.072	(0.062)	0.037	0.034
247	20.58	0.10	0.072	(0.061)	0.037	0.034
248	20.67	0.10	0.072	(0.061)	0.037	0.034
249	20.75	0.10	0.072	(0.061)	0.037	0.034
250	20.83	0.07	0.048	(0.061)	0.025	0.023
251	20.92	0.07	0.048	(0.060)	0.025	0.023
252	21.00	0.07	0.048	(0.060)	0.025	0.023
253	21.08	0.10	0.072	(0.060)	0.037	0.034
254	21.17	0.10	0.072	(0.060)	0.037	0.034
255	21.25	0.10	0.072	(0.059)	0.037	0.034
256	21.33	0.07	0.048	(0.059)	0.025	0.023
7	21.42	0.07	0.048	(0.059)	0.025	0.023
258	21.50	0.07	0.048	(0.059)	0.025	0.023
259	21.58	0.10	0.072	(0.059)	0.037	0.034
260	21.67	0.10	0.072	(0.058)	0.037	0.034
261	21.75	0.10	0.072	(0.058)	0.037	0.034
262	21.83	0.07	0.048	(0.058)	0.025	0.023
263	21.92	0.07	0.048	(0.058)	0.025	0.023
264	22.00	0.07	0.048	(0.058)	0.025	0.023
265	22.08	0.10	0.072	(0.057)	0.037	0.034
266	22.17	0.10	0.072	(0.057)	0.037	0.034
267	22.25	0.10	0.072	(0.057)	0.037	0.034
268	22.33	0.07	0.048	(0.057)	0.025	0.023
269	22.42	0.07	0.048	(0.057)	0.025	0.023
270	22.50	0.07	0.048	(0.056)	0.025	0.023
271	22.58	0.07	0.048	(0.056)	0.025	0.023
272	22.67	0.07	0.048	(0.056)	0.025	0.023
273	22.75	0.07	0.048	(0.056)	0.025	0.023
274	22.83	0.07	0.048	(0.056)	0.025	0.023
275	22.92	0.07	0.048	(0.056)	0.025	0.023
276	23.00	0.07	0.048	(0.056)	0.025	0.023
277	23.08	0.07	0.048	(0.055)	0.025	0.023
278	23.17	0.07	0.048	(0.055)	0.025	0.023
279	23.25	0.07	0.048	(0.055)	0.025	0.023
280	23.33	0.07	0.048	(0.055)	0.025	0.023
281	23.42	0.07	0.048	(0.055)	0.025	0.023
282	23.50	0.07	0.048	(0.055)	0.025	0.023
283	23.58	0.07	0.048	(0.055)	0.025	0.023
284	23.67	0.07	0.048	(0.055)	0.025	0.023
285	23.75	0.07	0.048	(0.055)	0.025	0.023
286	23.83	0.07	0.048	(0.055)	0.025	0.023
287	23.92	0.07	0.048	(0.055)	0.025	0.023

288 24.00 0.07 0.048 (0.054) 0.025 0.023
(Loss Rate Not Used)
Sum = 100.0 Sum = 51.0
Flood volume = Effective rainfall 4.25(In)
times area 393.8(Ac.)/[(In)/(Ft.)] = 139.4(Ac.Ft)
Total soil loss = 1.75(In)
Total soil loss = 57.360(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 6072642.8 Cubic Feet
Total soil loss = 2498594.1 Cubic Feet

Peak flow rate of this hydrograph = 267.208(CFS)

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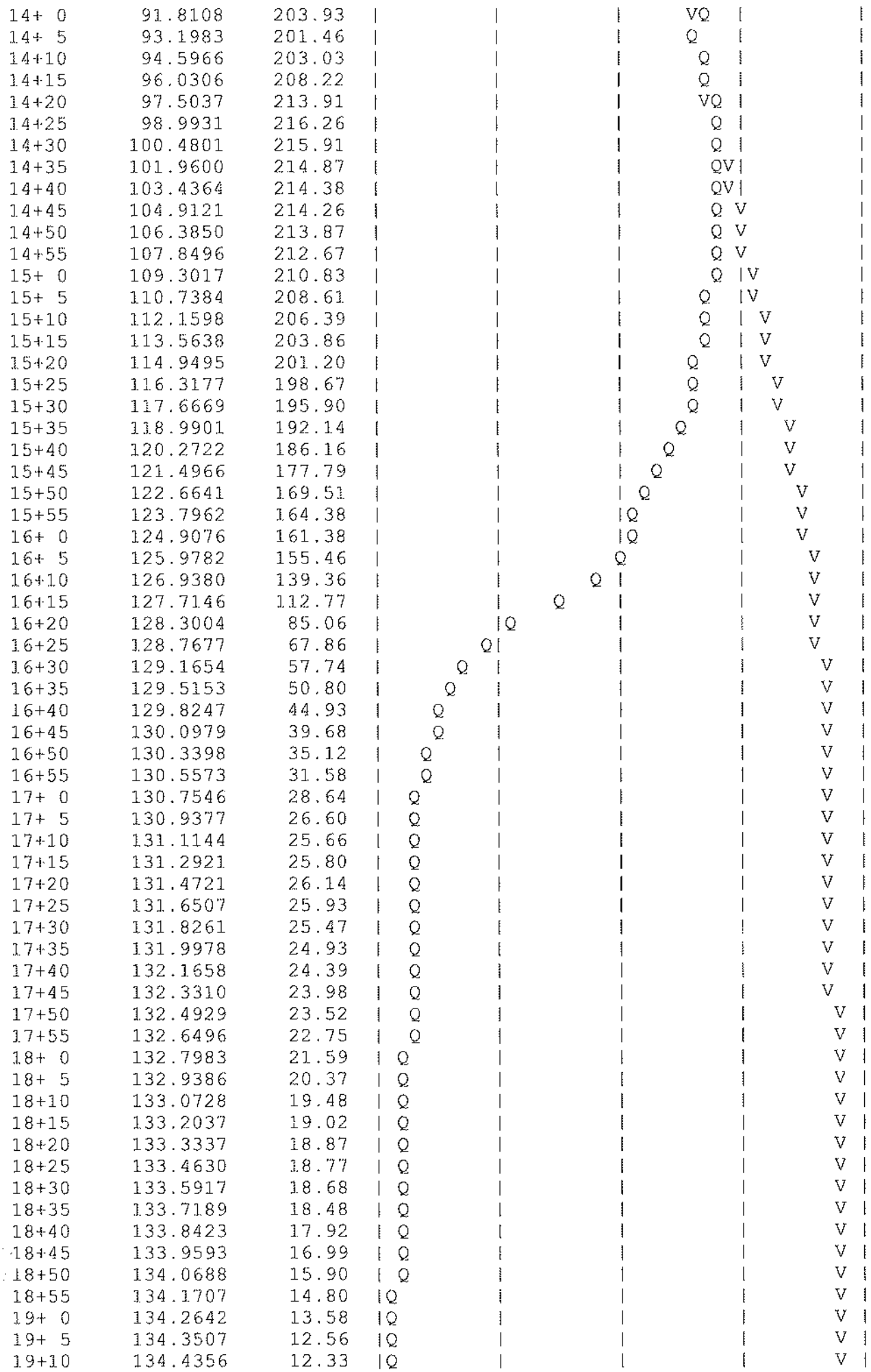
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0019	0.27	Q				
0+10	0.0108	1.29	Q				
0+15	0.0318	3.05	Q				
0+20	0.0664	5.04	Q				
0+25	0.1124	6.68	Q				
0+30	0.1689	8.20	VQ				
0+35	0.2347	9.56	VQ				
0+40	0.3067	10.45	VQ				
0+45	0.3828	11.05	VQ				
0+50	0.4628	11.62	VQ				
0+55	0.5487	12.47	VQ				
1+ 0	0.6427	13.65	VQ				
1+ 5	0.7438	14.67	VQ				
1+10	0.8466	14.93	VQ				
1+15	0.9467	14.54	VQ				
1+20	1.0430	13.98	VQ				
1+25	1.1374	13.71	VQ				
1+30	1.2312	13.63	VQ				
1+35	1.3251	13.62	VQ				
1+40	1.4189	13.63	VQ				
1+45	1.5130	13.65	VQ				
1+50	1.6080	13.80	VQ				
1+55	1.7067	14.33	VQ				
2+ 0	1.8115	15.22	V Q				
2+ 5	1.9229	16.17	V Q				
2+10	2.0383	16.76	V Q				
2+15	2.1561	17.10	V Q				
2+20	2.2753	17.31	V Q				
2+25	2.3957	17.48	V Q				
2+30	2.5170	17.61	V Q				
2+35	2.6400	17.85	V Q				
2+40	2.7669	18.44	V Q				
2+45	2.9005	19.39	V Q				
2+50	3.0408	20.37	V Q				
2+55	3.1854	20.99	V Q				
3+ 0	3.3324	21.36	V Q				
3+ 5	3.4812	21.60	V Q				
3+10	3.6313	21.79	|VQ				
3+15	3.7824	21.95	|VQ				
3+20	3.9345	22.09	|VQ				
3+25	4.0874	22.20	|VQ				

3+30	4.2410	22.30	VQ			
3+35	4.3951	22.38	VQ			
3+40	4.5497	22.45	VQ			
3+45	4.7048	22.51	V Q			
3+50	4.8611	22.70	V Q			
3+55	5.0213	23.26	V Q			
4+ 0	5.1878	24.18	V Q			
4+ 5	5.3609	25.13	V Q			
4+10	5.5381	25.72	V Q			
4+15	5.7176	26.07	V Q			
4+20	5.8997	26.43	V Q			
4+25	6.0865	27.12	V Q			
4+30	6.2804	28.15	V Q			
4+35	6.4815	29.20	V Q			
4+40	6.6872	29.87	V Q			
4+45	6.8958	30.28	V Q			
4+50	7.1072	30.70	V Q			
4+55	7.3236	31.42	V Q			
5+ 0	7.5473	32.48	V Q			
5+ 5	7.7766	33.29	V Q			
5+10	8.0036	32.97	V Q			
5+15	8.2215	31.64	V Q			
5+20	8.4297	30.23	V Q			
5+25	8.6353	29.85	VQ			
5+30	8.8439	30.29	V Q			
5+35	9.0580	31.09	V Q			
5+40	9.2783	31.97	V Q			
5+45	9.5058	33.03	V Q			
5+50	9.7403	34.05	V Q			
5+55	9.9793	34.70	V Q			
6+ 0	10.2208	35.07	V Q			
6+ 5	10.4651	35.47	VQ			
6+10	10.7142	36.18	VQ			
6+15	10.9706	37.23	VQ			
6+20	11.2343	38.28	V Q			
6+25	11.5026	38.95	V Q			
6+30	11.7737	39.37	V Q			
6+35	12.0477	39.78	V Q			
6+40	12.3267	40.52	V Q			
6+45	12.6131	41.58	V Q			
6+50	12.9069	42.67	V Q			
6+55	13.2056	43.37	V Q			
7+ 0	13.5073	43.80	V Q			
7+ 5	13.8110	44.10	V Q			
7+10	14.1163	44.33	VQ			
7+15	14.4229	44.53	VQ			
7+20	14.7321	44.89	VQ			
7+25	15.0470	45.73	V Q			
7+30	15.3711	47.06	V Q			
7+35	15.7069	48.75	V Q			
7+40	16.0566	50.78	V Q			
7+45	16.4235	53.28	V Q			
7+50	16.8093	56.01	V Q			
7+55	17.2136	58.71	V Q			
8+ 0	17.6382	61.65	V Q			
8+ 5	18.0858	64.99	V Q			
8+10	18.5610	69.00	V Q			
8+15	19.0705	73.98	V Q			
8+20	19.6134	78.83	V Q			
8+25	20.1784	82.03	V Q			
8+30	20.7577	84.13	V Q			
8+35	21.3498	85.96	V Q			
8+40	21.9579	88.30	V Q			

8+45	22.5863	91.24	V	Q			
8+50	23.2364	94.40	V	Q			
8+55	23.9077	97.47	V	Q			
9+ 0	24.6014	100.73	V	Q			
9+ 5	25.3200	104.34	V	Q			
9+10	26.0679	108.59	V	Q			
9+15	26.8514	113.77	V	Q			
9+20	27.6717	119.11	V	Q			
9+25	28.5226	123.56	V	Q			
9+30	29.4017	127.63	V	Q			
9+35	30.3074	131.52	V	Q			
9+40	31.2381	135.14	V	Q			
9+45	32.1943	138.83	V	Q			
9+50	33.1758	142.51	V	Q			
9+55	34.1811	145.98	V	Q			
10+ 0	35.2112	149.56	V	Q			
10+ 5	36.2502	150.87	V	Q			
10+10	37.2544	145.81	V	Q			
10+15	38.1814	134.61	V	Q			
10+20	39.0243	122.39	V	Q			
10+25	39.8179	115.23	V	Q			
10+30	40.5857	111.47	V	Q			
10+35	41.3476	110.63	V	Q			
10+40	42.1345	114.25	V	Q			
10+45	42.9757	122.14	V	Q			
10+50	43.8764	130.78	V	Q			
10+55	44.8125	135.93	V	Q			
11+ 0	45.7673	138.63	V	Q			
11+ 5	46.7323	140.11	V	Q			
11+10	47.6995	140.45	V	Q			
11+15	48.6620	139.75	V	Q			
11+20	49.6171	138.68	V	Q			
11+25	50.5688	138.18	V	Q			
11+30	51.5204	138.19	V	Q			
11+35	52.4688	137.71	V	Q			
11+40	53.4035	135.71	V	Q			
11+45	54.3137	132.17	V	Q			
11+50	55.2007	128.79	V	Q			
11+55	56.0804	127.74	V	Q			
12+ 0	56.9648	128.40	V	Q			
12+ 5	57.8711	131.60	V	Q			
12+10	58.8328	139.64	V	Q			
12+15	59.8855	152.84	V	Q			
12+20	61.0351	166.93	V	Q			
12+25	62.2507	176.50	V	Q			
12+30	63.5131	183.30	V	Q			
12+35	64.8160	189.18	V	Q			
12+40	66.1602	195.18	V	Q			
12+45	67.5494	201.72	V	Q			
12+50	68.9822	208.05	V	Q			
12+55	70.4508	213.23	V	Q			
13+ 0	71.9522	218.00	V	Q			
13+ 5	73.4918	223.55	V	Q			
13+10	75.0885	231.84	V	Q			
13+15	76.7638	243.25	V	Q			
13+20	78.5183	254.75	V	Q			
13+25	80.3244	262.25	V	Q			
13+30	82.1630	266.96	V	Q			
13+35	84.0033	267.21	V	Q			
13+40	85.7823	258.31	V	Q			
13+45	87.4380	240.41	V	Q			
13+50	88.9611	221.16	V	Q			
13+55	90.4063	209.85	V	Q			



| | | |

19+15	134.5233	12.73	|Q	|	|	|	V |
19+20	134.6159	13.44	|Q	|	|	|	V |
19+25	134.7139	14.23	|Q	|	|	|	V |
19+30	134.8186	15.20	| Q	|	|	|	V |
19+35	134.9289	16.01	| Q	|	|	|	V |
19+40	135.0397	16.08	| Q	|	|	|	V |
19+45	135.1466	15.52	| Q	|	|	|	V |
19+50	135.2476	14.66	|Q	|	|	|	V |
19+55	135.3422	13.74	|Q	|	|	|	V |
20+ 0	135.4295	12.67	|Q	|	|	|	V |
20+ 5	135.5105	11.77	|Q	|	|	|	V |
20+10	135.5906	11.62	|Q	|	|	|	V |
20+15	135.6740	12.12	|Q	|	|	|	V |
20+20	135.7621	12.78	|Q	|	|	|	V |
20+25	135.8526	13.14	|Q	|	|	|	V |
20+30	135.9441	13.29	|Q	|	|	|	V|
20+35	136.0362	13.37	|Q	|	|	|	V|
20+40	136.1287	13.43	|Q	|	|	|	V|
20+45	136.2215	13.47	|Q	|	|	|	V|
20+50	136.3136	13.37	|Q	|	|	|	V|
20+55	136.4024	12.89	|Q	|	|	|	V|
21+ 0	136.4853	12.04	|Q	|	|	|	V|
21+ 5	136.5629	11.27	|Q	|	|	|	V|
21+10	136.6403	11.23	|Q	|	|	|	V|
21+15	136.7215	11.80	|Q	|	|	|	V|
21+20	136.8069	12.39	|Q	|	|	|	V|
21+25	136.8916	12.30	|Q	|	|	|	V|
21+30	136.9715	11.61	|Q	|	|	|	V|
21+35	137.0467	10.92	|Q	|	|	|	V|
21+40	137.1220	10.93	|Q	|	|	|	V|
21+45	137.2015	11.55	|Q	|	|	|	V|
21+50	137.2854	12.17	|Q	|	|	|	V|
21+55	137.3687	12.10	|Q	|	|	|	V|
22+ 0	137.4475	11.45	|Q	|	|	|	V|
22+ 5	137.5219	10.80	|Q	|	|	|	V|
22+10	137.5966	10.85	|Q	|	|	|	V|
22+15	137.6756	11.48	|Q	|	|	|	V|
22+20	137.7591	12.12	|Q	|	|	|	V|
22+25	137.8421	12.06	|Q	|	|	|	V|
22+30	137.9207	11.41	|Q	|	|	|	V|
22+35	137.9939	10.62	|Q	|	|	|	V|
22+40	138.0638	10.16	|Q	|	|	|	V|
22+45	138.1320	9.91	|Q	|	|	|	V|
22+50	138.1993	9.76	|Q	|	|	|	V|
22+55	138.2657	9.64	|Q	|	|	|	V|
23+ 0	138.3315	9.56	|Q	|	|	|	V|
23+ 5	138.3969	9.50	|Q	|	|	|	V|
23+10	138.4620	9.45	|Q	|	|	|	V|
23+15	138.5267	9.39	|Q	|	|	|	V|
23+20	138.5911	9.35	|Q	|	|	|	V|
23+25	138.6552	9.31	|Q	|	|	|	V|
23+30	138.7191	9.28	|Q	|	|	|	V|
23+35	138.7829	9.26	|Q	|	|	|	V|
23+40	138.8466	9.25	|Q	|	|	|	V|
23+45	138.9102	9.23	|Q	|	|	|	V|
23+50	138.9736	9.21	|Q	|	|	|	V|
23+55	139.0368	9.18	|Q	|	|	|	V|
24+ 0	139.1000	9.17	|Q	|	|	|	V|
24+ 5	139.1612	8.89	|Q	|	|	|	V|
24+10	139.2155	7.88	|Q	|	|	|	V|
24+15	139.2575	6.11	Q	|	|	|	V|
24+20	139.2868	4.24	Q	|	|	|	V|
24+25	139.3081	3.10	Q	|	|	|	V|

24+30	139.3250	2.45	Q				V
24+35	139.3389	2.02	Q				V
24+40	139.3505	1.68	Q				V
24+45	139.3602	1.41	Q				V
24+50	139.3684	1.19	Q				V
24+55	139.3754	1.02	Q				V
25+ 0	139.3813	0.86	Q				V
25+ 5	139.3863	0.73	Q				V
25+10	139.3906	0.62	Q				V
25+15	139.3943	0.53	Q				V
25+20	139.3974	0.45	Q				V
25+25	139.3999	0.37	Q				V
25+30	139.4020	0.31	Q				V
25+35	139.4038	0.25	Q				V
25+40	139.4052	0.20	Q				V
25+45	139.4063	0.16	Q				V
25+50	139.4071	0.13	Q				V
25+55	139.4078	0.10	Q				V
26+ 0	139.4083	0.07	Q				V
26+ 5	139.4086	0.04	Q				V
26+10	139.4087	0.01	Q				V

TABLE 5.1

THIRD STREET STORM DRAIN

POST-DEVELOPMENT

COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A2"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.002	0.18		
	D	75.0%	75.0	92.3	16.33	0.041	3.83	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.001	0.08		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.10	0.000	0.02		
	D	90.0%	75.0	95.7	0.68	0.002	0.17	1.11	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.001	0.05		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.001	0.06		
	D	90.0%	75.0	95.7	2.69	0.007	0.65	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.20	0.001	0.05		
	C	90.0%	69.0	95.1	0.02	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.22	93.9
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.34	0.080	6.24	31.34	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.18	0.000	0.04		
	C	90.0%	69.0	95.1	10.83	0.027	2.62		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	11.01	95.1
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.96	0.008	0.66		
	C	75.0%	69.0	90.8	1.05	0.003	0.24		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	4.01	88.4
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	12.03	0.031	2.22		
	C	40.0%	69.0	80.6	26.21	0.067	5.36		
	D	40.0%	75.0	84.2	2.46	0.006	0.53	40.70	78.5
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.013	1.07		
	D	50.0%	75.0	86.5	93.29	0.237	20.49	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.013	1.05		
	D	50.0%	75.0	86.5	38.57	0.098	8.47	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	1.56	0.004	0.30		
	C	50.0%	69.0	83.5	1.15	0.003	0.24		
	D	50.0%	75.0	86.5	8.82	0.022	1.94	11.53	84.9
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.010	0.75		
	C	50.0%	69.0	83.5	1.77	0.004	0.38		
	D	50.0%	75.0	86.5	103.00	0.262	22.62	108.62	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.034	3.03	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.84	0.025	2.10	9.84	84.2
								393.84	
					393.84	1.000			
COMPOSITE RUN OFF INDEX - AMC II							85.5		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 5.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

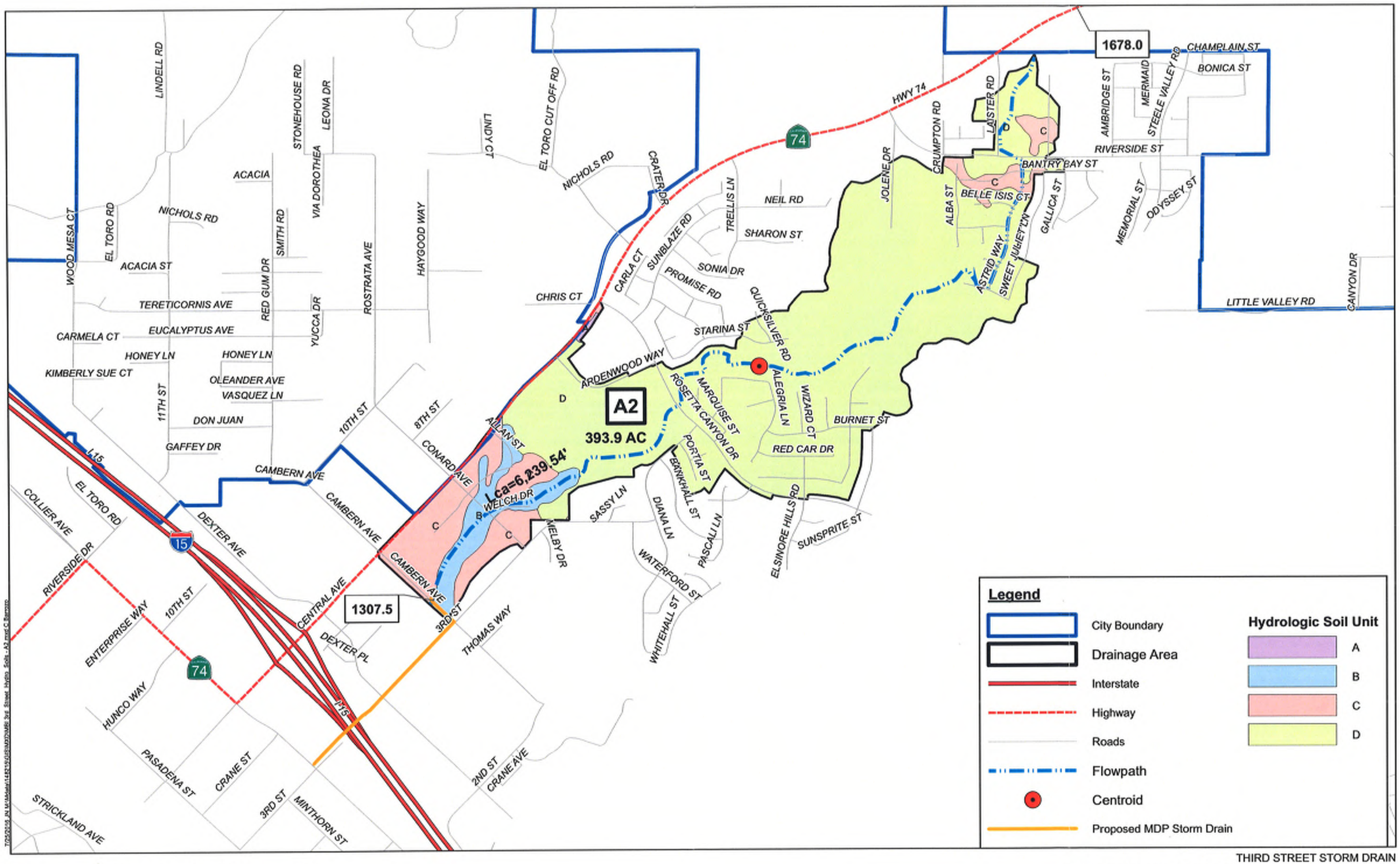
CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS]

WATERSHEAD "A2"					
LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.043	0.013
BUSINESS PROFESSIONAL	0.9	0.18	1.11	0.003	0.001
COMMERCIAL	0.9	0.18	3.16	0.008	0.001
COMMERCIAL MIXED-USE	0.9	0.18	0.22	0.001	0.000
COMMUNITY PARK	0.15	0.78	31.34	0.080	0.062
GENERAL COMMERCIAL	0.9	0.18	11.01	0.028	0.005
HIGH DENSITY-R	0.75	0.3	4.01	0.010	0.003
LOW DENSITY-R	0.4	0.58	40.70	0.103	0.060
LOW-MEDIUM R	0.5	0.5	98.35	0.250	0.125
MEDIUM DENSITY	0.5	0.5	43.50	0.110	0.055
MEDIUM DENSITY-R	0.5	0.5	11.53	0.029	0.015
MEDIUM LOW DENSITY	0.5	0.5	108.62	0.276	0.138
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.034	0.029
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	9.84	0.025	0.014
			393.84	1.000	
COMPOSITE LOW LOSS RATE					**0.521**

TABLE 5.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

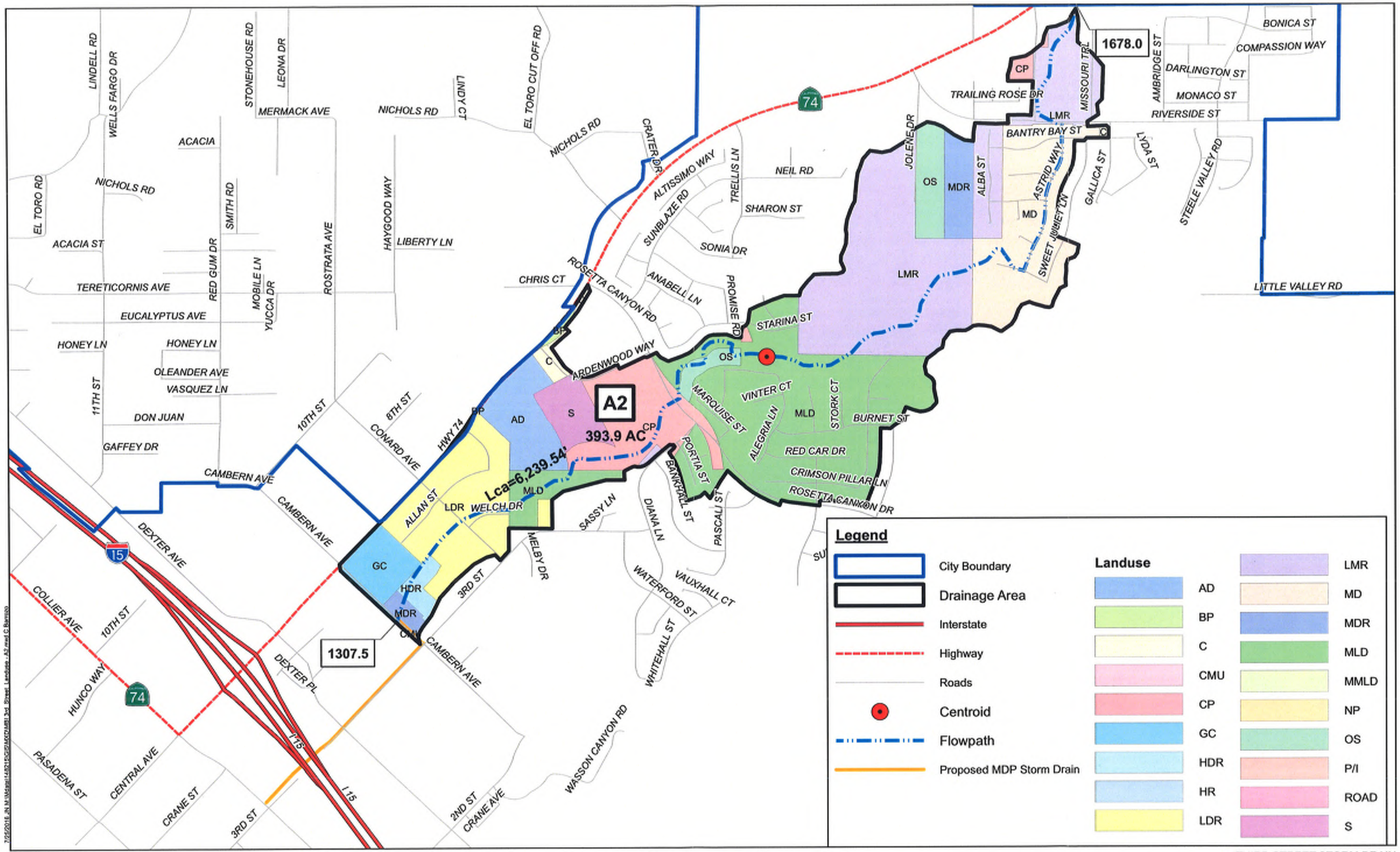
WATERSHEAD "A2"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.043	0.0007
BUSINESS PROFESSIONAL	0.015	1.11	0.003	0.0000
COMMERCIAL	0.015	3.16	0.008	0.0001
COMMERCIAL MIXED-USE	0.015	0.22	0.001	0.0000
COMMUNITY PARK	0.035	31.34	0.080	0.0028
GENERAL COMMERCIAL	0.015	11.01	0.028	0.0004
HIGH DENSITY-R	0.015	4.01	0.010	0.0002
LOW DENSITY-R	0.02	40.70	0.103	0.0021
LOW-MEDIUM R	0.015	98.35	0.250	0.0037
MEDIUM DENSITY	0.015	43.50	0.110	0.0017
MEDIUM DENSITY-R	0.015	11.53	0.029	0.0004
MEDIUM LOW DENSITY	0.02	108.62	0.276	0.0055
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.034	0.0014
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	9.84	0.025	0.0004
		393.8	1.000	
COMPOSITE MANNING'S "n" VALUE				0.0193



THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map - WS A2

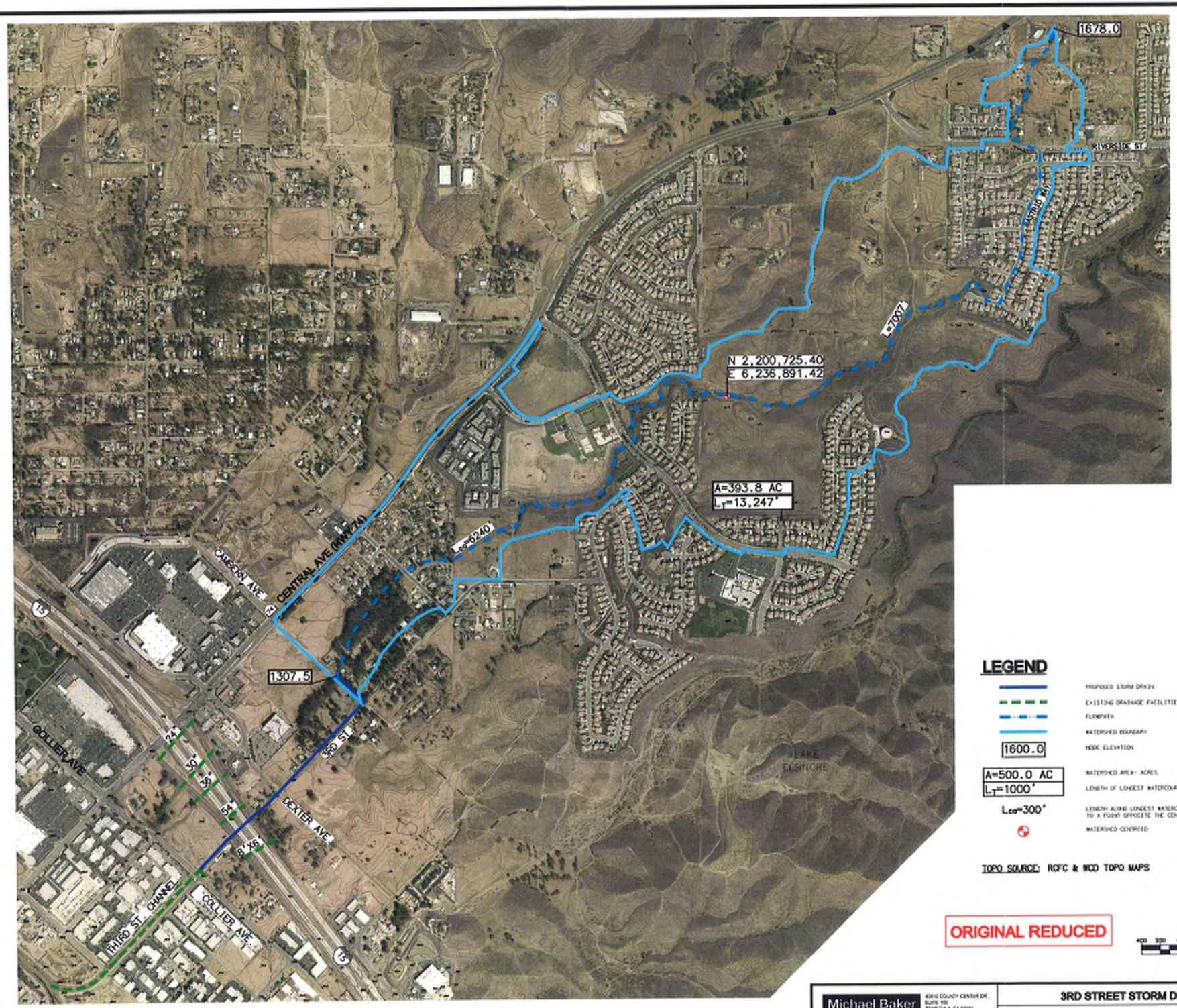
RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 7



THIRD STREET STORM DRAIN

Landuse Map - WS A2

RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 8



Michael Baker INTERNATIONAL
4219 COUNTY CENTER DR., SUITE 100, TEMECULA, CA 92591, PHONE: (951) 676-5042, MBAKERINTL.COM

3RD STREET STORM DRAIN - EXHIBIT 9

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A2'

H:\PROJECTS\162213\CADD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG XDGHYLLOCAD 7/28/16 12:01 pm

APPENDIX 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 06/22/16 File: 3RDSTA33100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A3 (DESIGN POINT AT 3RD ST AND DEXTER AVE)
100-YEAR STORM EVENT

Drainage Area = 431.34(Ac.) = 0.674 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 431.34(Ac.) = 0.674 Sq.

Length along longest watercourse = 14905.00(Ft.)
Length along longest watercourse measured to centroid = 7540.00(Ft.)
Length along longest watercourse = 2.823 Mi.
Length along longest watercourse measured to centroid = 1.428 Mi.
Difference in elevation = 390.00(Ft.)
Slope along watercourse = 138.1550 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.304 Hr.
Lag time = 18.22 Min.
25% of lag time = 4.55 Min.
40% of lag time = 7.29 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
431.34	0.95	409.77

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
431.34	2.30	992.08

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.81 %
Adjusted average point rain = 2.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
14.390	94.20	0.900
31.340	78.50	0.150
24.390	95.10	0.900
5.160	88.90	0.750
47.060	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
13.960	84.60	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 431.34(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.040	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.007	0.000
94.2	94.2	0.075	0.900	0.014	0.033	0.000
78.5	78.5	0.262	0.150	0.226	0.073	0.016
95.1	95.1	0.064	0.900	0.012	0.057	0.001
88.9	88.9	0.143	0.750	0.046	0.012	0.001
78.8	78.8	0.258	0.400	0.165	0.109	0.018
86.3	86.3	0.172	0.500	0.095	0.228	0.022
86.2	86.2	0.173	0.500	0.095	0.101	0.010
84.6	84.6	0.192	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.252	0.024
89.5	89.5	0.136	0.050	0.130	0.031	0.004
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.103

Area averaged mean soil loss (F) (In/Hr) = 0.103
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.500

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	27.445	2.580	11.214
2	0.167	54.889	9.037	39.283
3	0.250	82.334	16.056	69.795
4	0.333	109.779	19.152	83.255
5	0.417	137.223	14.259	61.984
6	0.500	164.668	8.418	36.592
7	0.583	192.113	5.259	22.861
8	0.667	219.557	3.910	16.995

9	0.750	247.002	3.149	13.688
10	0.833	274.447	2.625	11.409
11	0.917	301.891	2.206	9.588
12	1.000	329.336	1.790	7.779
13	1.083	356.781	1.633	7.100
14	1.167	384.225	1.332	5.790
15	1.250	411.670	1.178	5.120
16	1.333	439.115	0.933	4.054
17	1.417	466.559	0.868	3.774
18	1.500	494.004	0.828	3.598
19	1.583	521.449	0.756	3.288
20	1.667	548.893	0.609	2.647
21	1.750	576.338	0.553	2.405
22	1.833	603.783	0.493	2.143
23	1.917	631.227	0.425	1.848
24	2.000	658.672	0.379	1.646
25	2.083	686.117	0.300	1.305
26	2.167	713.562	0.274	1.193
27	2.250	741.006	0.274	1.193
28	2.333	768.451	0.274	1.193
29	2.417	795.896	0.274	1.193
30	2.500	823.340	0.178	0.775
		Sum = 100.000	Sum=	434.710

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	1.30	0.358	0.103	(0.179)	0.255
2	0.17	1.30	0.358	0.103	(0.179)	0.255
3	0.25	1.10	0.303	0.103	(0.152)	0.200
4	0.33	1.50	0.413	0.103	(0.207)	0.310
5	0.42	1.50	0.413	0.103	(0.207)	0.310
6	0.50	1.80	0.496	0.103	(0.248)	0.393
7	0.58	1.50	0.413	0.103	(0.207)	0.310
8	0.67	1.80	0.496	0.103	(0.248)	0.393
9	0.75	1.80	0.496	0.103	(0.248)	0.393
10	0.83	1.50	0.413	0.103	(0.207)	0.310
11	0.92	1.60	0.441	0.103	(0.220)	0.337
12	1.00	1.80	0.496	0.103	(0.248)	0.393
13	1.08	2.20	0.606	0.103	(0.303)	0.503
14	1.17	2.20	0.606	0.103	(0.303)	0.503
15	1.25	2.20	0.606	0.103	(0.303)	0.503
16	1.33	2.00	0.551	0.103	(0.275)	0.448
17	1.42	2.60	0.716	0.103	(0.358)	0.613
18	1.50	2.70	0.744	0.103	(0.372)	0.641
19	1.58	2.40	0.661	0.103	(0.331)	0.558
20	1.67	2.70	0.744	0.103	(0.372)	0.641
21	1.75	3.30	0.909	0.103	(0.455)	0.806
22	1.83	3.10	0.854	0.103	(0.427)	0.751
23	1.92	2.90	0.799	0.103	(0.399)	0.696
24	2.00	3.00	0.826	0.103	(0.413)	0.723
25	2.08	3.10	0.854	0.103	(0.427)	0.751
26	2.17	4.20	1.157	0.103	(0.579)	1.054
27	2.25	5.00	1.377	0.103	(0.689)	1.274
28	2.33	3.50	0.964	0.103	(0.482)	0.861
29	2.42	6.80	1.873	0.103	(0.937)	1.770
30	2.50	7.30	2.011	0.103	(1.005)	1.908
31	2.58	8.20	2.259	0.103	(1.129)	2.156
32	2.67	5.90	1.625	0.103	(0.813)	1.522

33	2.75	2.00	0.551	0.103	(0.275)	0.448
34	2.83	1.80	0.496	0.103	(0.248)	0.393
35	2.92	1.80	0.496	0.103	(0.248)	0.393
36	3.00	0.60	0.165	(0.103)	0.083	0.083

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.9

Flood volume = Effective rainfall 1.99(In)
times area 431.3(Ac.)/[(In)/(Ft.)] = 71.4(Ac.Ft)
Total soil loss = 0.31(In)
Total soil loss = 11.075(Ac.Ft)
Total rainfall = 2.30(In)
Flood volume = 3112051.6 Cubic Feet
Total soil loss = 482410.1 Cubic Feet

Peak flow rate of this hydrograph = 621.104(CFS)

++

3 - 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	175.0	350.0	525.0	700.0
0+ 5	0.0197	2.86	Q				
0+10	0.1084	12.88	Q				
0+15	0.3154	30.05	VQ				
0+20	0.6621	50.35	V Q				
0+25	1.1211	66.64	V Q				
0+30	1.6721	80.01	V Q				
0+35	2.3189	93.92	V Q				
0+40	3.0525	106.52	V Q				
0+45	3.8593	117.14	V Q				
0+50	4.7182	124.72	V Q				
0+55	5.6144	130.13	V Q				
1+ 0	6.5298	132.91	V Q				
1+ 5	7.4694	136.43	V Q				
1+10	8.4715	145.50	V Q				
1+15	9.5697	159.46	V Q				
1+20	10.7614	173.03	V Q				
1+25	12.0212	182.91	V Q				
1+30	13.3469	192.49	V Q				
1+35	14.7526	204.11	V Q				
1+40	16.2514	217.63	V Q				
1+45	17.8387	230.47	V Q				
1+50	19.5213	244.31	V Q				
1+55	21.3177	260.84	V Q				
2+ 0	23.2153	275.53	V Q				
2+ 5	25.1684	283.59	V Q				
2+10	27.1770	291.65	VQ				
2+15	29.3227	311.55	VQ				
2+20	31.6826	342.66	V Q				
2+25	34.3153	382.27	V Q				
2+30	37.2873	431.53	V Q				
2+35	40.7052	496.28	V Q				
2+40	44.6711	575.85	V Q				
2+45	48.9487	621.10	V Q				
2+50	53.0577	596.63	V Q				
2+55	56.5615	508.76	Q V				
3+ 0	59.3247	401.21	Q V				
3+ 5	61.4939	314.96	Q V				
3+10	63.2169	250.18	Q V				

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3+15      64.5658    195.87  |          |Q         |          |       V    |
3+20      65.6226    153.44  |        Q |          |          |       V    |
3+25      66.4809    124.63  |       Q  |          |          |        V   |
3+30      67.1975    104.05  |     Q    |          |          |        V   |
3+35      67.8097     88.90  |     Q    |          |          |        V   |
3+40      68.3351     76.28  |    Q     |          |          |         V  |
3+45      68.7863     65.51  |  Q       |          |          |         V  |
3+50      69.1774     56.79  |  Q       |          |          |         V  |
3+55      69.5209     49.88  | Q        |          |          |         V  |
4+ 0      69.8238     43.98  | Q        |          |          |          V |
4+ 5      70.0898     38.62  | Q        |          |          |          V |
4+10      70.3198     33.39  |Q         |          |          |          V |
4+15      70.5181     28.80  |Q         |          |          |          V |
4+20      70.6911     25.13  |Q         |          |          |          V |
4+25      70.8404     21.67  |Q         |          |          |          V |
4+30      70.9683     18.57  |Q         |          |          |          V |
4+35      71.0779     15.91  Q          |          |          |          V |
4+40      71.1706     13.47  Q          |          |          |          V |
4+45      71.2504     11.58  Q          |          |          |          V |
4+50      71.3185      9.89  Q          |          |          |          V |
4+55      71.3703      7.52  Q          |          |          |          V |
5+ 0      71.4052      5.07  Q          |          |          |          V |
5+ 5      71.4241      2.75  Q          |          |          |          V |
5+10      71.4337      1.38  Q          |          |          |          V |
5+15      71.4397      0.87  Q          |          |          |          V |
5+20      71.4424      0.40  Q          |          |          |          V |
5+25      71.4429      0.06  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 06/22/16 File: 3RDSTA36100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A3 (DESIGN POINT AT 3RD ST AND DEXTER AVE)
100-YEAR STORM EVENT

Drainage Area = 431.34(Ac.) = 0.674 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 431.34(Ac.) = 0.674 Sq.

Length along longest watercourse = 14905.00(Ft.)
Length along longest watercourse measured to centroid = 7540.00(Ft.)
Length along longest watercourse = 2.823 Mi.
Length along longest watercourse measured to centroid = 1.428 Mi.
Difference in elevation = 390.00(Ft.)
Slope along watercourse = 138.1550 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.304 Hr.
Lag time = 18.22 Min.
25% of lag time = 4.55 Min.
40% of lag time = 7.29 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
431.34	1.35	582.31

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
431.34	3.30	1423.42

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.85 %
Adjusted average point rain = 3.295(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
14.390	94.20	0.900
31.340	78.50	0.150
24.390	95.10	0.900
5.160	88.90	0.750
47.060	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
13.960	84.60	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 431.34(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.040	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.007	0.000
94.2	94.2	0.075	0.900	0.014	0.033	0.000
78.5	78.5	0.262	0.150	0.226	0.073	0.016
95.1	95.1	0.064	0.900	0.012	0.057	0.001
88.9	88.9	0.143	0.750	0.046	0.012	0.001
78.8	78.8	0.258	0.400	0.165	0.109	0.018
86.3	86.3	0.172	0.500	0.095	0.228	0.022
86.2	86.2	0.173	0.500	0.095	0.101	0.010
84.6	84.6	0.192	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.252	0.024
89.5	89.5	0.136	0.050	0.130	0.031	0.004
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.103

Area averaged mean soil loss (F) (In/Hr) = 0.103
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.500

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	27.445	2.580	11.214
2	0.167	54.889	9.037	39.283
3	0.250	82.334	16.056	69.795
4	0.333	109.779	19.152	83.255
5	0.417	137.223	14.259	61.984
6	0.500	164.668	8.418	36.592
7	0.583	192.113	5.259	22.861
8	0.667	219.557	3.910	16.995

9	0.750	247.002	3.149	13.688
10	0.833	274.447	2.625	11.409
11	0.917	301.891	2.206	9.588
12	1.000	329.336	1.790	7.779
13	1.083	356.781	1.633	7.100
14	1.167	384.225	1.332	5.790
15	1.250	411.670	1.178	5.120
16	1.333	439.115	0.933	4.054
17	1.417	466.559	0.868	3.774
18	1.500	494.004	0.828	3.598
19	1.583	521.449	0.756	3.288
20	1.667	548.893	0.609	2.647
21	1.750	576.338	0.553	2.405
22	1.833	603.783	0.493	2.143
23	1.917	631.227	0.425	1.848
24	2.000	658.672	0.379	1.646
25	2.083	686.117	0.300	1.305
26	2.167	713.562	0.274	1.193
27	2.250	741.006	0.274	1.193
28	2.333	768.451	0.274	1.193
29	2.417	795.896	0.274	1.193
30	2.500	823.340	0.178	0.775
		Sum = 100.000	Sum=	434.710

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	0.50	0.198	(0.103)	0.099	0.099
2	0.17	0.60	0.237	0.103	(0.119)	0.134
3	0.25	0.60	0.237	0.103	(0.119)	0.134
4	0.33	0.60	0.237	0.103	(0.119)	0.134
5	0.42	0.60	0.237	0.103	(0.119)	0.134
6	0.50	0.70	0.277	0.103	(0.138)	0.174
7	0.58	0.70	0.277	0.103	(0.138)	0.174
8	0.67	0.70	0.277	0.103	(0.138)	0.174
9	0.75	0.70	0.277	0.103	(0.138)	0.174
10	0.83	0.70	0.277	0.103	(0.138)	0.174
11	0.92	0.70	0.277	0.103	(0.138)	0.174
12	1.00	0.80	0.316	0.103	(0.158)	0.213
13	1.08	0.80	0.316	0.103	(0.158)	0.213
14	1.17	0.80	0.316	0.103	(0.158)	0.213
15	1.25	0.80	0.316	0.103	(0.158)	0.213
16	1.33	0.80	0.316	0.103	(0.158)	0.213
17	1.42	0.80	0.316	0.103	(0.158)	0.213
18	1.50	0.80	0.316	0.103	(0.158)	0.213
19	1.58	0.80	0.316	0.103	(0.158)	0.213
20	1.67	0.80	0.316	0.103	(0.158)	0.213
21	1.75	0.80	0.316	0.103	(0.158)	0.213
22	1.83	0.80	0.316	0.103	(0.158)	0.213
23	1.92	0.80	0.316	0.103	(0.158)	0.213
24	2.00	0.90	0.356	0.103	(0.178)	0.253
25	2.08	0.80	0.316	0.103	(0.158)	0.213
26	2.17	0.90	0.356	0.103	(0.178)	0.253
27	2.25	0.90	0.356	0.103	(0.178)	0.253
28	2.33	0.90	0.356	0.103	(0.178)	0.253
29	2.42	0.90	0.356	0.103	(0.178)	0.253
30	2.50	0.90	0.356	0.103	(0.178)	0.253
31	2.58	0.90	0.356	0.103	(0.178)	0.253
32	2.67	0.90	0.356	0.103	(0.178)	0.253

33	2.75	1.00	0.395	0.103	(0.198)	0.292
34	2.83	1.00	0.395	0.103	(0.198)	0.292
35	2.92	1.00	0.395	0.103	(0.198)	0.292
36	3.00	1.00	0.395	0.103	(0.198)	0.292
37	3.08	1.00	0.395	0.103	(0.198)	0.292
38	3.17	1.10	0.435	0.103	(0.217)	0.332
39	3.25	1.10	0.435	0.103	(0.217)	0.332
40	3.33	1.10	0.435	0.103	(0.217)	0.332
41	3.42	1.20	0.474	0.103	(0.237)	0.371
42	3.50	1.30	0.514	0.103	(0.257)	0.411
43	3.58	1.40	0.554	0.103	(0.277)	0.450
44	3.67	1.40	0.554	0.103	(0.277)	0.450
45	3.75	1.50	0.593	0.103	(0.297)	0.490
46	3.83	1.50	0.593	0.103	(0.297)	0.490
47	3.92	1.60	0.633	0.103	(0.316)	0.529
48	4.00	1.60	0.633	0.103	(0.316)	0.529
49	4.08	1.70	0.672	0.103	(0.336)	0.569
50	4.17	1.80	0.712	0.103	(0.356)	0.608
51	4.25	1.90	0.751	0.103	(0.376)	0.648
52	4.33	2.00	0.791	0.103	(0.395)	0.688
53	4.42	2.10	0.830	0.103	(0.415)	0.727
54	4.50	2.10	0.830	0.103	(0.415)	0.727
55	4.58	2.20	0.870	0.103	(0.435)	0.767
56	4.67	2.30	0.909	0.103	(0.455)	0.806
57	4.75	2.40	0.949	0.103	(0.474)	0.846
58	4.83	2.40	0.949	0.103	(0.474)	0.846
59	4.92	2.50	0.989	0.103	(0.494)	0.885
60	5.00	2.60	1.028	0.103	(0.514)	0.925
61	5.08	3.10	1.226	0.103	(0.613)	1.123
62	5.17	3.60	1.423	0.103	(0.712)	1.320
63	5.25	3.90	1.542	0.103	(0.771)	1.439
64	5.33	4.20	1.661	0.103	(0.830)	1.557
65	5.42	4.70	1.858	0.103	(0.929)	1.755
66	5.50	5.60	2.214	0.103	(1.107)	2.111
67	5.58	1.90	0.751	0.103	(0.376)	0.648
68	5.67	0.90	0.356	0.103	(0.178)	0.253
69	5.75	0.60	0.237	0.103	(0.119)	0.134
70	5.83	0.50	0.198	(0.103)	0.099	0.099
71	5.92	0.30	0.119	(0.103)	0.059	0.059
72	6.00	0.20	0.079	(0.103)	0.040	0.040

(Loss Rate Not Used)

Sum = 100.0 Sum = 32.2

Flood volume = Effective rainfall 2.69(In)
times area 431.3(Ac.)/[(In)/(Ft.)] = 96.5(Ac.Ft)
Total soil loss = 0.61(In)
Total soil loss = 21.924(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 4204362.1 Cubic Feet
Total soil loss = 954998.5 Cubic Feet

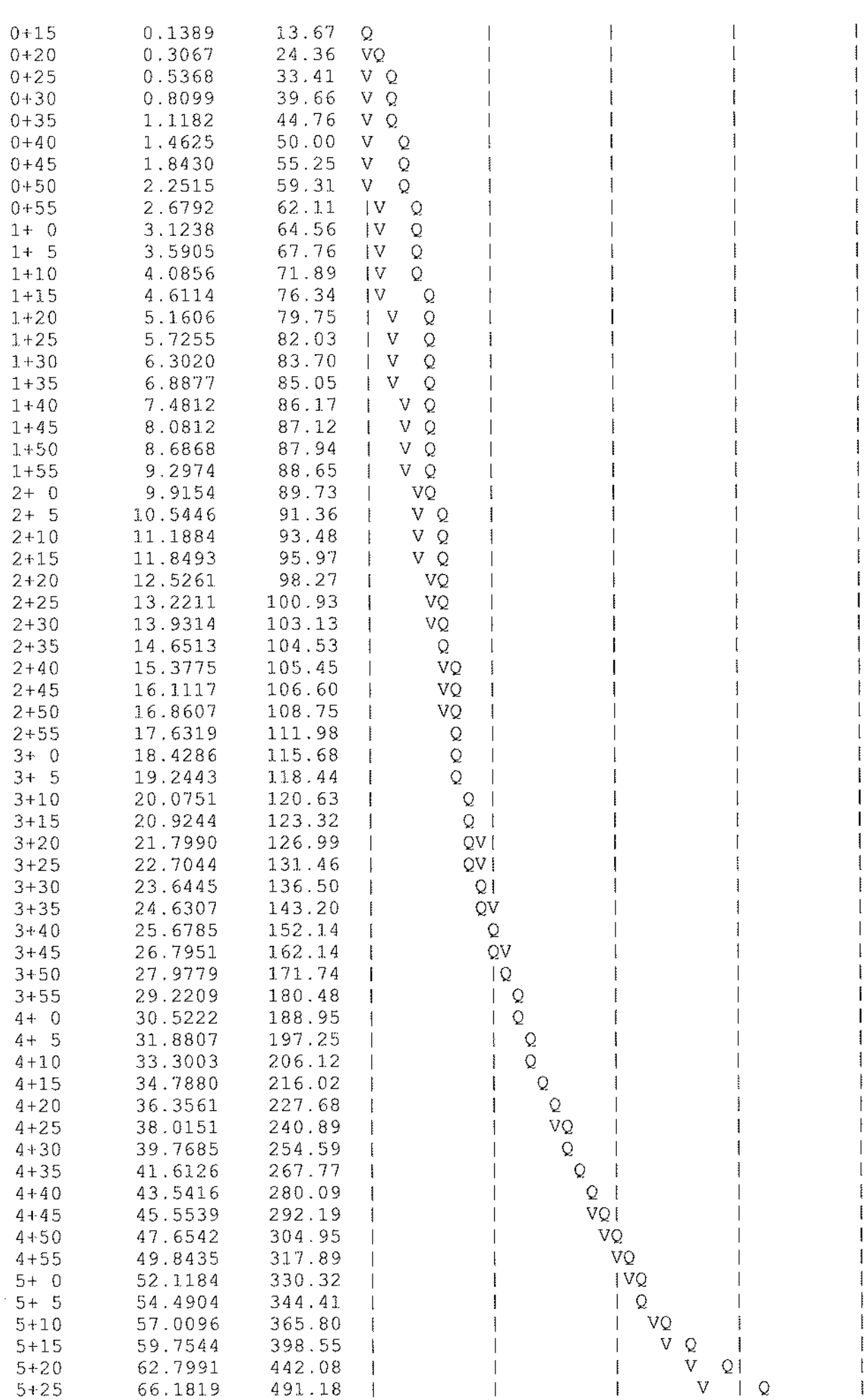
Peak flow rate of this hydrograph = 590.049(CFS)

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6 - 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	150.0	300.0	450.0	600.0
0+ 5	0.0076	1.11	Q	|	|	|	|
0+10	0.0447	5.39	Q	|	|	|	|



0+15	0.1389	13.67	Q
0+20	0.3067	24.36	VQ
0+25	0.5368	33.41	V Q
0+30	0.8099	39.66	V Q
0+35	1.1182	44.76	V Q
0+40	1.4625	50.00	V Q
0+45	1.8430	55.25	V Q
0+50	2.2515	59.31	V Q
0+55	2.6792	62.11	V Q
1+ 0	3.1238	64.56	V Q
1+ 5	3.5905	67.76	V Q
1+10	4.0856	71.89	V Q
1+15	4.6114	76.34	V Q
1+20	5.1606	79.75	V Q
1+25	5.7255	82.03	V Q
1+30	6.3020	83.70	V Q
1+35	6.8877	85.05	V Q
1+40	7.4812	86.17	V Q
1+45	8.0812	87.12	V Q
1+50	8.6868	87.94	V Q
1+55	9.2974	88.65	V Q
2+ 0	9.9154	89.73	VQ
2+ 5	10.5446	91.36	V Q
2+10	11.1884	93.48	V Q
2+15	11.8493	95.97	V Q
2+20	12.5261	98.27	VQ
2+25	13.2211	100.93	VQ
2+30	13.9314	103.13	VQ
2+35	14.6513	104.53	Q
2+40	15.3775	105.45	VQ
2+45	16.1117	106.60	VQ
2+50	16.8607	108.75	VQ
2+55	17.6319	111.98	Q
3+ 0	18.4286	115.68	Q
3+ 5	19.2443	118.44	Q
3+10	20.0751	120.63	Q
3+15	20.9244	123.32	Q
3+20	21.7990	126.99	QV
3+25	22.7044	131.46	QV
3+30	23.6445	136.50	Q
3+35	24.6307	143.20	QV
3+40	25.6785	152.14	Q
3+45	26.7951	162.14	QV
3+50	27.9779	171.74	Q
3+55	29.2209	180.48	Q
4+ 0	30.5222	188.95	Q
4+ 5	31.8807	197.25	Q
4+10	33.3003	206.12	Q
4+15	34.7880	216.02	Q
4+20	36.3561	227.68	Q
4+25	38.0151	240.89	VQ
4+30	39.7685	254.59	Q
4+35	41.6126	267.77	Q
4+40	43.5416	280.09	Q
4+45	45.5539	292.19	VQ
4+50	47.6542	304.95	VQ
4+55	49.8435	317.89	VQ
5+ 0	52.1184	330.32	VQ
5+ 5	54.4904	344.41	Q
5+10	57.0096	365.80	VQ
5+15	59.7544	398.55	V Q
5+20	62.7991	442.08	V Q
5+25	66.1819	491.18	V Q

| | | |

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 06/22/16 File: 3RDSTA324100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A3 (DESIGN POINT AT 3RD ST AND DEXTER AVE)
100-YEAR STORM EVENT

Drainage Area = 431.34(Ac.) = 0.674 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 431.34(Ac.) = 0.674 Sq.

Length along longest watercourse = 14905.00(Ft.)
Length along longest watercourse measured to centroid = 7540.00(Ft.)
Length along longest watercourse = 2.823 Mi.
Length along longest watercourse measured to centroid = 1.428 Mi.
Difference in elevation = 390.00(Ft.)
Slope along watercourse = 138.1550 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.304 Hr.
Lag time = 18.22 Min.
25% of lag time = 4.55 Min.
40% of lag time = 7.29 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]
431.34	2.50	1078.35

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
431.34	6.00	2588.04

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.92 %
Adjusted average point rain = 5.995(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
14.390	94.20	0.900
31.340	78.50	0.150
24.390	95.10	0.900
5.160	88.90	0.750
47.060	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
13.960	84.60	0.500
108.630	86.10	0.500
13.360	89.50	0.050
9.840	84.20	0.400

Total Area Entered = 431.34(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.040	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.007	0.000
94.2	94.2	0.075	0.900	0.014	0.033	0.000
78.5	78.5	0.262	0.150	0.226	0.073	0.016
95.1	95.1	0.064	0.900	0.012	0.057	0.001
88.9	88.9	0.143	0.750	0.046	0.012	0.001
78.8	78.8	0.258	0.400	0.165	0.109	0.018
86.3	86.3	0.172	0.500	0.095	0.228	0.022
86.2	86.2	0.173	0.500	0.095	0.101	0.010
84.6	84.6	0.192	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.252	0.024
89.5	89.5	0.136	0.050	0.130	0.031	0.004
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.103

Area averaged mean soil loss (F) (In/Hr) = 0.103
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.500

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	27.445	2.580	11.214
2	0.167	54.889	9.037	39.283
3	0.250	82.334	16.056	69.795
4	0.333	109.779	19.152	83.255
5	0.417	137.223	14.259	61.984
6	0.500	164.668	8.418	36.592
7	0.583	192.113	5.259	22.861
8	0.667	219.557	3.910	16.995

9	0.750	247.002	3.149	13.688
10	0.833	274.447	2.625	11.409
11	0.917	301.891	2.206	9.588
12	1.000	329.336	1.790	7.779
13	1.083	356.781	1.633	7.100
14	1.167	384.225	1.332	5.790
15	1.250	411.670	1.178	5.120
16	1.333	439.115	0.933	4.054
17	1.417	466.559	0.868	3.774
18	1.500	494.004	0.828	3.598
19	1.583	521.449	0.756	3.288
20	1.667	548.893	0.609	2.647
21	1.750	576.338	0.553	2.405
22	1.833	603.783	0.493	2.143
23	1.917	631.227	0.425	1.848
24	2.000	658.672	0.379	1.646
25	2.083	686.117	0.300	1.305
26	2.167	713.562	0.274	1.193
27	2.250	741.006	0.274	1.193
28	2.333	768.451	0.274	1.193
29	2.417	795.896	0.274	1.193
30	2.500	823.340	0.178	0.775
		Sum = 100.000	Sum=	434.710

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	0.048	(0.183)	0.024	0.024
2	0.17	0.07	0.048	(0.182)	0.024	0.024
3	0.25	0.07	0.048	(0.182)	0.024	0.024
4	0.33	0.10	0.072	(0.181)	0.036	0.036
5	0.42	0.10	0.072	(0.180)	0.036	0.036
6	0.50	0.10	0.072	(0.180)	0.036	0.036
7	0.58	0.10	0.072	(0.179)	0.036	0.036
8	0.67	0.10	0.072	(0.178)	0.036	0.036
9	0.75	0.10	0.072	(0.177)	0.036	0.036
10	0.83	0.13	0.096	(0.177)	0.048	0.048
11	0.92	0.13	0.096	(0.176)	0.048	0.048
12	1.00	0.13	0.096	(0.175)	0.048	0.048
13	1.08	0.10	0.072	(0.175)	0.036	0.036
14	1.17	0.10	0.072	(0.174)	0.036	0.036
15	1.25	0.10	0.072	(0.173)	0.036	0.036
16	1.33	0.10	0.072	(0.173)	0.036	0.036
17	1.42	0.10	0.072	(0.172)	0.036	0.036
18	1.50	0.10	0.072	(0.171)	0.036	0.036
19	1.58	0.10	0.072	(0.171)	0.036	0.036
20	1.67	0.10	0.072	(0.170)	0.036	0.036
21	1.75	0.10	0.072	(0.169)	0.036	0.036
22	1.83	0.13	0.096	(0.168)	0.048	0.048
23	1.92	0.13	0.096	(0.168)	0.048	0.048
24	2.00	0.13	0.096	(0.167)	0.048	0.048
25	2.08	0.13	0.096	(0.166)	0.048	0.048
26	2.17	0.13	0.096	(0.166)	0.048	0.048
27	2.25	0.13	0.096	(0.165)	0.048	0.048
28	2.33	0.13	0.096	(0.164)	0.048	0.048
29	2.42	0.13	0.096	(0.164)	0.048	0.048
30	2.50	0.13	0.096	(0.163)	0.048	0.048
31	2.58	0.17	0.120	(0.162)	0.060	0.060
32	2.67	0.17	0.120	(0.162)	0.060	0.060

33	2.75	0.17	0.120	(0.161)	0.060	0.060
34	2.83	0.17	0.120	(0.160)	0.060	0.060
35	2.92	0.17	0.120	(0.160)	0.060	0.060
36	3.00	0.17	0.120	(0.159)	0.060	0.060
37	3.08	0.17	0.120	(0.158)	0.060	0.060
38	3.17	0.17	0.120	(0.158)	0.060	0.060
9	3.25	0.17	0.120	(0.157)	0.060	0.060
40	3.33	0.17	0.120	(0.156)	0.060	0.060
41	3.42	0.17	0.120	(0.156)	0.060	0.060
42	3.50	0.17	0.120	(0.155)	0.060	0.060
43	3.58	0.17	0.120	(0.155)	0.060	0.060
44	3.67	0.17	0.120	(0.154)	0.060	0.060
45	3.75	0.17	0.120	(0.153)	0.060	0.060
46	3.83	0.20	0.144	(0.153)	0.072	0.072
47	3.92	0.20	0.144	(0.152)	0.072	0.072
48	4.00	0.20	0.144	(0.151)	0.072	0.072
49	4.08	0.20	0.144	(0.151)	0.072	0.072
50	4.17	0.20	0.144	(0.150)	0.072	0.072
51	4.25	0.20	0.144	(0.149)	0.072	0.072
52	4.33	0.23	0.168	(0.149)	0.084	0.084
53	4.42	0.23	0.168	(0.148)	0.084	0.084
54	4.50	0.23	0.168	(0.147)	0.084	0.084
55	4.58	0.23	0.168	(0.147)	0.084	0.084
56	4.67	0.23	0.168	(0.146)	0.084	0.084
57	4.75	0.23	0.168	(0.146)	0.084	0.084
58	4.83	0.27	0.192	(0.145)	0.096	0.096
59	4.92	0.27	0.192	(0.144)	0.096	0.096
60	5.00	0.27	0.192	(0.144)	0.096	0.096
61	5.08	0.20	0.144	(0.143)	0.072	0.072
62	5.17	0.20	0.144	(0.142)	0.072	0.072
63	5.25	0.20	0.144	(0.142)	0.072	0.072
64	5.33	0.23	0.168	(0.141)	0.084	0.084
5	5.42	0.23	0.168	(0.141)	0.084	0.084
66	5.50	0.23	0.168	(0.140)	0.084	0.084
67	5.58	0.27	0.192	(0.139)	0.096	0.096
68	5.67	0.27	0.192	(0.139)	0.096	0.096
69	5.75	0.27	0.192	(0.138)	0.096	0.096
70	5.83	0.27	0.192	(0.138)	0.096	0.096
71	5.92	0.27	0.192	(0.137)	0.096	0.096
72	6.00	0.27	0.192	(0.136)	0.096	0.096
73	6.08	0.30	0.216	(0.136)	0.108	0.108
74	6.17	0.30	0.216	(0.135)	0.108	0.108
75	6.25	0.30	0.216	(0.135)	0.108	0.108
76	6.33	0.30	0.216	(0.134)	0.108	0.108
77	6.42	0.30	0.216	(0.133)	0.108	0.108
78	6.50	0.30	0.216	(0.133)	0.108	0.108
79	6.58	0.33	0.240	(0.132)	0.120	0.120
80	6.67	0.33	0.240	(0.132)	0.120	0.120
81	6.75	0.33	0.240	(0.131)	0.120	0.120
82	6.83	0.33	0.240	(0.130)	0.120	0.120
83	6.92	0.33	0.240	(0.130)	0.120	0.120
84	7.00	0.33	0.240	(0.129)	0.120	0.120
85	7.08	0.33	0.240	(0.129)	0.120	0.120
86	7.17	0.33	0.240	(0.128)	0.120	0.120
87	7.25	0.33	0.240	(0.127)	0.120	0.120
88	7.33	0.37	0.264	0.127	(0.132)	0.137
89	7.42	0.37	0.264	0.126	(0.132)	0.138
90	7.50	0.37	0.264	0.126	(0.132)	0.138
91	7.58	0.40	0.288	0.125	(0.144)	0.163
92	7.67	0.40	0.288	0.125	(0.144)	0.163
93	7.75	0.40	0.288	0.124	(0.144)	0.164
94	7.83	0.43	0.312	0.123	(0.156)	0.188
95	7.92	0.43	0.312	0.123	(0.156)	0.189

96	8.00	0.43	0.312	0.122	(0.156)	0.190
97	8.08	0.50	0.360	0.122	(0.180)	0.238
98	8.17	0.50	0.360	0.121	(0.180)	0.239
99	8.25	0.50	0.360	0.121	(0.180)	0.239
100	8.33	0.50	0.360	0.120	(0.180)	0.240
101	8.42	0.50	0.360	0.119	(0.180)	0.240
2	8.50	0.50	0.360	0.119	(0.180)	0.241
103	8.58	0.53	0.384	0.118	(0.192)	0.265
104	8.67	0.53	0.384	0.118	(0.192)	0.266
105	8.75	0.53	0.384	0.117	(0.192)	0.267
106	8.83	0.57	0.408	0.117	(0.204)	0.291
107	8.92	0.57	0.408	0.116	(0.204)	0.292
108	9.00	0.57	0.408	0.116	(0.204)	0.292
109	9.08	0.63	0.456	0.115	(0.228)	0.341
110	9.17	0.63	0.456	0.114	(0.228)	0.341
111	9.25	0.63	0.456	0.114	(0.228)	0.342
112	9.33	0.67	0.480	0.113	(0.240)	0.366
113	9.42	0.67	0.480	0.113	(0.240)	0.367
114	9.50	0.67	0.480	0.112	(0.240)	0.367
115	9.58	0.70	0.504	0.112	(0.252)	0.392
116	9.67	0.70	0.504	0.111	(0.252)	0.392
117	9.75	0.70	0.504	0.111	(0.252)	0.393
118	9.83	0.73	0.528	0.110	(0.264)	0.417
119	9.92	0.73	0.528	0.110	(0.264)	0.418
120	10.00	0.73	0.528	0.109	(0.264)	0.418
121	10.08	0.50	0.360	0.109	(0.180)	0.251
122	10.17	0.50	0.360	0.108	(0.180)	0.252
123	10.25	0.50	0.360	0.107	(0.180)	0.252
124	10.33	0.50	0.360	0.107	(0.180)	0.253
125	10.42	0.50	0.360	0.106	(0.180)	0.253
126	10.50	0.50	0.360	0.106	(0.180)	0.254
127	10.58	0.67	0.480	0.105	(0.240)	0.374
8	10.67	0.67	0.480	0.105	(0.240)	0.375
129	10.75	0.67	0.480	0.104	(0.240)	0.375
130	10.83	0.67	0.480	0.104	(0.240)	0.376
131	10.92	0.67	0.480	0.103	(0.240)	0.376
132	11.00	0.67	0.480	0.103	(0.240)	0.377
133	11.08	0.63	0.456	0.102	(0.228)	0.353
134	11.17	0.63	0.456	0.102	(0.228)	0.354
135	11.25	0.63	0.456	0.101	(0.228)	0.354
136	11.33	0.63	0.456	0.101	(0.228)	0.355
137	11.42	0.63	0.456	0.100	(0.228)	0.355
138	11.50	0.63	0.456	0.100	(0.228)	0.356
139	11.58	0.57	0.408	0.099	(0.204)	0.308
140	11.67	0.57	0.408	0.099	(0.204)	0.309
141	11.75	0.57	0.408	0.098	(0.204)	0.309
142	11.83	0.60	0.432	0.098	(0.216)	0.334
143	11.92	0.60	0.432	0.097	(0.216)	0.334
144	12.00	0.60	0.432	0.097	(0.216)	0.335
145	12.08	0.83	0.599	0.096	(0.300)	0.503
146	12.17	0.83	0.599	0.096	(0.300)	0.504
147	12.25	0.83	0.599	0.095	(0.300)	0.504
148	12.33	0.87	0.623	0.095	(0.312)	0.529
149	12.42	0.87	0.623	0.094	(0.312)	0.529
150	12.50	0.87	0.623	0.094	(0.312)	0.529
151	12.58	0.93	0.671	0.094	(0.336)	0.578
152	12.67	0.93	0.671	0.093	(0.336)	0.578
3	12.75	0.93	0.671	0.093	(0.336)	0.579
4	12.83	0.97	0.695	0.092	(0.348)	0.603
155	12.92	0.97	0.695	0.092	(0.348)	0.604
156	13.00	0.97	0.695	0.091	(0.348)	0.604
157	13.08	1.13	0.815	0.091	(0.408)	0.725
158	13.17	1.13	0.815	0.090	(0.408)	0.725

159	13.25	1.13	0.815	0.090	(0.408)	0.725
160	13.33	1.13	0.815	0.089	(0.408)	0.726
161	13.42	1.13	0.815	0.089	(0.408)	0.726
162	13.50	1.13	0.815	0.088	(0.408)	0.727
163	13.58	0.77	0.552	0.088	(0.276)	0.464
164	13.67	0.77	0.552	0.088	(0.276)	0.464
5	13.75	0.77	0.552	0.087	(0.276)	0.464
166	13.83	0.77	0.552	0.087	(0.276)	0.465
167	13.92	0.77	0.552	0.086	(0.276)	0.465
168	14.00	0.77	0.552	0.086	(0.276)	0.466
169	14.08	0.90	0.647	0.085	(0.324)	0.562
170	14.17	0.90	0.647	0.085	(0.324)	0.563
171	14.25	0.90	0.647	0.084	(0.324)	0.563
172	14.33	0.87	0.623	0.084	(0.312)	0.539
173	14.42	0.87	0.623	0.084	(0.312)	0.540
174	14.50	0.87	0.623	0.083	(0.312)	0.540
175	14.58	0.87	0.623	0.083	(0.312)	0.541
176	14.67	0.87	0.623	0.082	(0.312)	0.541
177	14.75	0.87	0.623	0.082	(0.312)	0.542
178	14.83	0.83	0.599	0.081	(0.300)	0.518
179	14.92	0.83	0.599	0.081	(0.300)	0.518
180	15.00	0.83	0.599	0.081	(0.300)	0.519
181	15.08	0.80	0.576	0.080	(0.288)	0.495
182	15.17	0.80	0.576	0.080	(0.288)	0.496
183	15.25	0.80	0.576	0.079	(0.288)	0.496
184	15.33	0.77	0.552	0.079	(0.276)	0.473
185	15.42	0.77	0.552	0.079	(0.276)	0.473
186	15.50	0.77	0.552	0.078	(0.276)	0.473
187	15.58	0.63	0.456	0.078	(0.228)	0.378
188	15.67	0.63	0.456	0.077	(0.228)	0.378
189	15.75	0.63	0.456	0.077	(0.228)	0.379
190	15.83	0.63	0.456	0.077	(0.228)	0.379
1	15.92	0.63	0.456	0.076	(0.228)	0.379
192	16.00	0.63	0.456	0.076	(0.228)	0.380
193	16.08	0.13	0.096	(0.075)	0.048	0.048
194	16.17	0.13	0.096	(0.075)	0.048	0.048
195	16.25	0.13	0.096	(0.075)	0.048	0.048
196	16.33	0.13	0.096	(0.074)	0.048	0.048
197	16.42	0.13	0.096	(0.074)	0.048	0.048
198	16.50	0.13	0.096	(0.074)	0.048	0.048
199	16.58	0.10	0.072	(0.073)	0.036	0.036
200	16.67	0.10	0.072	(0.073)	0.036	0.036
201	16.75	0.10	0.072	(0.072)	0.036	0.036
202	16.83	0.10	0.072	(0.072)	0.036	0.036
203	16.92	0.10	0.072	(0.072)	0.036	0.036
204	17.00	0.10	0.072	(0.071)	0.036	0.036
205	17.08	0.17	0.120	(0.071)	0.060	0.060
206	17.17	0.17	0.120	(0.071)	0.060	0.060
207	17.25	0.17	0.120	(0.070)	0.060	0.060
208	17.33	0.17	0.120	(0.070)	0.060	0.060
209	17.42	0.17	0.120	(0.070)	0.060	0.060
210	17.50	0.17	0.120	(0.069)	0.060	0.060
211	17.58	0.17	0.120	(0.069)	0.060	0.060
212	17.67	0.17	0.120	(0.069)	0.060	0.060
213	17.75	0.17	0.120	(0.068)	0.060	0.060
214	17.83	0.13	0.096	(0.068)	0.048	0.048
215	17.92	0.13	0.096	(0.068)	0.048	0.048
6	18.00	0.13	0.096	(0.067)	0.048	0.048
217	18.08	0.13	0.096	(0.067)	0.048	0.048
218	18.17	0.13	0.096	(0.067)	0.048	0.048
219	18.25	0.13	0.096	(0.066)	0.048	0.048
220	18.33	0.13	0.096	(0.066)	0.048	0.048
221	18.42	0.13	0.096	(0.066)	0.048	0.048

222	18.50	0.13	0.096	(0.065)	0.048	0.048
223	18.58	0.10	0.072	(0.065)	0.036	0.036
224	18.67	0.10	0.072	(0.065)	0.036	0.036
225	18.75	0.10	0.072	(0.064)	0.036	0.036
226	18.83	0.07	0.048	(0.064)	0.024	0.024
227	18.92	0.07	0.048	(0.064)	0.024	0.024
8	19.00	0.07	0.048	(0.063)	0.024	0.024
229	19.08	0.10	0.072	(0.063)	0.036	0.036
230	19.17	0.10	0.072	(0.063)	0.036	0.036
231	19.25	0.10	0.072	(0.062)	0.036	0.036
232	19.33	0.13	0.096	(0.062)	0.048	0.048
233	19.42	0.13	0.096	(0.062)	0.048	0.048
234	19.50	0.13	0.096	(0.062)	0.048	0.048
235	19.58	0.10	0.072	(0.061)	0.036	0.036
236	19.67	0.10	0.072	(0.061)	0.036	0.036
237	19.75	0.10	0.072	(0.061)	0.036	0.036
238	19.83	0.07	0.048	(0.061)	0.024	0.024
239	19.92	0.07	0.048	(0.060)	0.024	0.024
240	20.00	0.07	0.048	(0.060)	0.024	0.024
241	20.08	0.10	0.072	(0.060)	0.036	0.036
242	20.17	0.10	0.072	(0.059)	0.036	0.036
243	20.25	0.10	0.072	(0.059)	0.036	0.036
244	20.33	0.10	0.072	(0.059)	0.036	0.036
245	20.42	0.10	0.072	(0.059)	0.036	0.036
246	20.50	0.10	0.072	(0.058)	0.036	0.036
247	20.58	0.10	0.072	(0.058)	0.036	0.036
248	20.67	0.10	0.072	(0.058)	0.036	0.036
249	20.75	0.10	0.072	(0.058)	0.036	0.036
250	20.83	0.07	0.048	(0.057)	0.024	0.024
251	20.92	0.07	0.048	(0.057)	0.024	0.024
252	21.00	0.07	0.048	(0.057)	0.024	0.024
253	21.08	0.10	0.072	(0.057)	0.036	0.036
4	21.17	0.10	0.072	(0.057)	0.036	0.036
255	21.25	0.10	0.072	(0.056)	0.036	0.036
256	21.33	0.07	0.048	(0.056)	0.024	0.024
257	21.42	0.07	0.048	(0.056)	0.024	0.024
258	21.50	0.07	0.048	(0.056)	0.024	0.024
259	21.58	0.10	0.072	(0.055)	0.036	0.036
260	21.67	0.10	0.072	(0.055)	0.036	0.036
261	21.75	0.10	0.072	(0.055)	0.036	0.036
262	21.83	0.07	0.048	(0.055)	0.024	0.024
263	21.92	0.07	0.048	(0.055)	0.024	0.024
264	22.00	0.07	0.048	(0.055)	0.024	0.024
265	22.08	0.10	0.072	(0.054)	0.036	0.036
266	22.17	0.10	0.072	(0.054)	0.036	0.036
267	22.25	0.10	0.072	(0.054)	0.036	0.036
268	22.33	0.07	0.048	(0.054)	0.024	0.024
269	22.42	0.07	0.048	(0.054)	0.024	0.024
270	22.50	0.07	0.048	(0.054)	0.024	0.024
271	22.58	0.07	0.048	(0.053)	0.024	0.024
272	22.67	0.07	0.048	(0.053)	0.024	0.024
273	22.75	0.07	0.048	(0.053)	0.024	0.024
274	22.83	0.07	0.048	(0.053)	0.024	0.024
275	22.92	0.07	0.048	(0.053)	0.024	0.024
276	23.00	0.07	0.048	(0.053)	0.024	0.024
277	23.08	0.07	0.048	(0.053)	0.024	0.024
278	23.17	0.07	0.048	(0.052)	0.024	0.024
279	23.25	0.07	0.048	(0.052)	0.024	0.024
280	23.33	0.07	0.048	(0.052)	0.024	0.024
281	23.42	0.07	0.048	(0.052)	0.024	0.024
282	23.50	0.07	0.048	(0.052)	0.024	0.024
283	23.58	0.07	0.048	(0.052)	0.024	0.024
284	23.67	0.07	0.048	(0.052)	0.024	0.024

285	23.75	0.07	0.048	(0.052)	0.024	0.024
286	23.83	0.07	0.048	(0.052)	0.024	0.024
287	23.92	0.07	0.048	(0.052)	0.024	0.024
288	24.00	0.07	0.048	(0.052)	0.024	0.024

(Loss Rate Not Used)

Sum = 100.0 Sum = 51.9

Flood volume = Effective rainfall 4.33(In)
times area 431.3(Ac.)/[(In)/(Ft.)] = 155.6(Ac.Ft)
Total soil loss = 1.67(In)
Total soil loss = 59.905(Ac.Ft)
Total rainfall = 5.99(In)
Flood volume = 6777207.6 Cubic Feet
Total soil loss = 2609463.1 Cubic Feet

Peak flow rate of this hydrograph = 291.814(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0019	0.27	Q				
0+10	0.0102	1.21	Q				
0+15	0.0301	2.89	Q				
0+20	0.0646	5.02	Q				
0+25	0.1127	6.98	Q				
0+30	0.1725	8.69	VQ				
0+35	0.2431	10.24	VQ				
0+40	0.3215	11.39	VQ				
0+45	0.4052	12.16	VQ				
0+50	0.4937	12.84	VQ				
0+55	0.5883	13.75	VQ				
1+ 0	0.6912	14.93	VQ				
1+ 5	0.8021	16.10	V Q				
1+10	0.9166	16.63	V Q				
1+15	1.0299	16.45	V Q				
1+20	1.1395	15.91	V Q				
1+25	1.2464	15.53	V Q				
1+30	1.3525	15.40	V Q				
1+35	1.4584	15.39	V Q				
1+40	1.5646	15.41	V Q				
1+45	1.6709	15.44	V Q				
1+50	1.7784	15.61	V Q				
1+55	1.8894	16.12	V Q				
2+ 0	2.0064	16.99	V Q				
2+ 5	2.1305	18.01	V Q				
2+10	2.2598	18.78	V Q				
2+15	2.3924	19.25	V Q				
2+20	2.5271	19.56	V Q				
2+25	2.6633	19.79	V Q				
2+30	2.8009	19.97	V Q				
2+35	2.9403	20.25	V Q				
2+40	3.0838	20.84	V Q				
2+45	3.2337	21.77	V Q				
2+50	3.3911	22.84	V Q				
2+55	3.5539	23.65	V Q				
3+ 0	3.7202	24.14	V Q				
3+ 5	3.8886	24.46	V Q				
3+10	4.0588	24.71	|V Q				

3+15	4.2304	24.91	|V Q	|	|	|	|
3+20	4.4031	25.08	|V Q	|	|	|	|
3+25	4.5767	25.21	|V Q	|	|	|	|
3+30	4.7511	25.32	|V Q	|	|	|	|
3+35	4.9263	25.43	|V Q	|	|	|	|
3+40	5.1020	25.52	|V Q	|	|	|	|
3+45	5.2784	25.60	|V Q	|	|	|	|
3+50	5.4561	25.80	|V Q	|	|	|	|
3+55	5.6375	26.33	|V Q	|	|	|	|
4+ 0	5.8250	27.23	|V Q	|	|	|	|
4+ 5	6.0198	28.28	|V Q	|	|	|	|
4+10	6.2200	29.07	|V Q	|	|	|	|
4+15	6.4235	29.55	|V Q	|	|	|	|
4+20	6.6300	29.98	|V Q	|	|	|	|
4+25	6.8413	30.68	|V Q	|	|	|	|
4+30	7.0596	31.70	|V Q	|	|	|	|
4+35	7.2859	32.85	|V Q	|	|	|	|
4+40	7.5181	33.73	|V Q	|	|	|	|
4+45	7.7542	34.27	|V Q	|	|	|	|
4+50	7.9937	34.78	| V Q	|	|	|	|
4+55	8.2385	35.54	| V Q	|	|	|	|
5+ 0	8.4906	36.61	| V Q	|	|	|	|
5+ 5	8.7491	37.53	| V Q	|	|	|	|
5+10	9.0073	37.49	| V Q	|	|	|	|
5+15	9.2579	36.39	| V Q	|	|	|	|
5+20	9.4984	34.92	| V Q	|	|	|	|
5+25	9.7340	34.21	| V Q	|	|	|	|
5+30	9.9711	34.43	| V Q	|	|	|	|
5+35	10.2137	35.22	| V Q	|	|	|	|
5+40	10.4631	36.21	| V Q	|	|	|	|
5+45	10.7201	37.32	| V Q	|	|	|	|
5+50	10.9850	38.46	| V Q	|	|	|	|
5+55	11.2556	39.29	| V Q	|	|	|	|
6+ 0	11.5298	39.81	| V Q	|	|	|	|
6+ 5	11.8072	40.28	| V Q	|	|	|	|
6+10	12.0896	41.01	| V Q	|	|	|	|
6+15	12.3792	42.05	| V Q	|	|	|	|
6+20	12.6769	43.23	| V Q	|	|	|	|
6+25	12.9807	44.11	| V Q	|	|	|	|
6+30	13.2884	44.66	| V Q	|	|	|	|
6+35	13.5994	45.17	| V Q	|	|	|	|
6+40	13.9158	45.93	| V Q	|	|	|	|
6+45	14.2395	47.01	| V Q	|	|	|	|
6+50	14.5714	48.20	| V Q	|	|	|	|
6+55	14.9096	49.10	| V Q	|	|	|	|
7+ 0	15.2518	49.68	| V Q	|	|	|	|
7+ 5	15.5967	50.09	| V Q	|	|	|	|
7+10	15.9439	50.40	| V Q	|	|	|	|
7+15	16.2927	50.66	| V Q	|	|	|	|
7+20	16.6443	51.05	| V Q	|	|	|	|
7+25	17.0017	51.89	| V Q	|	|	|	|
7+30	17.3685	53.26	| V Q	|	|	|	|
7+35	17.7485	55.18	| V Q	|	|	|	|
7+40	18.1440	57.43	| V Q	|	|	|	|
7+45	18.5572	59.99	| V Q	|	|	|	|
7+50	18.9905	62.91	| V Q |		|	|	|
7+55	19.4444	65.90	| V Q |		|	|	|
8+ 0	19.9193	68.96	| V Q|		|	|	|
8+ 5	20.4186	72.50	| V Q|		|	|	|
8+10	20.9468	76.69	| V Q		|	|	|
8+15	21.5090	81.64	| V Q		|	|	|
8+20	22.1071	86.84	| V |Q		|	|	|
8+25	22.7325	90.81	| V | Q		|	|	|

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19+ 0	149.6267	16.01	Q				V
19+ 5	149.7290	14.86	Q				V
19+10	149.8280	14.37	Q				V
19+15	149.9284	14.59	Q				V
19+20	150.0338	15.30	Q				V
19+25	150.1453	16.19	Q				V
19+30	150.2637	17.20	Q				V
19+35	150.3883	18.09	Q				V
19+40	150.5147	18.36	Q				V
19+45	150.6383	17.95	Q				V
19+50	150.7559	17.08	Q				V
19+55	150.8665	16.05	Q				V
20+ 0	150.9692	14.92	Q				V
20+ 5	151.0649	13.90	Q				V
20+10	151.1580	13.51	Q				V
20+15	151.2532	13.82	Q				V
20+20	151.3529	14.48	Q				V
20+25	151.4559	14.96	Q				V
20+30	151.5606	15.20	Q				V
20+35	151.6660	15.30	Q				V
20+40	151.7718	15.36	Q				V
20+45	151.8779	15.41	Q				V
20+50	151.9833	15.31	Q				V
20+55	152.0857	14.86	Q				V
21+ 0	152.1824	14.04	Q				V
21+ 5	152.2733	13.20	Q				V
21+10	152.3625	12.94	Q				V
21+15	152.4544	13.36	Q				V
21+20	152.5506	13.96	Q				V
21+25	152.6473	14.05	Q				V
21+30	152.7403	13.50	Q				V
21+35	152.8284	12.79	Q				V
21+40	152.9153	12.62	Q				V
21+45	153.0054	13.09	Q				V
21+50	153.1000	13.73	Q				V
21+55	153.1952	13.83	Q				V
22+ 0	153.2868	13.30	Q				V
22+ 5	153.3737	12.61	Q				V
22+10	153.4594	12.45	Q				V
22+15	153.5485	12.94	Q				V
22+20	153.6423	13.61	Q				V
22+25	153.7370	13.75	Q				V
22+30	153.8282	13.24	Q				V
22+35	153.9138	12.43	Q				V
22+40	153.9951	11.81	Q				V
22+45	154.0741	11.47	Q				V
22+50	154.1517	11.27	Q				V
22+55	154.2284	11.13	Q				V
23+ 0	154.3043	11.02	Q				V
23+ 5	154.3795	10.93	Q				V
23+10	154.4543	10.85	Q				V
23+15	154.5286	10.79	Q				V
23+20	154.6025	10.74	Q				V
23+25	154.6763	10.70	Q				V
23+30	154.7498	10.67	Q				V
23+35	154.8230	10.64	Q				V
23+40	154.8961	10.60	Q				V
23+45	154.9689	10.57	Q				V
23+50	155.0416	10.56	Q				V
23+55	155.1143	10.55	Q				V
24+ 0	155.1868	10.54	Q				V
24+ 5	155.2573	10.24	Q				V
24+10	155.3212	9.28	Q				V

24+15	155.3735	7.59	|Q	|	|	|	V|
24+20	155.4120	5.59	Q	|	|	|	V|
24+25	155.4402	4.10	Q	|	|	|	V|
24+30	155.4624	3.22	Q	|	|	|	V|
24+35	155.4807	2.66	Q	|	|	|	V|
24+40	155.4961	2.23	Q	|	|	|	V|
24+45	155.5091	1.90	Q	|	|	|	V|
24+50	155.5203	1.62	Q	|	|	|	V|
24+55	155.5299	1.39	Q	|	|	|	V|
25+ 0	155.5382	1.21	Q	|	|	|	V|
25+ 5	155.5454	1.04	Q	|	|	|	V|
25+10	155.5515	0.90	Q	|	|	|	V|
25+15	155.5569	0.77	Q	|	|	|	V|
25+20	155.5615	0.68	Q	|	|	|	V|
25+25	155.5656	0.59	Q	|	|	|	V|
25+30	155.5690	0.50	Q	|	|	|	V|
25+35	155.5719	0.42	Q	|	|	|	V|
25+40	155.5744	0.36	Q	|	|	|	V|
25+45	155.5764	0.30	Q	|	|	|	V|
25+50	155.5781	0.25	Q	|	|	|	V|
25+55	155.5795	0.20	Q	|	|	|	V|
26+ 0	155.5807	0.16	Q	|	|	|	V|
26+ 5	155.5816	0.13	Q	|	|	|	V|
26+10	155.5823	0.10	Q	|	|	|	V|
26+15	155.5828	0.08	Q	|	|	|	V|
26+20	155.5831	0.05	Q	|	|	|	V|
26+25	155.5833	0.02	Q	|	|	|	V|

TABLE 6.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A3"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.002	0.16		
	D	75.0%	75.0	92.3	16.33	0.038	3.49	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.001	0.07		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.10	0.000	0.02		
	D	90.0%	75.0	95.7	0.68	0.002	0.15	1.11	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.000	0.04		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.001	0.06		
	D	90.0%	75.0	95.7	2.69	0.006	0.60	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	10.21	0.024	2.22		
	C	90.0%	69.0	95.1	4.18	0.010	0.92		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	14.39	94.2
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.34	0.073	5.70	31.34	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.82	0.002	0.18		
	C	90.0%	69.0	95.1	23.57	0.055	5.20		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	24.39	95.1
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.96	0.007	0.60		
	C	75.0%	69.0	90.8	2.20	0.005	0.46		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	5.16	88.9
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	12.03	0.028	2.03		
	C	40.0%	69.0	80.6	32.28	0.075	6.03		
	D	40.0%	75.0	84.2	2.75	0.006	0.54	47.06	78.8
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.012	0.98		
	D	50.0%	75.0	86.5	93.29	0.216	18.71	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.011	0.95		
	D	50.0%	75.0	86.5	38.57	0.089	7.73	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	1.65	0.004	0.29		
	C	50.0%	69.0	83.5	3.49	0.008	0.68		
	D	50.0%	75.0	86.5	8.82	0.020	1.77	13.96	84.6
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.009	0.69		
	C	50.0%	69.0	83.5	1.77	0.004	0.34		
	D	50.0%	75.0	86.5	103.01	0.239	20.66	108.63	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.031	2.77	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.84	0.023	1.92	9.84	84.2
					431.34	1.000			
COMPOSITE RUN OFF INDEX - AMC II							86.0		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 6.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

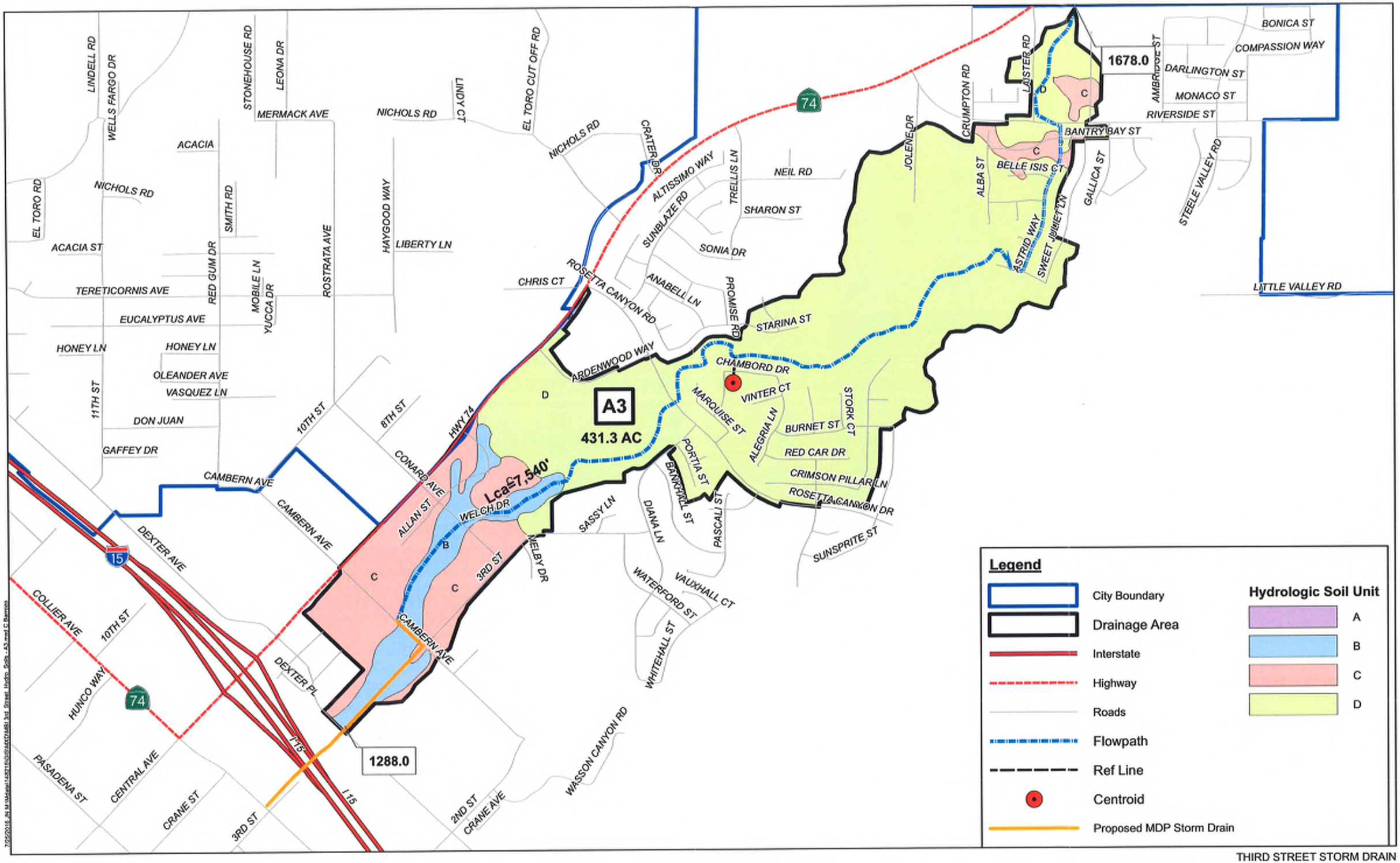
CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

WATERSHEAD "A3"					
LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.040	0.012
BUSINESS PROFESSIONAL	0.9	0.18	1.11	0.003	0.000
COMMERCIAL	0.9	0.18	3.16	0.007	0.001
COMMERCIAL MIXED-USE	0.9	0.18	14.39	0.033	0.006
COMMUNITY PARK	0.15	0.78	31.34	0.073	0.057
GENERAL COMMERCIAL	0.9	0.18	24.39	0.057	0.010
HIGH DENSITY-R	0.75	0.3	5.16	0.012	0.004
LOW DENSITY-R	0.4	0.58	47.06	0.109	0.063
LOW-MEDIUM R	0.5	0.5	98.35	0.228	0.114
MEDIUM DENSITY	0.5	0.5	43.50	0.101	0.050
MEDIUM DENSITY-R	0.5	0.5	13.96	0.032	0.016
MEDIUM LOW DENSITY	0.5	0.5	108.63	0.252	0.126
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.031	0.027
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	9.84	0.023	0.013
			431.34	1.000	
COMPOSITE LOW LOSS RATE					**0.500**

TABLE 6.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

WATERSHEAD "A3"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.040	0.0006
BUSINESS PROFESSIONAL	0.015	1.11	0.003	0.0000
COMMERCIAL	0.015	3.16	0.007	0.0001
COMMERCIAL MIXED-USE	0.015	14.39	0.033	0.0005
COMMUNITY PARK	0.035	31.34	0.073	0.0025
GENERAL COMMERCIAL	0.015	24.39	0.057	0.0008
HIGH DENSITY-R	0.015	5.16	0.012	0.0002
LOW DENSITY-R	0.02	47.06	0.109	0.0022
LOW-MEDIUM R	0.015	98.35	0.228	0.0034
MEDIUM DENSITY	0.015	43.50	0.101	0.0015
MEDIUM DENSITY-R	0.015	13.96	0.032	0.0005
MEDIUM LOW DENSITY	0.02	108.63	0.252	0.0050
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.031	0.0012
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	9.84	0.023	0.0003
		431.34	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0190**



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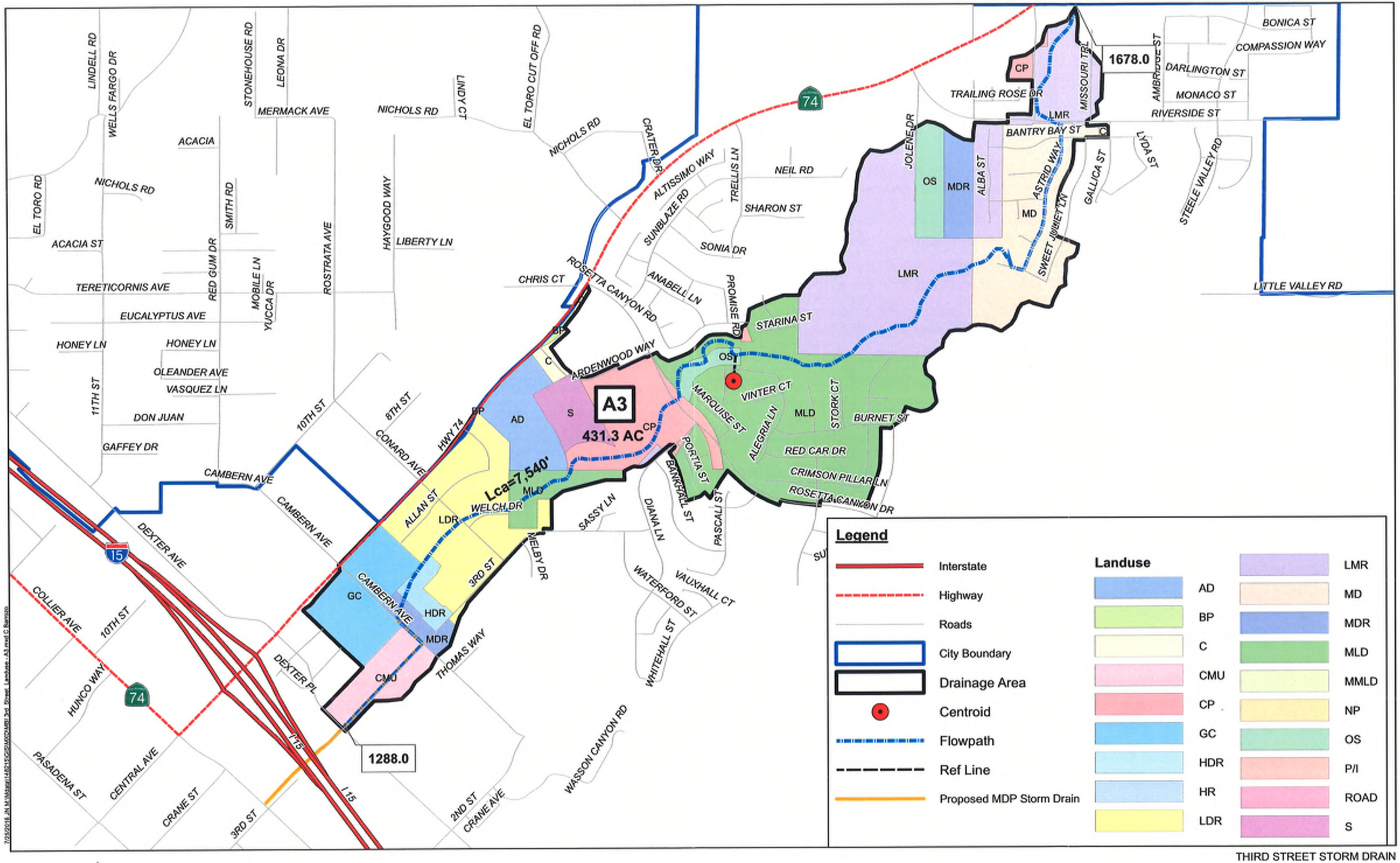
0 500 1,000 2,000 Feet

Source:

THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map - WS A3

RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 10

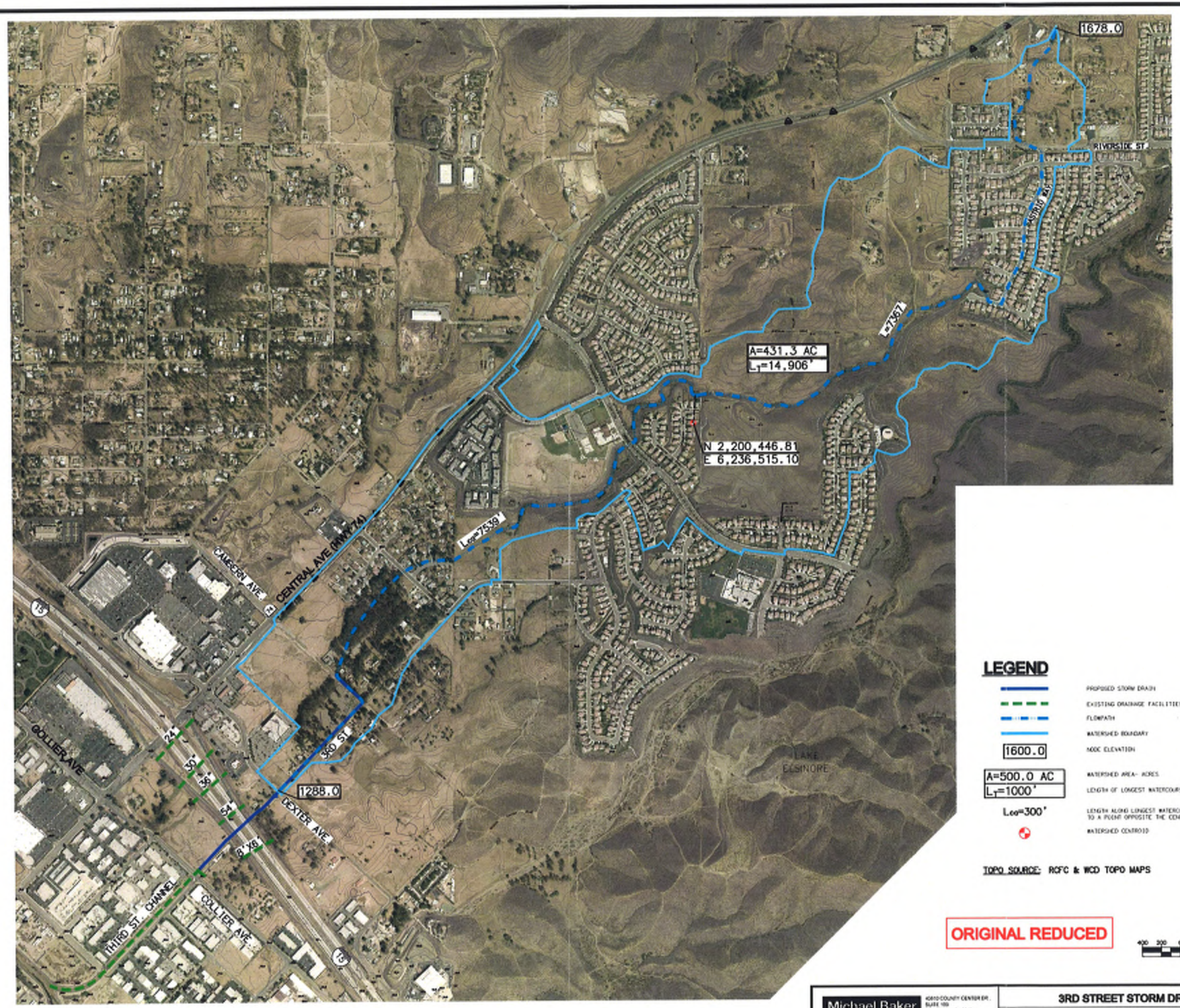


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THIRD STREET STORM DRAIN

Landuse Map - WS A3

RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 11



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- L_{CG}=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

400 200 0 400 800 1200
SCALE: 1"=400'

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41810 COUNTY CENTER DR., SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

3RD STREET STORM DRAIN - EXHIBIT 12

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A3'

H:\PSATA\148215\CADD\STRMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG 7/28/16 12:54 pm

APPENDIX E

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 06/22/16 File: 3RDSTA43100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A4 (DESIGN POINT AT 3RD ST & I-15)
100-YEAR STORM EVENT

Drainage Area = 631.03(Ac.) = 0.986 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 631.03(Ac.) = 0.986 Sq.

Length along longest watercourse = 15348.00(Ft.)
Length along longest watercourse measured to centroid = 5970.00(Ft.)
Length along longest watercourse = 2.907 Mi.
Length along longest watercourse measured to centroid = 1.131 Mi.
Difference in elevation = 404.00(Ft.)
Slope along watercourse = 138.9836 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.275 Hr.
Lag time = 16.48 Min.
25% of lag time = 4.12 Min.
40% of lag time = 6.59 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
631.03	0.95	599.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
631.03	2.30	1451.37

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.72 %
Adjusted average point rain = 2.294(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
38.480	94.90	0.900
5.180	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.150	86.20	0.500
48.360	84.90	0.050
5.600	76.00	0.150
13.360	89.50	0.050
2.750	77.40	0.400
0.230	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 631.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.027	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.005	0.000
94.6	94.6	0.070	0.900	0.013	0.079	0.001
78.5	78.5	0.262	0.150	0.226	0.050	0.011
94.9	94.9	0.066	0.900	0.013	0.061	0.001
88.9	88.9	0.143	0.750	0.046	0.008	0.000
79.2	79.2	0.253	0.400	0.162	0.105	0.017
86.3	86.3	0.172	0.500	0.095	0.240	0.023
86.2	86.2	0.173	0.500	0.095	0.069	0.007
84.3	84.3	0.195	0.500	0.107	0.025	0.003
86.2	86.2	0.173	0.500	0.095	0.201	0.019
84.9	84.9	0.188	0.050	0.180	0.077	0.014
76.0	76.0	0.291	0.150	0.252	0.009	0.002
89.5	89.5	0.136	0.050	0.130	0.021	0.003
77.4	77.4	0.275	0.400	0.176	0.004	0.001
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.016	0.002
					Sum (F) =	0.104

Area averaged mean soil loss (F) (In/Hr) = 0.104
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.480

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	30.331	2.943	18.718
2	0.167	60.662	10.846	68.977
3	0.250	90.994	18.895	120.167
4	0.333	121.325	20.224	128.615
5	0.417	151.656	12.634	80.345
6	0.500	181.987	7.242	46.058
7	0.583	212.318	4.724	30.044
8	0.667	242.650	3.687	23.447
9	0.750	272.981	2.982	18.962
10	0.833	303.312	2.466	15.684
11	0.917	333.643	1.965	12.499
12	1.000	363.974	1.768	11.246
13	1.083	394.306	1.405	8.936
14	1.167	424.637	1.215	7.724
15	1.250	454.968	0.976	6.208
16	1.333	485.299	0.931	5.922
17	1.417	515.630	0.878	5.582
18	1.500	545.961	0.696	4.425
19	1.583	576.293	0.622	3.954
20	1.667	606.624	0.544	3.461
21	1.750	636.955	0.462	2.936
22	1.833	667.286	0.405	2.575
23	1.917	697.617	0.315	2.000
24	2.000	727.949	0.303	1.929
25	2.083	758.280	0.303	1.929
26	2.167	788.611	0.303	1.929
27	2.250	818.942	0.266	1.689
			Sum = 100.000	Sum= 635.960

The following loss rate calculations reflect use of the minimum calculated loss
te 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	1.30	0.358	0.104	(0.172)	0.254
2	0.17	1.30	0.358	0.104	(0.172)	0.254
3	0.25	1.10	0.303	0.104	(0.145)	0.199
4	0.33	1.50	0.413	0.104	(0.198)	0.309
5	0.42	1.50	0.413	0.104	(0.198)	0.309
6	0.50	1.80	0.495	0.104	(0.238)	0.391
7	0.58	1.50	0.413	0.104	(0.198)	0.309
8	0.67	1.80	0.495	0.104	(0.238)	0.391
9	0.75	1.80	0.495	0.104	(0.238)	0.391
10	0.83	1.50	0.413	0.104	(0.198)	0.309
11	0.92	1.60	0.440	0.104	(0.211)	0.336
12	1.00	1.80	0.495	0.104	(0.238)	0.391
13	1.08	2.20	0.606	0.104	(0.291)	0.501
14	1.17	2.20	0.606	0.104	(0.291)	0.501
15	1.25	2.20	0.606	0.104	(0.291)	0.501
16	1.33	2.00	0.550	0.104	(0.264)	0.446
17	1.42	2.60	0.716	0.104	(0.343)	0.611
18	1.50	2.70	0.743	0.104	(0.357)	0.639
19	1.58	2.40	0.661	0.104	(0.317)	0.556
20	1.67	2.70	0.743	0.104	(0.357)	0.639
21	1.75	3.30	0.908	0.104	(0.436)	0.804
22	1.83	3.10	0.853	0.104	(0.410)	0.749
23	1.92	2.90	0.798	0.104	(0.383)	0.694
24	2.00	3.00	0.826	0.104	(0.396)	0.721
25	2.08	3.10	0.853	0.104	(0.410)	0.749
26	2.17	4.20	1.156	0.104	(0.555)	1.052
27	2.25	5.00	1.376	0.104	(0.661)	1.272

28	2.33	3.50	0.963	0.104	(0.462)	0.859
29	2.42	6.80	1.872	0.104	(0.898)	1.767
30	2.50	7.30	2.009	0.104	(0.964)	1.905
31	2.58	8.20	2.257	0.104	(1.083)	2.153
32	2.67	5.90	1.624	0.104	(0.779)	1.520
33	2.75	2.00	0.550	0.104	(0.264)	0.446
4	2.83	1.80	0.495	0.104	(0.238)	0.391
35	2.92	1.80	0.495	0.104	(0.238)	0.391
36	3.00	0.60	0.165	(0.104)	0.079	0.086

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.8

Flood volume = Effective rainfall 1.98(In)
times area 631.0(Ac.)/[(In)/(Ft.)] = 104.3(Ac.Ft)
Total soil loss = 0.31(In)
Total soil loss = 16.336(Ac.Ft)
Total rainfall = 2.29(In)
Flood volume = 4542328.3 Cubic Feet
Total soil loss = 711596.2 Cubic Feet

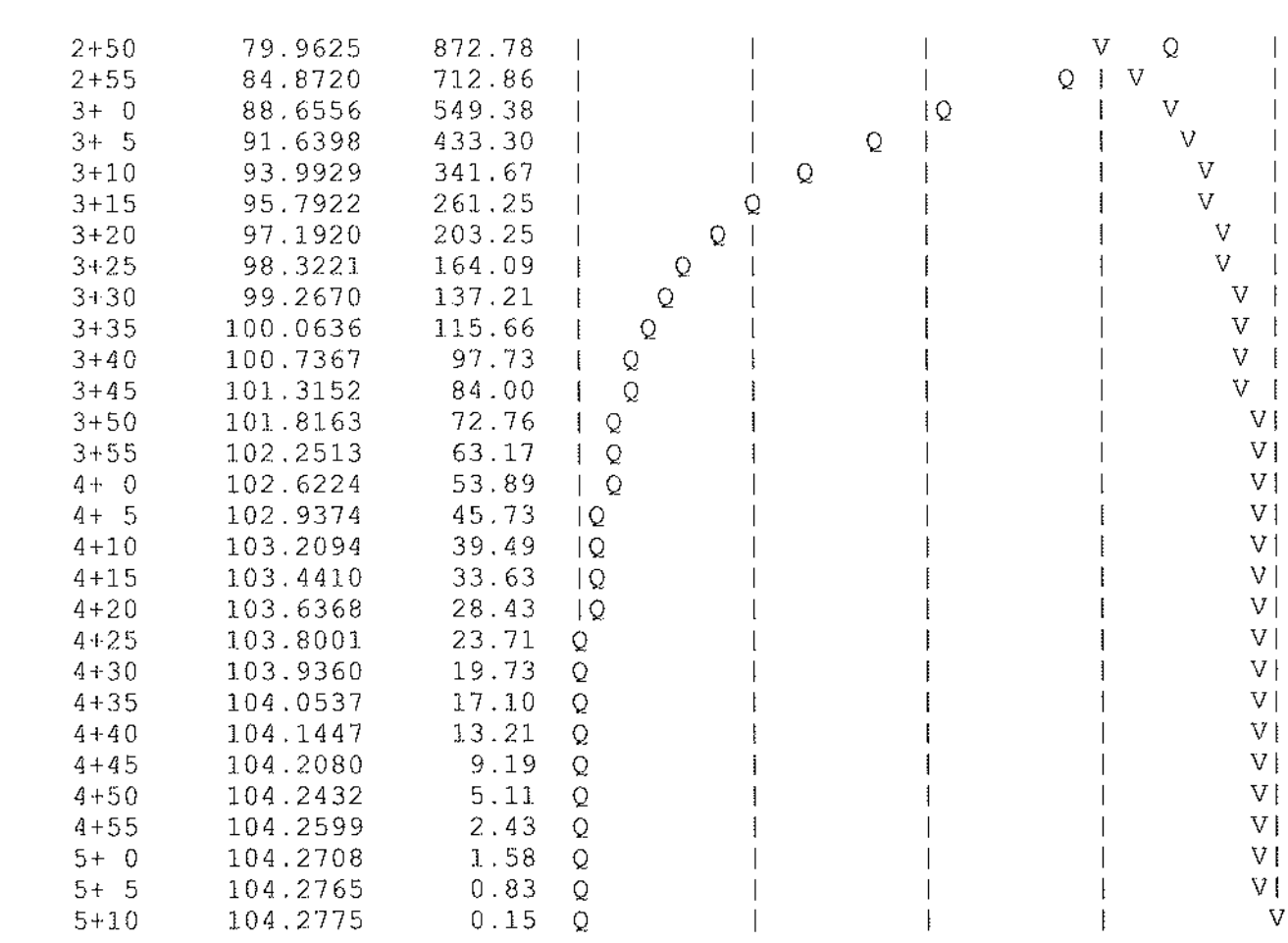
Peak flow rate of this hydrograph = 938.648(CFS)

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3 - 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)	0 250.0 500.0 750.0 1000.0
0+ 5	0.0327	4.75	Q
0+10	0.1859	22.25	Q
0+15	0.5420	51.70	V Q
0+20	1.1108	82.59	V Q
0+25	1.8268	103.96	V Q
0+30	2.6762	123.34	V Q
0+35	3.6739	144.86	V Q
0+40	4.7958	162.89	V Q
0+45	6.0183	177.52	V Q
0+50	7.3125	187.91	V Q
0+55	8.6571	195.23	V Q
1+ 0	10.0181	197.63	V Q
1+ 5	11.4144	202.74	V Q
1+10	12.9205	218.69	V Q
1+15	14.5830	241.40	V Q
1+20	16.3813	261.11	V Q
1+25	18.2670	273.80	V Q
1+30	20.2451	287.22	V Q
1+35	22.3550	306.35	V Q
1+40	24.6086	327.22	V Q
1+45	26.9803	344.37	V Q
1+50	29.4980	365.57	V Q
1+55	32.1994	392.25	V Q
2+ 0	35.0411	412.61	V Q
2+ 5	37.9400	420.92	V Q
2+10	40.9197	432.65	V Q
2+15	44.1315	466.36	V Q
2+20	47.7038	518.70	V Q
2+25	51.6910	578.95	V Q
2+30	56.1799	651.79	V Q
2+35	61.3937	757.04	V Q
2+40	67.4871	884.77	V Q
2+45	73.9516	938.65	V Q


2+50 79.9625 872.78
2+55 84.8720 712.86
3+ 0 88.6556 549.38
3+ 5 91.6398 433.30
3+10 93.9929 341.67
3+15 95.7922 261.25
3+20 97.1920 203.25
3+25 98.3221 164.09
3+30 99.2670 137.21
3+35 100.0636 115.66
3+40 100.7367 97.73
3+45 101.3152 84.00
3+50 101.8163 72.76
3+55 102.2513 63.17
4+ 0 102.6224 53.89
4+ 5 102.9374 45.73
4+10 103.2094 39.49
4+15 103.4410 33.63
4+20 103.6368 28.43
4+25 103.8001 23.71
4+30 103.9360 19.73
4+35 104.0537 17.10
4+40 104.1447 13.21
4+45 104.2080 9.19
4+50 104.2432 5.11
4+55 104.2599 2.43
5+ 0 104.2708 1.58
5+ 5 104.2765 0.83
5+10 104.2775 0.15

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 06/22/16 File: 3RDSTA46100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A4 (DESIGN POINT AT 3RD ST & I-15)
100-YEAR STORM EVENT

Drainage Area = 631.03(Ac.) = 0.986 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 631.03(Ac.) = 0.986 Sq.
M

Length along longest watercourse = 15348.00(Ft.)
Length along longest watercourse measured to centroid = 5970.00(Ft.)
Length along longest watercourse = 2.907 Mi.
Length along longest watercourse measured to centroid = 1.131 Mi.
Difference in elevation = 404.00(Ft.)
Slope along watercourse = 138.9836 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.275 Hr.
Lag time = 16.48 Min.
25% of lag time = 4.12 Min.
40% of lag time = 6.59 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
631.03	1.35	851.89

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
631.03	3.30	2082.40

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.78 %
Adjusted average point rain = 3.293(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
38.480	94.90	0.900
5.180	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.150	86.20	0.500
48.360	84.90	0.050
5.600	76.00	0.150
13.360	89.50	0.050
2.750	77.40	0.400
0.230	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 631.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.027	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.005	0.000
94.6	94.6	0.070	0.900	0.013	0.079	0.001
78.5	78.5	0.262	0.150	0.226	0.050	0.011
94.9	94.9	0.066	0.900	0.013	0.061	0.001
88.9	88.9	0.143	0.750	0.046	0.008	0.000
79.2	79.2	0.253	0.400	0.162	0.105	0.017
86.3	86.3	0.172	0.500	0.095	0.240	0.023
86.2	86.2	0.173	0.500	0.095	0.069	0.007
84.3	84.3	0.195	0.500	0.107	0.025	0.003
86.2	86.2	0.173	0.500	0.095	0.201	0.019
84.9	84.9	0.188	0.050	0.180	0.077	0.014
76.0	76.0	0.291	0.150	0.252	0.009	0.002
89.5	89.5	0.136	0.050	0.130	0.021	0.003
77.4	77.4	0.275	0.400	0.176	0.004	0.001
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.016	0.002
					Sum (F) =	0.104

Area averaged mean soil loss (F) (In/Hr) = 0.104
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.480

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	30.331	2.943	18.718
2	0.167	60.662	10.846	68.977
3	0.250	90.994	18.895	120.167
4	0.333	121.325	20.224	128.615
5	0.417	151.656	12.634	80.345
6	0.500	181.987	7.242	46.058
7	0.583	212.318	4.724	30.044
8	0.667	242.650	3.687	23.447
9	0.750	272.981	2.982	18.962
10	0.833	303.312	2.466	15.684
11	0.917	333.643	1.965	12.499
12	1.000	363.974	1.768	11.246
13	1.083	394.306	1.405	8.936
14	1.167	424.637	1.215	7.724
15	1.250	454.968	0.976	6.208
16	1.333	485.299	0.931	5.922
17	1.417	515.630	0.878	5.582
18	1.500	545.961	0.696	4.425
19	1.583	576.293	0.622	3.954
20	1.667	606.624	0.544	3.461
21	1.750	636.955	0.462	2.936
22	1.833	667.286	0.405	2.575
23	1.917	697.617	0.315	2.000
24	2.000	727.949	0.303	1.929
25	2.083	758.280	0.303	1.929
26	2.167	788.611	0.303	1.929
27	2.250	818.942	0.266	1.689
			Sum = 100.000	Sum= 635.960

The following loss rate calculations reflect use of the minimum calculated loss
te 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	0.50	0.198	(0.104)	0.095	0.103
2	0.17	0.60	0.237	0.104	(0.114)	0.133
3	0.25	0.60	0.237	0.104	(0.114)	0.133
4	0.33	0.60	0.237	0.104	(0.114)	0.133
5	0.42	0.60	0.237	0.104	(0.114)	0.133
6	0.50	0.70	0.277	0.104	(0.133)	0.172
7	0.58	0.70	0.277	0.104	(0.133)	0.172
8	0.67	0.70	0.277	0.104	(0.133)	0.172
9	0.75	0.70	0.277	0.104	(0.133)	0.172
10	0.83	0.70	0.277	0.104	(0.133)	0.172
11	0.92	0.70	0.277	0.104	(0.133)	0.172
12	1.00	0.80	0.316	0.104	(0.152)	0.212
13	1.08	0.80	0.316	0.104	(0.152)	0.212
14	1.17	0.80	0.316	0.104	(0.152)	0.212
15	1.25	0.80	0.316	0.104	(0.152)	0.212
16	1.33	0.80	0.316	0.104	(0.152)	0.212
17	1.42	0.80	0.316	0.104	(0.152)	0.212
18	1.50	0.80	0.316	0.104	(0.152)	0.212
19	1.58	0.80	0.316	0.104	(0.152)	0.212
20	1.67	0.80	0.316	0.104	(0.152)	0.212
21	1.75	0.80	0.316	0.104	(0.152)	0.212
22	1.83	0.80	0.316	0.104	(0.152)	0.212
23	1.92	0.80	0.316	0.104	(0.152)	0.212
24	2.00	0.90	0.356	0.104	(0.171)	0.251
25	2.08	0.80	0.316	0.104	(0.152)	0.212
26	2.17	0.90	0.356	0.104	(0.171)	0.251
27	2.25	0.90	0.356	0.104	(0.171)	0.251

28	2.33	0.90	0.356	0.104	(0.171)	0.251
29	2.42	0.90	0.356	0.104	(0.171)	0.251
30	2.50	0.90	0.356	0.104	(0.171)	0.251
31	2.58	0.90	0.356	0.104	(0.171)	0.251
32	2.67	0.90	0.356	0.104	(0.171)	0.251
33	2.75	1.00	0.395	0.104	(0.190)	0.291
4	2.83	1.00	0.395	0.104	(0.190)	0.291
35	2.92	1.00	0.395	0.104	(0.190)	0.291
36	3.00	1.00	0.395	0.104	(0.190)	0.291
37	3.08	1.00	0.395	0.104	(0.190)	0.291
38	3.17	1.10	0.435	0.104	(0.209)	0.330
39	3.25	1.10	0.435	0.104	(0.209)	0.330
40	3.33	1.10	0.435	0.104	(0.209)	0.330
41	3.42	1.20	0.474	0.104	(0.228)	0.370
42	3.50	1.30	0.514	0.104	(0.247)	0.409
43	3.58	1.40	0.553	0.104	(0.266)	0.449
44	3.67	1.40	0.553	0.104	(0.266)	0.449
45	3.75	1.50	0.593	0.104	(0.285)	0.488
46	3.83	1.50	0.593	0.104	(0.285)	0.488
47	3.92	1.60	0.632	0.104	(0.303)	0.528
48	4.00	1.60	0.632	0.104	(0.303)	0.528
49	4.08	1.70	0.672	0.104	(0.322)	0.567
50	4.17	1.80	0.711	0.104	(0.341)	0.607
51	4.25	1.90	0.751	0.104	(0.360)	0.647
52	4.33	2.00	0.790	0.104	(0.379)	0.686
53	4.42	2.10	0.830	0.104	(0.398)	0.726
54	4.50	2.10	0.830	0.104	(0.398)	0.726
55	4.58	2.20	0.869	0.104	(0.417)	0.765
56	4.67	2.30	0.909	0.104	(0.436)	0.805
57	4.75	2.40	0.948	0.104	(0.455)	0.844
58	4.83	2.40	0.948	0.104	(0.455)	0.844
59	4.92	2.50	0.988	0.104	(0.474)	0.884
0	5.00	2.60	1.027	0.104	(0.493)	0.923
61	5.08	3.10	1.225	0.104	(0.588)	1.121
62	5.17	3.60	1.423	0.104	(0.683)	1.318
63	5.25	3.90	1.541	0.104	(0.740)	1.437
64	5.33	4.20	1.660	0.104	(0.797)	1.555
65	5.42	4.70	1.857	0.104	(0.891)	1.753
66	5.50	5.60	2.213	0.104	(1.062)	2.109
67	5.58	1.90	0.751	0.104	(0.360)	0.647
68	5.67	0.90	0.356	0.104	(0.171)	0.251
69	5.75	0.60	0.237	0.104	(0.114)	0.133
70	5.83	0.50	0.198	(0.104)	0.095	0.103
71	5.92	0.30	0.119	(0.104)	0.057	0.062
72	6.00	0.20	0.079	(0.104)	0.038	0.041

(Loss Rate Not Used)

Sum = 100.0 Sum = 32.1

Flood volume = Effective rainfall 2.68(In)
times area 631.0(Ac.)/[(In)/(Ft.)] = 140.8(Ac.Ft)
Total soil loss = 0.61(In)
Total soil loss = 32.310(Ac.Ft)
Total rainfall = 3.29(In)
Flood volume = 6135272.1 Cubic Feet
Total soil loss = 1407439.3 Cubic Feet

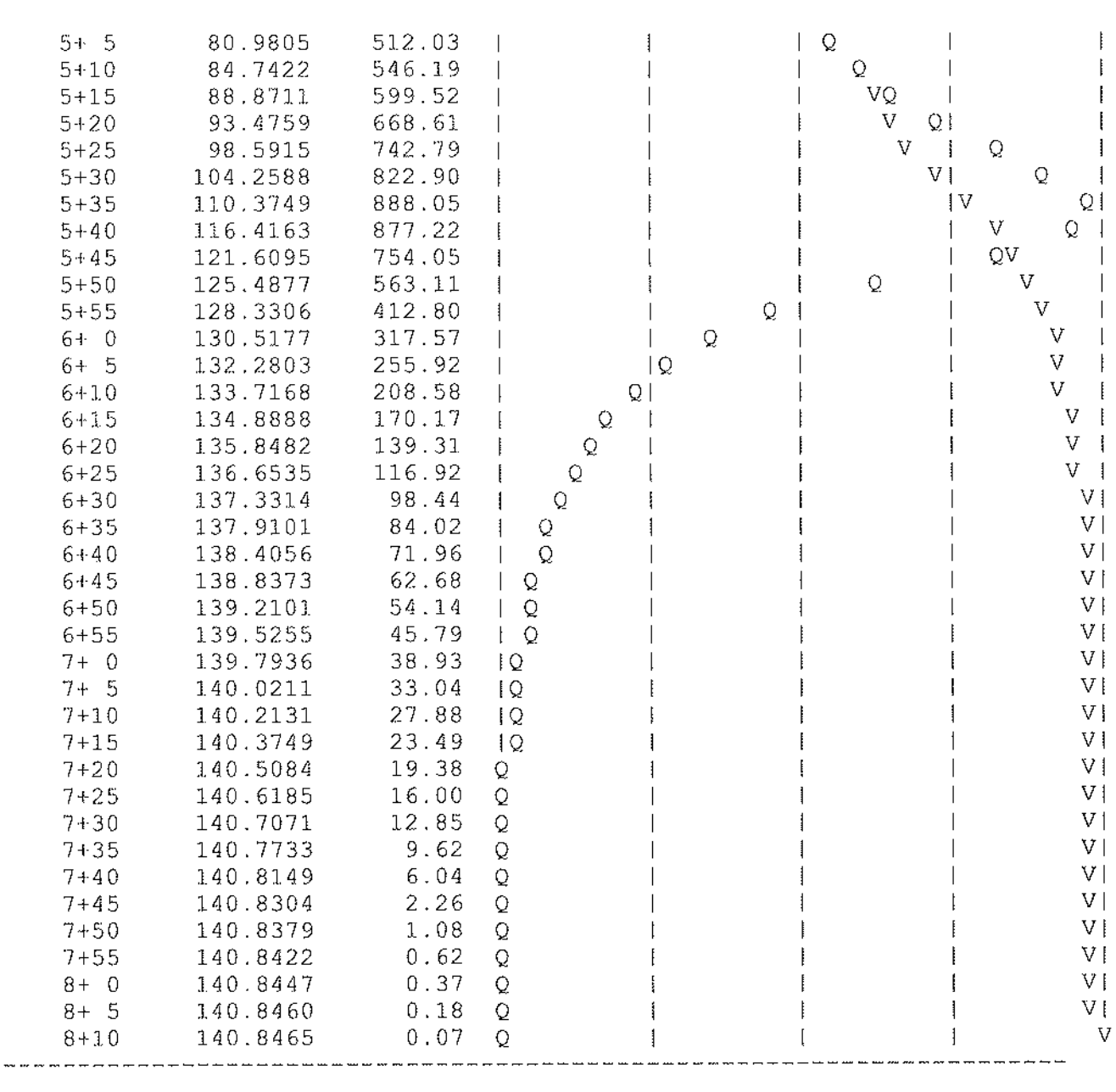
Peak flow rate of this hydrograph = 888.053(CFS)

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6 - 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	225.0	450.0	675.0	900.0
0+ 5	0.0133	1.92	Q				
0+10	0.0792	9.58	Q				
0+15	0.2446	24.01	VQ				
0+20	0.5259	40.85	VQ				
0+25	0.8907	52.98	V Q				
0+30	1.3100	60.87	V Q				
0+35	1.7788	68.08	V Q				
0+40	2.3032	76.14	V Q				
0+45	2.8809	83.88	V Q				
0+50	3.4955	89.24	V Q				
0+55	4.1348	92.82	V Q				
1+ 0	4.7978	96.28	V Q				
1+ 5	5.4947	101.19	V Q				
1+10	6.2368	107.75	V Q				
1+15	7.0242	114.33	V Q				
1+20	7.8424	118.80	V Q				
1+25	8.6813	121.81	V Q				
1+30	9.5352	123.98	V Q				
1+35	10.4012	125.75	V Q				
1+40	11.2774	127.22	V Q				
1+45	12.1622	128.48	V Q				
1+50	13.0544	129.55	V Q				
1+55	13.9528	130.45	V Q				
2+ 0	14.8616	131.96	VQ				
2+ 5	15.7889	134.64	VQ				
2+10	16.7395	138.03	V Q				
2+15	17.7151	141.65	VQ				
2+20	18.7127	144.85	VQ				
2+25	19.7376	148.83	VQ				
2+30	20.7817	151.60	VQ				
2+35	21.8381	153.38	Q				
2+40	22.9026	154.57	Q				
2+45	23.9784	156.21	Q				
2+50	25.0778	159.64	Q				
2+55	26.2145	165.04	Q				
3+ 0	27.3894	170.60	Q				
3+ 5	28.5895	174.25	QV				
3+10	29.8096	177.17	QV				
3+15	31.0588	181.38	Q				
3+20	32.3487	187.29	QV				
3+25	33.6851	194.05	QV				
3+30	35.0730	201.52	QV				
3+35	36.5344	212.21	QV				
3+40	38.0946	226.54	Q				
3+45	39.7591	241.69	QV				
3+50	41.5198	255.65	Q				
3+55	43.3675	268.29	QV				
4+ 0	45.3017	280.84	Q				
4+ 5	47.3204	293.12	Q				
4+10	49.4304	306.38	QV				
4+15	51.6432	321.30	Q				
4+20	53.9804	339.35	Q				
4+25	56.4557	359.41	QV				
4+30	59.0724	379.95	Q				
4+35	61.8211	399.11	Q				
4+40	64.6920	416.85	Q				
4+45	67.6857	434.69	Q				
4+50	70.8134	454.13	Q				
4+55	74.0722	473.18	Q				
5+ 0	77.4541	491.05	Q				



5+ 5	80.9805	512.03	Q
5+10	84.7422	546.19	Q
5+15	88.8711	599.52	VQ
5+20	93.4759	668.61	V Q
5+25	98.5915	742.79	V Q
5+30	104.2588	822.90	V Q
5+35	110.3749	888.05	V Q
5+40	116.4163	877.22	V Q
5+45	121.6095	754.05	QV
5+50	125.4877	563.11	Q V
5+55	128.3306	412.80	Q V
6+ 0	130.5177	317.57	Q V
6+ 5	132.2803	255.92	Q V
6+10	133.7168	208.58	Q V
6+15	134.8888	170.17	Q V
6+20	135.8482	139.31	Q V
6+25	136.6535	116.92	Q V
6+30	137.3314	98.44	Q V
6+35	137.9101	84.02	Q V
6+40	138.4056	71.96	Q V
6+45	138.8373	62.68	Q V
6+50	139.2101	54.14	Q V
6+55	139.5255	45.79	Q V
7+ 0	139.7936	38.93	Q V
7+ 5	140.0211	33.04	Q V
7+10	140.2131	27.88	Q V
7+15	140.3749	23.49	Q V
7+20	140.5084	19.38	Q V
7+25	140.6185	16.00	Q V
7+30	140.7071	12.85	Q V
7+35	140.7733	9.62	Q V
7+40	140.8149	6.04	Q V
7+45	140.8304	2.26	Q V
7+50	140.8379	1.08	Q V
7+55	140.8422	0.62	Q V
8+ 0	140.8447	0.37	Q V
8+ 5	140.8460	0.18	Q V
8+10	140.8465	0.07	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 06/22/16 File: 3RDSTA424100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A4 (DESIGN POINT AT 3RD ST & I-15)
100-YEAR STORM EVENT

Drainage Area = 631.03(Ac.) = 0.986 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 631.03(Ac.) = 0.986 Sq.

Length along longest watercourse = 15348.00(Ft.)
Length along longest watercourse measured to centroid = 5970.00(Ft.)
Length along longest watercourse = 2.907 Mi.
Length along longest watercourse measured to centroid = 1.131 Mi.
Difference in elevation = 404.00(Ft.)
Slope along watercourse = 138.9836 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.275 Hr.
Lag time = 16.48 Min.
25% of lag time = 4.12 Min.
40% of lag time = 6.59 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]
631.03	2.50	1577.57

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
631.03	6.00	3786.18

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.88 %
Adjusted average point rain = 5.993(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
49.780	94.60	0.900
31.580	78.50	0.150
38.480	94.90	0.900
5.180	88.90	0.750
66.120	79.20	0.400
151.710	86.30	0.500
43.500	86.20	0.500
16.030	84.30	0.500
127.150	86.20	0.500
48.360	84.90	0.050
5.600	76.00	0.150
13.360	89.50	0.050
2.750	77.40	0.400
0.230	95.70	0.900
9.840	84.20	0.400

Total Area Entered = 631.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.027	0.001
94.4	94.4	0.073	0.900	0.014	0.002	0.000
95.4	95.4	0.060	0.900	0.011	0.005	0.000
94.6	94.6	0.070	0.900	0.013	0.079	0.001
78.5	78.5	0.262	0.150	0.226	0.050	0.011
94.9	94.9	0.066	0.900	0.013	0.061	0.001
88.9	88.9	0.143	0.750	0.046	0.008	0.000
79.2	79.2	0.253	0.400	0.162	0.105	0.017
86.3	86.3	0.172	0.500	0.095	0.240	0.023
86.2	86.2	0.173	0.500	0.095	0.069	0.007
84.3	84.3	0.195	0.500	0.107	0.025	0.003
86.2	86.2	0.173	0.500	0.095	0.201	0.019
84.9	84.9	0.188	0.050	0.180	0.077	0.014
76.0	76.0	0.291	0.150	0.252	0.009	0.002
89.5	89.5	0.136	0.050	0.130	0.021	0.003
77.4	77.4	0.275	0.400	0.176	0.004	0.001
95.7	95.7	0.056	0.900	0.011	0.000	0.000
84.2	84.2	0.196	0.400	0.126	0.016	0.002
					Sum (F) =	0.104

Area averaged mean soil loss (F) (In/Hr) = 0.104
Minimum soil loss rate ((In/Hr)) = 0.052
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.480

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	30.331	2.943	18.718
2	0.167	60.662	10.846	68.977
3	0.250	90.994	18.895	120.167
4	0.333	121.325	20.224	128.615
5	0.417	151.656	12.634	80.345
6	0.500	181.987	7.242	46.058
7	0.583	212.318	4.724	30.044
8	0.667	242.650	3.687	23.447
9	0.750	272.981	2.982	18.962
10	0.833	303.312	2.466	15.684
11	0.917	333.643	1.965	12.499
12	1.000	363.974	1.768	11.246
13	1.083	394.306	1.405	8.936
14	1.167	424.637	1.215	7.724
15	1.250	454.968	0.976	6.208
16	1.333	485.299	0.931	5.922
17	1.417	515.630	0.878	5.582
18	1.500	545.961	0.696	4.425
19	1.583	576.293	0.622	3.954
20	1.667	606.624	0.544	3.461
21	1.750	636.955	0.462	2.936
22	1.833	667.286	0.405	2.575
23	1.917	697.617	0.315	2.000
24	2.000	727.949	0.303	1.929
25	2.083	758.280	0.303	1.929
26	2.167	788.611	0.303	1.929
27	2.250	818.942	0.266	1.689
			Sum = 100.000	Sum= 635.960

The following loss rate calculations reflect use of the minimum calculated loss
te 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	0.048	(0.185)	0.023	0.025
2	0.17	0.07	0.048	(0.184)	0.023	0.025
3	0.25	0.07	0.048	(0.183)	0.023	0.025
4	0.33	0.10	0.072	(0.183)	0.035	0.037
5	0.42	0.10	0.072	(0.182)	0.035	0.037
6	0.50	0.10	0.072	(0.181)	0.035	0.037
7	0.58	0.10	0.072	(0.181)	0.035	0.037
8	0.67	0.10	0.072	(0.180)	0.035	0.037
9	0.75	0.10	0.072	(0.179)	0.035	0.037
10	0.83	0.13	0.096	(0.178)	0.046	0.050
11	0.92	0.13	0.096	(0.178)	0.046	0.050
12	1.00	0.13	0.096	(0.177)	0.046	0.050
13	1.08	0.10	0.072	(0.176)	0.035	0.037
14	1.17	0.10	0.072	(0.176)	0.035	0.037
15	1.25	0.10	0.072	(0.175)	0.035	0.037
16	1.33	0.10	0.072	(0.174)	0.035	0.037
17	1.42	0.10	0.072	(0.174)	0.035	0.037
18	1.50	0.10	0.072	(0.173)	0.035	0.037
19	1.58	0.10	0.072	(0.172)	0.035	0.037
20	1.67	0.10	0.072	(0.171)	0.035	0.037
21	1.75	0.10	0.072	(0.171)	0.035	0.037
22	1.83	0.13	0.096	(0.170)	0.046	0.050
23	1.92	0.13	0.096	(0.169)	0.046	0.050
24	2.00	0.13	0.096	(0.169)	0.046	0.050
25	2.08	0.13	0.096	(0.168)	0.046	0.050
26	2.17	0.13	0.096	(0.167)	0.046	0.050
27	2.25	0.13	0.096	(0.167)	0.046	0.050

28	2.33	0.13	0.096	(0.166)	0.046	0.050
29	2.42	0.13	0.096	(0.165)	0.046	0.050
30	2.50	0.13	0.096	(0.165)	0.046	0.050
31	2.58	0.17	0.120	(0.164)	0.058	0.062
32	2.67	0.17	0.120	(0.163)	0.058	0.062
33	2.75	0.17	0.120	(0.163)	0.058	0.062
4	2.83	0.17	0.120	(0.162)	0.058	0.062
35	2.92	0.17	0.120	(0.161)	0.058	0.062
36	3.00	0.17	0.120	(0.161)	0.058	0.062
37	3.08	0.17	0.120	(0.160)	0.058	0.062
38	3.17	0.17	0.120	(0.159)	0.058	0.062
39	3.25	0.17	0.120	(0.159)	0.058	0.062
40	3.33	0.17	0.120	(0.158)	0.058	0.062
41	3.42	0.17	0.120	(0.157)	0.058	0.062
42	3.50	0.17	0.120	(0.157)	0.058	0.062
43	3.58	0.17	0.120	(0.156)	0.058	0.062
44	3.67	0.17	0.120	(0.155)	0.058	0.062
45	3.75	0.17	0.120	(0.155)	0.058	0.062
46	3.83	0.20	0.144	(0.154)	0.069	0.075
47	3.92	0.20	0.144	(0.153)	0.069	0.075
48	4.00	0.20	0.144	(0.153)	0.069	0.075
49	4.08	0.20	0.144	(0.152)	0.069	0.075
50	4.17	0.20	0.144	(0.151)	0.069	0.075
51	4.25	0.20	0.144	(0.151)	0.069	0.075
52	4.33	0.23	0.168	(0.150)	0.081	0.087
53	4.42	0.23	0.168	(0.150)	0.081	0.087
54	4.50	0.23	0.168	(0.149)	0.081	0.087
55	4.58	0.23	0.168	(0.148)	0.081	0.087
56	4.67	0.23	0.168	(0.148)	0.081	0.087
57	4.75	0.23	0.168	(0.147)	0.081	0.087
58	4.83	0.27	0.192	(0.146)	0.092	0.100
59	4.92	0.27	0.192	(0.146)	0.092	0.100
0	5.00	0.27	0.192	(0.145)	0.092	0.100
61	5.08	0.20	0.144	(0.144)	0.069	0.075
62	5.17	0.20	0.144	(0.144)	0.069	0.075
63	5.25	0.20	0.144	(0.143)	0.069	0.075
64	5.33	0.23	0.168	(0.143)	0.081	0.087
65	5.42	0.23	0.168	(0.142)	0.081	0.087
66	5.50	0.23	0.168	(0.141)	0.081	0.087
67	5.58	0.27	0.192	(0.141)	0.092	0.100
68	5.67	0.27	0.192	(0.140)	0.092	0.100
69	5.75	0.27	0.192	(0.139)	0.092	0.100
70	5.83	0.27	0.192	(0.139)	0.092	0.100
71	5.92	0.27	0.192	(0.138)	0.092	0.100
72	6.00	0.27	0.192	(0.138)	0.092	0.100
73	6.08	0.30	0.216	(0.137)	0.104	0.112
74	6.17	0.30	0.216	(0.136)	0.104	0.112
75	6.25	0.30	0.216	(0.136)	0.104	0.112
76	6.33	0.30	0.216	(0.135)	0.104	0.112
77	6.42	0.30	0.216	(0.135)	0.104	0.112
78	6.50	0.30	0.216	(0.134)	0.104	0.112
79	6.58	0.33	0.240	(0.133)	0.115	0.125
80	6.67	0.33	0.240	(0.133)	0.115	0.125
81	6.75	0.33	0.240	(0.132)	0.115	0.125
82	6.83	0.33	0.240	(0.132)	0.115	0.125
83	6.92	0.33	0.240	(0.131)	0.115	0.125
84	7.00	0.33	0.240	(0.130)	0.115	0.125
85	7.08	0.33	0.240	(0.130)	0.115	0.125
6	7.17	0.33	0.240	(0.129)	0.115	0.125
87	7.25	0.33	0.240	(0.129)	0.115	0.125
88	7.33	0.37	0.264	(0.128)	0.127	0.137
89	7.42	0.37	0.264	(0.127)	0.127	0.137
90	7.50	0.37	0.264	(0.127)	0.127	0.137

91	7.58	0.40	0.288	0.126	(0.138)	0.161
92	7.67	0.40	0.288	0.126	(0.138)	0.162
93	7.75	0.40	0.288	0.125	(0.138)	0.163
94	7.83	0.43	0.312	0.125	(0.150)	0.187
95	7.92	0.43	0.312	0.124	(0.150)	0.188
96	8.00	0.43	0.312	0.123	(0.150)	0.188
7	8.08	0.50	0.360	0.123	(0.173)	0.237
98	8.17	0.50	0.360	0.122	(0.173)	0.237
99	8.25	0.50	0.360	0.122	(0.173)	0.238
100	8.33	0.50	0.360	0.121	(0.173)	0.238
101	8.42	0.50	0.360	0.121	(0.173)	0.239
102	8.50	0.50	0.360	0.120	(0.173)	0.240
103	8.58	0.53	0.384	0.119	(0.184)	0.264
104	8.67	0.53	0.384	0.119	(0.184)	0.265
105	8.75	0.53	0.384	0.118	(0.184)	0.265
106	8.83	0.57	0.407	0.118	(0.196)	0.290
107	8.92	0.57	0.407	0.117	(0.196)	0.290
108	9.00	0.57	0.407	0.117	(0.196)	0.291
109	9.08	0.63	0.455	0.116	(0.219)	0.339
110	9.17	0.63	0.455	0.116	(0.219)	0.340
111	9.25	0.63	0.455	0.115	(0.219)	0.340
112	9.33	0.67	0.479	0.114	(0.230)	0.365
113	9.42	0.67	0.479	0.114	(0.230)	0.366
114	9.50	0.67	0.479	0.113	(0.230)	0.366
115	9.58	0.70	0.503	0.113	(0.242)	0.391
116	9.67	0.70	0.503	0.112	(0.242)	0.391
117	9.75	0.70	0.503	0.112	(0.242)	0.392
118	9.83	0.73	0.527	0.111	(0.253)	0.416
119	9.92	0.73	0.527	0.111	(0.253)	0.417
120	10.00	0.73	0.527	0.110	(0.253)	0.417
121	10.08	0.50	0.360	0.110	(0.173)	0.250
122	10.17	0.50	0.360	0.109	(0.173)	0.251
3	10.25	0.50	0.360	0.108	(0.173)	0.251
124	10.33	0.50	0.360	0.108	(0.173)	0.252
125	10.42	0.50	0.360	0.107	(0.173)	0.252
126	10.50	0.50	0.360	0.107	(0.173)	0.253
127	10.58	0.67	0.479	0.106	(0.230)	0.373
128	10.67	0.67	0.479	0.106	(0.230)	0.374
129	10.75	0.67	0.479	0.105	(0.230)	0.374
130	10.83	0.67	0.479	0.105	(0.230)	0.375
131	10.92	0.67	0.479	0.104	(0.230)	0.375
132	11.00	0.67	0.479	0.104	(0.230)	0.376
133	11.08	0.63	0.455	0.103	(0.219)	0.352
134	11.17	0.63	0.455	0.103	(0.219)	0.353
135	11.25	0.63	0.455	0.102	(0.219)	0.353
136	11.33	0.63	0.455	0.102	(0.219)	0.354
137	11.42	0.63	0.455	0.101	(0.219)	0.354
138	11.50	0.63	0.455	0.101	(0.219)	0.355
139	11.58	0.57	0.407	0.100	(0.196)	0.307
140	11.67	0.57	0.407	0.100	(0.196)	0.308
141	11.75	0.57	0.407	0.099	(0.196)	0.308
142	11.83	0.60	0.431	0.099	(0.207)	0.333
143	11.92	0.60	0.431	0.098	(0.207)	0.333
144	12.00	0.60	0.431	0.098	(0.207)	0.334
145	12.08	0.83	0.599	0.097	(0.288)	0.502
146	12.17	0.83	0.599	0.097	(0.288)	0.502
147	12.25	0.83	0.599	0.096	(0.288)	0.503
8	12.33	0.87	0.623	0.096	(0.299)	0.527
9	12.42	0.87	0.623	0.095	(0.299)	0.528
150	12.50	0.87	0.623	0.095	(0.299)	0.528
151	12.58	0.93	0.671	0.094	(0.322)	0.577
152	12.67	0.93	0.671	0.094	(0.322)	0.577
153	12.75	0.93	0.671	0.093	(0.322)	0.578

154	12.83	0.97	0.695	0.093	(0.334)	0.602
155	12.92	0.97	0.695	0.093	(0.334)	0.603
156	13.00	0.97	0.695	0.092	(0.334)	0.603
157	13.08	1.13	0.815	0.092	(0.391)	0.723
158	13.17	1.13	0.815	0.091	(0.391)	0.724
159	13.25	1.13	0.815	0.091	(0.391)	0.724
)	13.33	1.13	0.815	0.090	(0.391)	0.725
161	13.42	1.13	0.815	0.090	(0.391)	0.725
162	13.50	1.13	0.815	0.089	(0.391)	0.726
163	13.58	0.77	0.551	0.089	(0.265)	0.462
164	13.67	0.77	0.551	0.088	(0.265)	0.463
165	13.75	0.77	0.551	0.088	(0.265)	0.463
166	13.83	0.77	0.551	0.087	(0.265)	0.464
167	13.92	0.77	0.551	0.087	(0.265)	0.464
168	14.00	0.77	0.551	0.087	(0.265)	0.465
169	14.08	0.90	0.647	0.086	(0.311)	0.561
170	14.17	0.90	0.647	0.086	(0.311)	0.561
171	14.25	0.90	0.647	0.085	(0.311)	0.562
172	14.33	0.87	0.623	0.085	(0.299)	0.538
173	14.42	0.87	0.623	0.084	(0.299)	0.539
174	14.50	0.87	0.623	0.084	(0.299)	0.539
175	14.58	0.87	0.623	0.084	(0.299)	0.540
176	14.67	0.87	0.623	0.083	(0.299)	0.540
177	14.75	0.87	0.623	0.083	(0.299)	0.541
178	14.83	0.83	0.599	0.082	(0.288)	0.517
179	14.92	0.83	0.599	0.082	(0.288)	0.517
180	15.00	0.83	0.599	0.081	(0.288)	0.518
181	15.08	0.80	0.575	0.081	(0.276)	0.494
182	15.17	0.80	0.575	0.081	(0.276)	0.495
183	15.25	0.80	0.575	0.080	(0.276)	0.495
184	15.33	0.77	0.551	0.080	(0.265)	0.472
185	15.42	0.77	0.551	0.079	(0.265)	0.472
6	15.50	0.77	0.551	0.079	(0.265)	0.472
187	15.58	0.63	0.455	0.079	(0.219)	0.377
188	15.67	0.63	0.455	0.078	(0.219)	0.377
189	15.75	0.63	0.455	0.078	(0.219)	0.378
190	15.83	0.63	0.455	0.077	(0.219)	0.378
191	15.92	0.63	0.455	0.077	(0.219)	0.378
192	16.00	0.63	0.455	0.077	(0.219)	0.379
193	16.08	0.13	0.096	(0.076)	0.046	0.050
194	16.17	0.13	0.096	(0.076)	0.046	0.050
195	16.25	0.13	0.096	(0.075)	0.046	0.050
196	16.33	0.13	0.096	(0.075)	0.046	0.050
197	16.42	0.13	0.096	(0.075)	0.046	0.050
198	16.50	0.13	0.096	(0.074)	0.046	0.050
199	16.58	0.10	0.072	(0.074)	0.035	0.037
200	16.67	0.10	0.072	(0.073)	0.035	0.037
201	16.75	0.10	0.072	(0.073)	0.035	0.037
202	16.83	0.10	0.072	(0.073)	0.035	0.037
203	16.92	0.10	0.072	(0.072)	0.035	0.037
204	17.00	0.10	0.072	(0.072)	0.035	0.037
205	17.08	0.17	0.120	(0.072)	0.058	0.062
206	17.17	0.17	0.120	(0.071)	0.058	0.062
207	17.25	0.17	0.120	(0.071)	0.058	0.062
208	17.33	0.17	0.120	(0.071)	0.058	0.062
209	17.42	0.17	0.120	(0.070)	0.058	0.062
210	17.50	0.17	0.120	(0.070)	0.058	0.062
211	17.58	0.17	0.120	(0.070)	0.058	0.062
212	17.67	0.17	0.120	(0.069)	0.058	0.062
213	17.75	0.17	0.120	(0.069)	0.058	0.062
214	17.83	0.13	0.096	(0.068)	0.046	0.050
215	17.92	0.13	0.096	(0.068)	0.046	0.050
216	18.00	0.13	0.096	(0.068)	0.046	0.050

217	18.08	0.13	0.096	(0.067)	0.046	0.050
218	18.17	0.13	0.096	(0.067)	0.046	0.050
219	18.25	0.13	0.096	(0.067)	0.046	0.050
220	18.33	0.13	0.096	(0.066)	0.046	0.050
221	18.42	0.13	0.096	(0.066)	0.046	0.050
222	18.50	0.13	0.096	(0.066)	0.046	0.050
3	18.58	0.10	0.072	(0.066)	0.035	0.037
224	18.67	0.10	0.072	(0.065)	0.035	0.037
225	18.75	0.10	0.072	(0.065)	0.035	0.037
226	18.83	0.07	0.048	(0.065)	0.023	0.025
227	18.92	0.07	0.048	(0.064)	0.023	0.025
228	19.00	0.07	0.048	(0.064)	0.023	0.025
229	19.08	0.10	0.072	(0.064)	0.035	0.037
230	19.17	0.10	0.072	(0.063)	0.035	0.037
231	19.25	0.10	0.072	(0.063)	0.035	0.037
232	19.33	0.13	0.096	(0.063)	0.046	0.050
233	19.42	0.13	0.096	(0.062)	0.046	0.050
234	19.50	0.13	0.096	(0.062)	0.046	0.050
235	19.58	0.10	0.072	(0.062)	0.035	0.037
236	19.67	0.10	0.072	(0.062)	0.035	0.037
237	19.75	0.10	0.072	(0.061)	0.035	0.037
238	19.83	0.07	0.048	(0.061)	0.023	0.025
239	19.92	0.07	0.048	(0.061)	0.023	0.025
240	20.00	0.07	0.048	(0.061)	0.023	0.025
241	20.08	0.10	0.072	(0.060)	0.035	0.037
242	20.17	0.10	0.072	(0.060)	0.035	0.037
243	20.25	0.10	0.072	(0.060)	0.035	0.037
244	20.33	0.10	0.072	(0.059)	0.035	0.037
245	20.42	0.10	0.072	(0.059)	0.035	0.037
246	20.50	0.10	0.072	(0.059)	0.035	0.037
247	20.58	0.10	0.072	(0.059)	0.035	0.037
248	20.67	0.10	0.072	(0.058)	0.035	0.037
9	20.75	0.10	0.072	(0.058)	0.035	0.037
250	20.83	0.07	0.048	(0.058)	0.023	0.025
251	20.92	0.07	0.048	(0.058)	0.023	0.025
252	21.00	0.07	0.048	(0.058)	0.023	0.025
253	21.08	0.10	0.072	(0.057)	0.035	0.037
254	21.17	0.10	0.072	(0.057)	0.035	0.037
255	21.25	0.10	0.072	(0.057)	0.035	0.037
256	21.33	0.07	0.048	(0.057)	0.023	0.025
257	21.42	0.07	0.048	(0.056)	0.023	0.025
258	21.50	0.07	0.048	(0.056)	0.023	0.025
259	21.58	0.10	0.072	(0.056)	0.035	0.037
260	21.67	0.10	0.072	(0.056)	0.035	0.037
261	21.75	0.10	0.072	(0.056)	0.035	0.037
262	21.83	0.07	0.048	(0.055)	0.023	0.025
263	21.92	0.07	0.048	(0.055)	0.023	0.025
264	22.00	0.07	0.048	(0.055)	0.023	0.025
265	22.08	0.10	0.072	(0.055)	0.035	0.037
266	22.17	0.10	0.072	(0.055)	0.035	0.037
267	22.25	0.10	0.072	(0.055)	0.035	0.037
268	22.33	0.07	0.048	(0.054)	0.023	0.025
269	22.42	0.07	0.048	(0.054)	0.023	0.025
270	22.50	0.07	0.048	(0.054)	0.023	0.025
271	22.58	0.07	0.048	(0.054)	0.023	0.025
272	22.67	0.07	0.048	(0.054)	0.023	0.025
273	22.75	0.07	0.048	(0.054)	0.023	0.025
274	22.83	0.07	0.048	(0.053)	0.023	0.025
5	22.92	0.07	0.048	(0.053)	0.023	0.025
276	23.00	0.07	0.048	(0.053)	0.023	0.025
277	23.08	0.07	0.048	(0.053)	0.023	0.025
278	23.17	0.07	0.048	(0.053)	0.023	0.025
279	23.25	0.07	0.048	(0.053)	0.023	0.025

280	23.33	0.07	0.048	(0.053)	0.023	0.025
281	23.42	0.07	0.048	(0.053)	0.023	0.025
282	23.50	0.07	0.048	(0.052)	0.023	0.025
283	23.58	0.07	0.048	(0.052)	0.023	0.025
284	23.67	0.07	0.048	(0.052)	0.023	0.025
285	23.75	0.07	0.048	(0.052)	0.023	0.025
6	23.83	0.07	0.048	(0.052)	0.023	0.025
287	23.92	0.07	0.048	(0.052)	0.023	0.025
288	24.00	0.07	0.048	(0.052)	0.023	0.025

(Loss Rate Not Used)

Sum = 100.0 Sum = 52.2

Flood volume = Effective rainfall 4.35(In)
times area 631.0(Ac.)/[(In)/(Ft.)] = 228.8(Ac.Ft)
Total soil loss = 1.64(In)
Total soil loss = 86.372(Ac.Ft)
Total rainfall = 5.99(In)
Flood volume = 9964515.0 Cubic Feet
Total soil loss = 3762379.4 Cubic Feet

Peak flow rate of this hydrograph = 430.024(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	125.0	250.0	375.0	500.0
0+ 5	0.0032	0.47	Q				
0+10	0.0183	2.19	Q				
0+15	0.0540	5.18	Q				
0+20	0.1134	8.63	Q				
0+25	0.1925	11.49	Q				
0+30	0.2899	14.14	VQ				
0+35	0.4035	16.49	VQ				
0+40	0.5280	18.08	VQ				
0+45	0.6597	19.12	VQ				
0+50	0.7983	20.12	VQ				
0+55	0.9470	21.59	VQ				
1+ 0	1.1095	23.60	VQ				
1+ 5	1.2844	25.39	V Q				
1+10	1.4627	25.88	V Q				
1+15	1.6366	25.25	V Q				
1+20	1.8038	24.28	VQ				
1+25	1.9678	23.81	VQ				
1+30	2.1308	23.66	VQ				
1+35	2.2937	23.65	VQ				
1+40	2.4567	23.67	VQ				
1+45	2.6200	23.71	VQ				
1+50	2.7850	23.97	VQ				
1+55	2.9563	24.86	VQ				
2+ 0	3.1380	26.38	V Q				
2+ 5	3.3310	28.03	V Q				
2+10	3.5312	29.08	V Q				
2+15	3.7358	29.70	V Q				
2+20	3.9428	30.07	V Q				
2+25	4.1519	30.36	V Q				
2+30	4.3627	30.60	V Q				
2+35	4.5762	31.01	V Q				
2+40	4.7967	32.01	V Q				
2+45	5.0283	33.63	V Q				

2+50	5.2717	35.34	V Q				
2+55	5.5227	36.44	V Q				
3+ 0	5.7781	37.09	VQ				
3+ 5	6.0365	37.51	V Q				
3+10	6.2971	37.85	V Q				
3+15	6.5597	38.12	V Q				
3+20	6.8239	38.37	V Q				
3+25	7.0895	38.57	V Q				
3+30	7.3563	38.74	V Q				
3+35	7.6241	38.89	V Q				
3+40	7.8928	39.01	V Q				
3+45	8.1621	39.11	V Q				
3+50	8.4337	39.44	V Q				
3+55	8.7119	40.39	V Q				
4+ 0	9.0010	41.97	V Q				
4+ 5	9.3014	43.62	V Q				
4+10	9.6090	44.67	V Q				
4+15	9.9209	45.28	V Q				
4+20	10.2371	45.92	V Q				
4+25	10.5614	47.10	V Q				
4+30	10.8979	48.85	V Q				
4+35	11.2469	50.68	V Q				
4+40	11.6041	51.86	V Q				
4+45	11.9663	52.60	V Q				
4+50	12.3335	53.32	V Q				
4+55	12.7093	54.56	V Q				
5+ 0	13.0976	56.38	V Q				
5+ 5	13.4955	57.78	V Q				
5+10	13.8901	57.29	V Q				
5+15	14.2693	55.06	V Q				
5+20	14.6317	52.62	V Q				
5+25	14.9893	51.91	V Q				
5+30	15.3516	52.61	V Q				
5+35	15.7235	54.00	V Q				
5+40	16.1060	55.53	V Q				
5+45	16.5009	57.35	V Q				
5+50	16.9081	59.12	V Q				
5+55	17.3232	60.27	VQ				
6+ 0	17.7428	60.93	VQ				
6+ 5	18.1672	61.62	VQ				
6+10	18.5999	62.83	V Q				
6+15	19.0450	64.63	V Q				
6+20	19.5028	66.47	V Q				
6+25	19.9687	67.65	V Q				
6+30	20.4397	68.39	V Q				
6+35	20.9157	69.12	V Q				
6+40	21.4004	70.37	V Q				
6+45	21.8975	72.19	V Q				
6+50	22.4077	74.07	V Q				
6+55	22.9264	75.32	V Q				
7+ 0	23.4505	76.10	V Q				
7+ 5	23.9782	76.62	V Q				
7+10	24.5087	77.03	V Q				
7+15	25.0414	77.36	V Q				
7+20	25.5781	77.92	V Q				
7+25	26.1225	79.05	V Q				
7+30	26.6789	80.79	V Q				
7+35	27.2508	83.03	V Q				
7+40	27.8423	85.89	V Q				
7+45	28.4591	89.57	V Q				
7+50	29.1047	93.74	V Q				
7+55	29.7791	97.93	V Q				
8+ 0	30.4850	102.48	V Q				

8+ 5	31.2269	107.73	V Q				
8+10	32.0124	114.05	V Q				
8+15	32.8517	121.87	V Q				
8+20	33.7442	129.59	V Q				
8+25	34.6722	134.75	V Q				
8+30	35.6233	138.11	V Q				
8+35	36.5945	141.02	V Q				
8+40	37.5911	144.71	V Q				
8+45	38.6196	149.33	V Q				
8+50	39.6826	154.36	V Q				
8+55	40.7794	159.25	V Q				
9+ 0	41.9117	164.41	V Q				
9+ 5	43.0835	170.15	V Q				
9+10	44.3019	176.91	V Q				
9+15	45.5765	185.08	V Q				
9+20	46.9099	193.60	V Q				
9+25	48.2924	200.74	V Q				
9+30	49.7198	207.26	V Q				
9+35	51.1900	213.47	V Q				
9+40	52.7001	219.27	V Q				
9+45	54.2508	225.16	V Q				
9+50	55.8419	231.04	V Q				
9+55	57.4713	236.59	V Q				
10+ 0	59.1401	242.30	V Q				
10+ 5	60.8236	244.44	V Q				
10+10	62.4536	236.68	V Q				
10+15	63.9634	219.23	V Q				
10+20	65.3390	199.73	V Q				
10+25	66.6339	188.03	V Q				
10+30	67.8862	181.84	V Q				
10+35	69.1287	180.40	V Q				
10+40	70.4094	185.95	V Q				
10+45	71.7749	198.27	V Q				
10+50	73.2350	212.01	V Q				
10+55	74.7531	220.43	V Q				
11+ 0	76.3017	224.85	V Q				
11+ 5	77.8666	227.23	V Q				
11+10	79.4353	227.78	V Q				
11+15	80.9970	226.76	V Q				
11+20	82.5472	225.09	V Q				
11+25	84.0915	224.23	V Q				
11+30	85.6356	224.21	V Q				
11+35	87.1744	223.43	V Q				
11+40	88.6918	220.32	V Q				
11+45	90.1709	214.77	V Q				
11+50	91.6124	209.31	Q				
11+55	93.0416	207.51	Q				
12+ 0	94.4774	208.48	Q				
12+ 5	95.9480	213.52	VQ				
12+10	97.5053	226.12	VQ				
12+15	99.2045	246.73	V Q				
12+20	101.0586	269.22	V Q				
12+25	103.0196	284.74	V Q				
12+30	105.0562	295.71	V Q				
12+35	107.1576	305.13	V Q				
12+40	109.3248	314.68	V Q				
12+45	111.5641	325.15	V Q				
12+50	113.8733	335.29	V Q				
12+55	116.2400	343.64	V Q				
13+ 0	118.6592	351.27	V Q				
13+ 5	121.1393	360.12	V Q				
13+10	123.7100	373.26	V Q				
13+15	126.4044	391.22	V Q				

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18+35	218.8463	32.14	| Q	|	|	|	V |
18+40	219.0610	31.18	| Q	|	|	|	V |
18+45	219.2648	29.59	| Q	|	|	|	V |
18+50	219.4557	27.71	| Q	|	|	|	V |
18+55	219.6334	25.80	| Q	|	|	|	V |
19+ 0	219.7966	23.70	|Q	|	|	|	V |
19+ 5	219.9476	21.93	|Q	|	|	|	V |
19+10	220.0955	21.47	|Q	|	|	|	V |
19+15	220.2480	22.15	|Q	|	|	|	V |
19+20	220.4089	23.37	|Q	|	|	|	V |
19+25	220.5793	24.74	|Q	|	|	|	V |
19+30	220.7611	26.40	| Q	|	|	|	V |
19+35	220.9526	27.80	| Q	|	|	|	V |
19+40	221.1451	27.96	| Q	|	|	|	V |
19+45	221.3313	27.03	| Q	|	|	|	V |
19+50	221.5072	25.55	| Q	|	|	|	V |
19+55	221.6722	23.95	|Q	|	|	|	V |
20+ 0	221.8244	22.10	|Q	|	|	|	V |
20+ 5	221.9658	20.54	|Q	|	|	|	V |
20+10	222.1052	20.24	|Q	|	|	|	V |
20+15	222.2502	21.06	|Q	|	|	|	V |
20+20	222.4031	22.19	|Q	|	|	|	V |
20+25	222.5604	22.85	|Q	|	|	|	V |
20+30	222.7196	23.11	|Q	|	|	|	V |
20+35	222.8797	23.25	|Q	|	|	|	V |
20+40	223.0406	23.35	|Q	|	|	|	V|
20+45	223.2019	23.42	|Q	|	|	|	V|
20+50	223.3620	23.25	|Q	|	|	|	V|
20+55	223.5165	22.43	|Q	|	|	|	V|
21+ 0	223.6609	20.98	|Q	|	|	|	V|
21+ 5	223.7963	19.65	|Q	|	|	|	V|
21+10	223.9308	19.54	|Q	|	|	|	V|
21+15	224.0720	20.50	|Q	|	|	|	V|
21+20	224.2201	21.51	|Q	|	|	|	V|
21+25	224.3674	21.38	|Q	|	|	|	V|
21+30	224.5068	20.24	|Q	|	|	|	V|
21+35	224.6379	19.04	|Q	|	|	|	V|
21+40	224.7689	19.03	|Q	|	|	|	V|
21+45	224.9070	20.04	|Q	|	|	|	V|
21+50	225.0525	21.13	|Q	|	|	|	V|
21+55	225.1974	21.04	|Q	|	|	|	V|
22+ 0	225.3347	19.94	|Q	|	|	|	V|
22+ 5	225.4643	18.81	|Q	|	|	|	V|
22+10	225.5942	18.86	|Q	|	|	|	V|
22+15	225.7314	19.92	|Q	|	|	|	V|
22+20	225.8762	21.03	|Q	|	|	|	V|
22+25	226.0205	20.96	|Q	|	|	|	V|
22+30	226.1575	19.88	|Q	|	|	|	V|
22+35	226.2850	18.51	|Q	|	|	|	V|
22+40	226.4068	17.69	|Q	|	|	|	V|
22+45	226.5256	17.25	|Q	|	|	|	V|
22+50	226.6426	16.99	|Q	|	|	|	V|
22+55	226.7583	16.79	|Q	|	|	|	V|
23+ 0	226.8728	16.63	|Q	|	|	|	V|
23+ 5	226.9866	16.52	|Q	|	|	|	V|
23+10	227.0997	16.43	|Q	|	|	|	V|
23+15	227.2123	16.35	|Q	|	|	|	V|
23+20	227.3243	16.27	|Q	|	|	|	V|
23+25	227.4359	16.20	|Q	|	|	|	V|
23+30	227.5470	16.14	|Q	|	|	|	V|
23+35	227.6580	16.11	|Q	|	|	|	V|
23+40	227.7687	16.08	|Q	|	|	|	V|
23+45	227.8794	16.06	|Q	|	|	|	V|

23+50	227.9897	16.02	|Q	|	|	|	V|
23+55	228.0997	15.98	|Q	|	|	|	V|
24+ 0	228.2095	15.94	|Q	|	|	|	V|
24+ 5	228.3160	15.47	|Q	|	|	|	V|
24+10	228.4107	13.75	|Q	|	|	|	V|
24+15	228.4847	10.75	Q	|	|	|	V|
24+20	228.5365	7.51	Q	|	|	|	V|
24+25	228.5743	5.49	Q	|	|	|	V|
24+30	228.6040	4.32	Q	|	|	|	V|
24+35	228.6286	3.57	Q	|	|	|	V|
24+40	228.6491	2.98	Q	|	|	|	V|
24+45	228.6664	2.51	Q	|	|	|	V|
24+50	228.6810	2.12	Q	|	|	|	V|
24+55	228.6935	1.81	Q	|	|	|	V|
25+ 0	228.7040	1.53	Q	|	|	|	V|
25+ 5	228.7129	1.30	Q	|	|	|	V|
25+10	228.7206	1.11	Q	|	|	|	V|
25+15	228.7272	0.96	Q	|	|	|	V|
25+20	228.7327	0.81	Q	|	|	|	V|
25+25	228.7374	0.67	Q	|	|	|	V|
25+30	228.7412	0.56	Q	|	|	|	V|
25+35	228.7444	0.46	Q	|	|	|	V|
25+40	228.7469	0.37	Q	|	|	|	V|
25+45	228.7490	0.30	Q	|	|	|	V|
25+50	228.7506	0.24	Q	|	|	|	V|
25+55	228.7519	0.19	Q	|	|	|	V|
26+ 0	228.7529	0.14	Q	|	|	|	V|
26+ 5	228.7535	0.09	Q	|	|	|	V|
26+10	228.7538	0.04	Q	|	|	|	V

TABLE 7.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A4"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.001	0.11		
	D	75.0%	75.0	92.3	16.33	0.026	2.39	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.001	0.05		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.10	0.000	0.02		
	D	90.0%	75.0	95.7	0.68	0.001	0.10	1.11	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.000	0.03		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.000	0.04		
	D	90.0%	75.0	95.7	2.69	0.004	0.41	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	20.10	0.032	2.99		
	C	90.0%	69.0	95.1	28.79	0.046	4.34		
	D	90.0%	75.0	95.7	0.89	0.001	0.13	49.78	94.6
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.58	0.050	3.93	31.58	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	5.16	0.008	0.77		
	C	90.0%	69.0	95.1	33.32	0.053	5.02		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	38.48	94.9
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.56	0.005	0.41		
	C	75.0%	69.0	90.8	2.20	0.003	0.32		
	D	75.0%	75.0	92.3	0.02	0.000	0.00	5.18	88.9
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	13.61	0.022	1.57		
	C	40.0%	69.0	80.6	48.48	0.077	6.19		
	D	40.0%	75.0	84.2	4.03	0.006	0.54	66.12	79.2
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.30	0.000	0.03		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	7.80	0.012	1.03		
	D	50.0%	75.0	86.5	143.61	0.228	19.69	151.71	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.008	0.65		
	D	50.0%	75.0	86.5	38.57	0.061	5.29	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	2.05	0.003	0.25		
	C	50.0%	69.0	83.5	5.16	0.008	0.68		
	D	50.0%	75.0	86.5	8.82	0.014	1.21	16.03	84.3
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.006	0.47		
	C	50.0%	69.0	83.5	1.98	0.003	0.26		
	D	50.0%	75.0	86.5	121.32	0.192	16.63	127.15	86.2
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.63	0.006	0.44		
	C	50.0%	69.0	83.5	13.68	0.022	1.81		
	D	50.0%	75.0	86.5	31.05	0.049	4.26	48.36	84.9
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.35	0.001	0.03		
	C	15.0%	69.0	73.4	1.54	0.002	0.18		
	D	15.0%	75.0	78.5	3.71	0.006	0.46	5.60	76.0
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.021	1.89	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	1.13	0.002	0.13		
	C	40.0%	69.0	80.6	1.62	0.003	0.21		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	2.75	77.4
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.23	0.000	0.03	0.23	95.7
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.84	0.016	1.31	9.84	84.2
					631.03	1.000			
COMPOSITE RUN OFF INDEX - AMC II							86.3		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 7.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

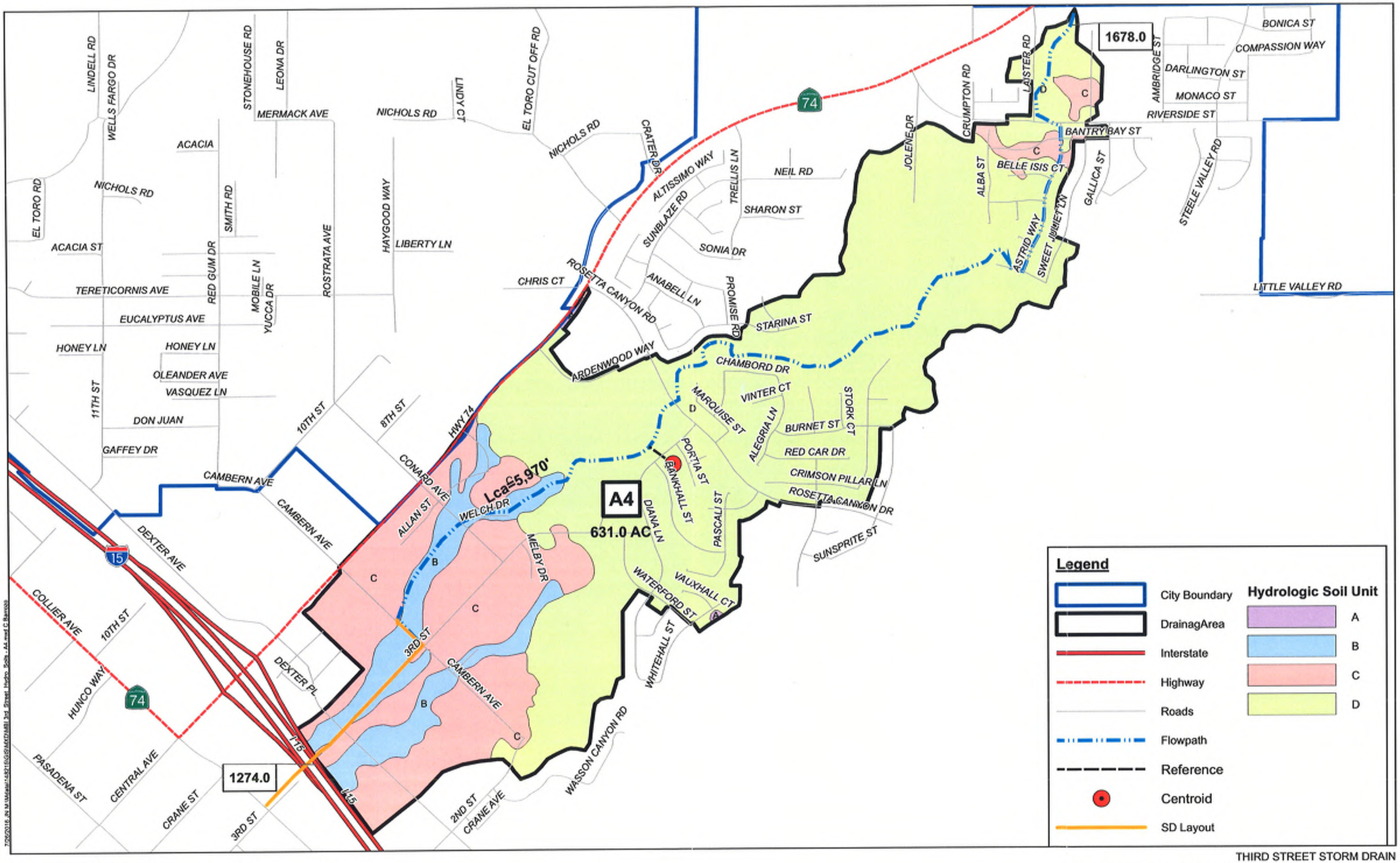
WATERSHEAD "A4"

LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.027	0.008
BUSINESS PROFESSIONAL	0.9	0.18	1.11	0.002	0.000
COMMERCIAL	0.9	0.18	3.16	0.005	0.001
COMMERCIAL MIXED-USE	0.9	0.18	49.78	0.079	0.014
COMMUNITY PARK	0.15	0.78	31.58	0.050	0.039
GENERAL COMMERCIAL	0.9	0.18	38.48	0.061	0.011
HIGH DENSITY-R	0.75	0.3	5.18	0.008	0.002
LOW DENSITY-R	0.4	0.58	66.12	0.105	0.061
LOW-MEDIUM R	0.5	0.5	151.71	0.240	0.120
MEDIUM DENSITY	0.5	0.5	43.50	0.069	0.034
MEDIUM DENSITY-R	0.5	0.5	16.03	0.025	0.013
MEDIUM LOW DENSITY	0.5	0.5	127.15	0.201	0.101
MODIFIED MLD	0.5	0.5	48.36	0.077	0.038
NP - PARK	0.15	0.78	5.60	0.009	0.007
OPEN SPACE	0.05	0.86	13.36	0.021	0.018
PUBLIC INSTITUTIONAL	0.4	0.58	2.75	0.004	0.003
ROAD	0.9	0.18	0.23	0.000	0.000
SCHOOL	0.4	0.58	9.84	0.016	0.009
			631.03	1.000	
COMPOSITE LOW LOSS RATE					**0.480**

TABLE 7.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

WATERSHEAD "A4"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.027	0.0004
BUSINESS PROFESSIONAL	0.015	1.11	0.002	0.0000
COMMERCIAL	0.015	3.16	0.005	0.0001
COMMERCIAL MIXED-USE	0.015	49.78	0.079	0.0012
COMMUNITY PARK	0.035	31.58	0.050	0.0018
GENERAL COMMERCIAL	0.015	38.48	0.061	0.0009
HIGH DENSITY-R	0.015	5.18	0.008	0.0001
LOW DENSITY-R	0.02	66.12	0.105	0.0021
LOW-MEDIUM R	0.015	151.71	0.240	0.0036
MEDIUM DENSITY	0.015	43.50	0.069	0.0010
MEDIUM DENSITY-R	0.015	16.03	0.025	0.0004
MEDIUM LOW DENSITY	0.02	127.15	0.201	0.0040
MODIFIED MLD	0.02	48.36	0.077	0.0015
NP - PARK	0.035	5.60	0.009	0.0003
OPEN SPACE (Natural)	0.04	13.36	0.021	0.0008
PUBLIC INSTITUTIONAL	0.015	2.75	0.004	0.0001
ROAD	0.015	0.23	0.000	0.0000
SCHOOL	0.015	9.84	0.016	0.0002
		631.03	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0186**



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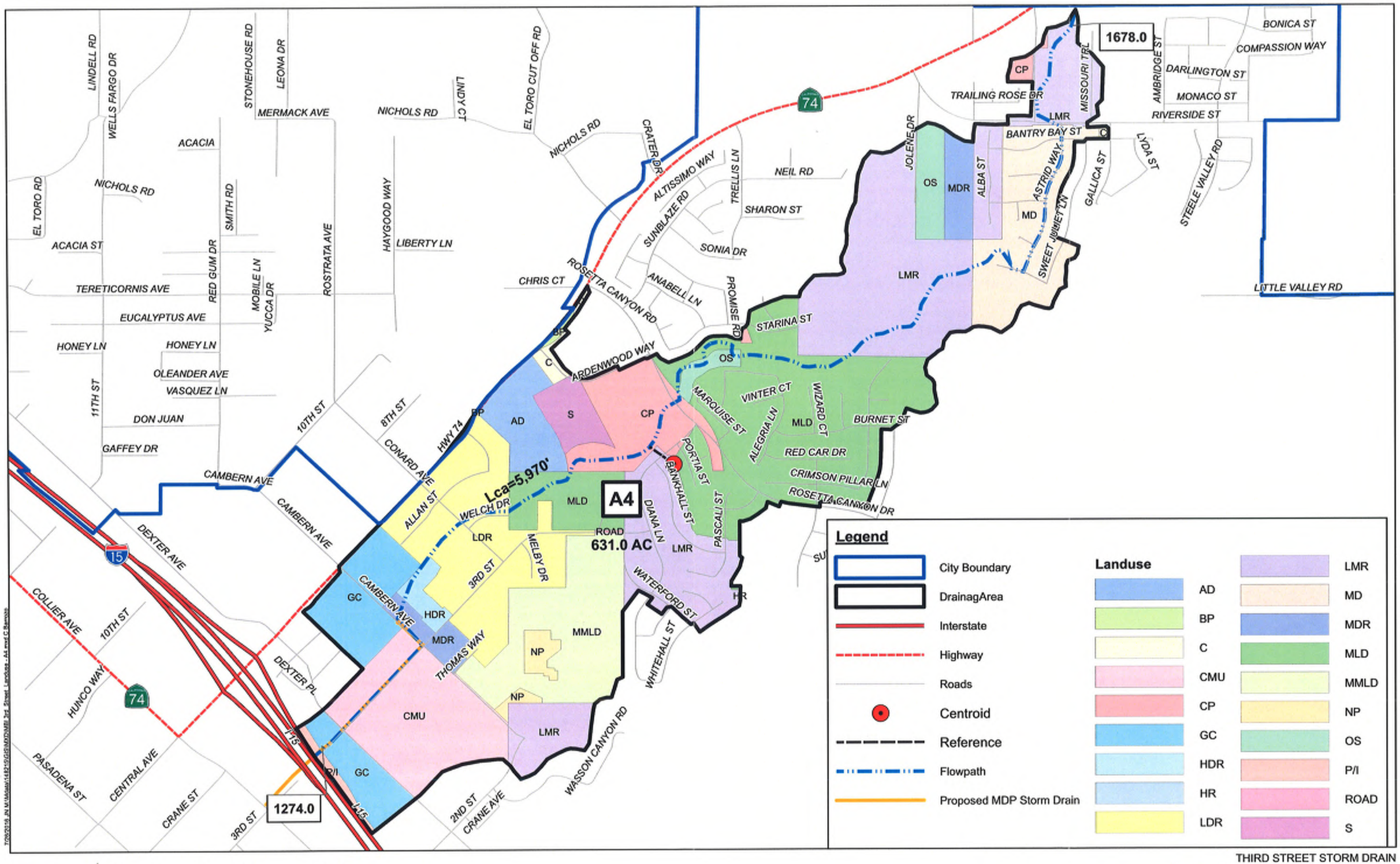
0 500 1,000 2,000 Feet

Source:

THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map - WS A4

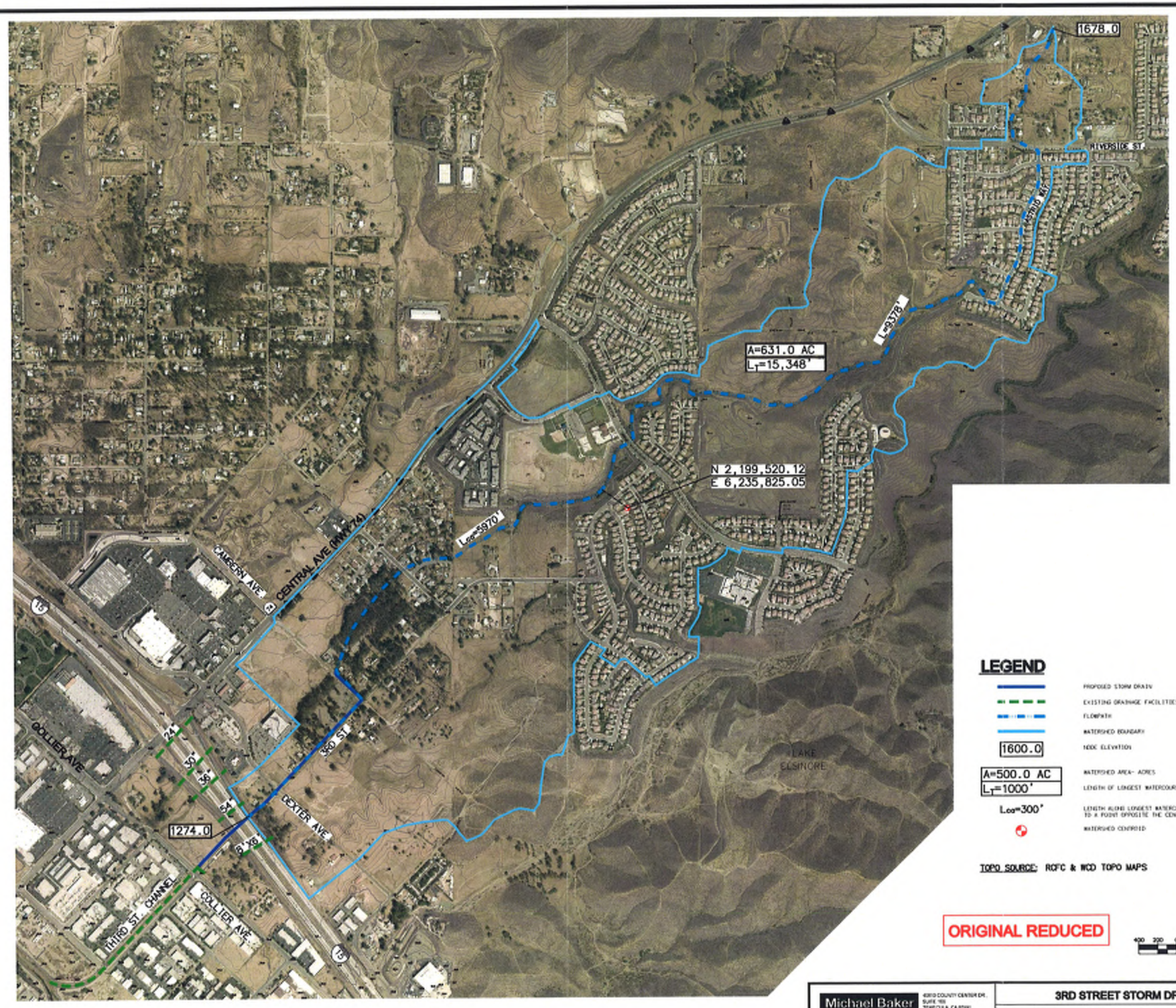
RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 13



THIRD STREET STORM DRAIN

Landuse Map - WS A4

RCFC&WCD ZONE 3 STAGE 2 STORM DRAIN - EXHIBIT 14



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- L_{CA}=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

400 200 0 400 800 1200
SCALE: 1"=400'

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3RD STREET STORM DRAIN - EXHIBIT 15

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A4'

H:\DATA\MBD\GIS\CAD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG 8:09PM,LOCKED 7/28/16 12:05 pm

APPENDIX F

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 06/28/16 File: 3rdstA53100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A5 (DESIGN POINT AT CONARD AND WELCH)
100-YEAR STORM EVENT

Drainage Area = 330.00(Ac.) = 0.516 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 330.00(Ac.) = 0.516 Sq.

Length along longest watercourse = 11810.00(Ft.)
Length along longest watercourse measured to centroid = 5810.00(Ft.)
Length along longest watercourse = 2.237 Mi.
Length along longest watercourse measured to centroid = 1.100 Mi.
Difference in elevation = 344.00(Ft.)
Slope along watercourse = 153.7951 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.254 Hr.
Lag time = 15.27 Min.
25% of lag time = 3.82 Min.
40% of lag time = 6.11 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
330.00	0.95	313.50

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
330.00	2.30	759.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.86 %
Adjusted average point rain = 2.297(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.410	92.10	0.750
0.340	95.60	0.900
30.550	78.50	0.150
8.250	79.00	0.400
98.350	86.30	0.500
43.500	86.20	0.500
8.820	86.50	0.500
108.620	86.10	0.500
13.360	89.50	0.500
7.800	84.20	0.400

Total Area Entered = 330.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.032	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.093	0.021
79.0	79.0	0.256	0.400	0.164	0.025	0.004
86.3	86.3	0.172	0.500	0.095	0.298	0.028
86.2	86.2	0.173	0.500	0.095	0.132	0.013
86.5	86.5	0.170	0.500	0.093	0.027	0.002
86.1	86.1	0.174	0.500	0.096	0.329	0.032
89.5	89.5	0.136	0.500	0.075	0.040	0.003
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.107

Area averaged mean soil loss (F) (In/Hr) = 0.107
Minimum soil loss rate ((In/Hr)) = 0.053
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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	32.751	3.269	10.873
2	0.167	65.503	12.473	41.483
3	0.250	98.254	21.238	70.632
4	0.333	131.006	20.210	67.215
5	0.417	163.757	11.358	37.774
6	0.500	196.509	6.468	21.511
7	0.583	229.260	4.519	15.029
8	0.667	262.012	3.502	11.646
9	0.750	294.763	2.866	9.530
10	0.833	327.514	2.261	7.518
11	0.917	360.266	1.944	6.467
12	1.000	393.017	1.565	5.203
13	1.083	425.769	1.319	4.388
14	1.167	458.520	1.055	3.508
15	1.250	491.272	1.000	3.327
16	1.333	524.023	0.912	3.033

17	1.417	556.774	0.727	2.418
18	1.500	589.526	0.631	2.098
19	1.583	622.277	0.559	1.860
20	1.667	655.029	0.464	1.542
21	1.750	687.780	0.374	1.245
22	1.833	720.532	0.328	1.089
23	1.917	753.283	0.328	1.089
24	2.000	786.035	0.328	1.089
25	2.083	818.786	0.303	1.009
			Sum = 100.000	Sum= 332.578

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	1.30	0.358	0.107	(0.193)	0.251
2	0.17	1.30	0.358	0.107	(0.193)	0.251
3	0.25	1.10	0.303	0.107	(0.163)	0.196
4	0.33	1.50	0.413	0.107	(0.222)	0.306
5	0.42	1.50	0.413	0.107	(0.222)	0.306
6	0.50	1.80	0.496	0.107	(0.267)	0.389
7	0.58	1.50	0.413	0.107	(0.222)	0.306
8	0.67	1.80	0.496	0.107	(0.267)	0.389
9	0.75	1.80	0.496	0.107	(0.267)	0.389
10	0.83	1.50	0.413	0.107	(0.222)	0.306
11	0.92	1.60	0.441	0.107	(0.237)	0.334
12	1.00	1.80	0.496	0.107	(0.267)	0.389
13	1.08	2.20	0.606	0.107	(0.326)	0.499
14	1.17	2.20	0.606	0.107	(0.326)	0.499
15	1.25	2.20	0.606	0.107	(0.326)	0.499
16	1.33	2.00	0.551	0.107	(0.297)	0.444
17	1.42	2.60	0.717	0.107	(0.386)	0.610
18	1.50	2.70	0.744	0.107	(0.400)	0.637
19	1.58	2.40	0.661	0.107	(0.356)	0.554
20	1.67	2.70	0.744	0.107	(0.400)	0.637
21	1.75	3.30	0.909	0.107	(0.489)	0.803
22	1.83	3.10	0.854	0.107	(0.460)	0.747
23	1.92	2.90	0.799	0.107	(0.430)	0.692
24	2.00	3.00	0.827	0.107	(0.445)	0.720
25	2.08	3.10	0.854	0.107	(0.460)	0.747
26	2.17	4.20	1.158	0.107	(0.623)	1.051
27	2.25	5.00	1.378	0.107	(0.741)	1.271
28	2.33	3.50	0.965	0.107	(0.519)	0.858
29	2.42	6.80	1.874	0.107	(1.008)	1.767
30	2.50	7.30	2.012	0.107	(1.082)	1.905
31	2.58	8.20	2.260	0.107	(1.216)	2.153
32	2.67	5.90	1.626	0.107	(0.875)	1.519
33	2.75	2.00	0.551	0.107	(0.297)	0.444
34	2.83	1.80	0.496	0.107	(0.267)	0.389
35	2.92	1.80	0.496	0.107	(0.267)	0.389
36	3.00	0.60	0.165	(0.107)	0.089	0.076
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	23.7

Flood volume = Effective rainfall 1.98(In)
times area 330.0(Ac.)/[(In)/(Ft.)] = 54.4(Ac.Ft)
Total soil loss = 0.32(In)
Total soil loss = 8.784(Ac.Ft)
Total rainfall = 2.30(In)
Flood volume = 2368567.5 Cubic Feet
Total soil loss = 382624.7 Cubic Feet

Peak flow rate of this hydrograph = 501.424(CFS)

3 - 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)	0 150.0 300.0 450.0 600.0
0+ 5	0.0188	2.73	Q
0+10	0.1095	13.16	Q
0+15	0.3183	30.32	V Q
0+20	0.6361	46.14	V Q
0+25	1.0239	56.31	V Q
0+30	1.4833	66.71	V Q
0+35	2.0229	78.35	V Q
0+40	2.6260	87.57	V Q
0+45	3.2779	94.66	V Q
0+50	3.9671	100.07	V Q
0+55	4.6802	103.54	V Q
1+ 0	5.3962	103.97	V Q
1+ 5	6.1326	106.92	V Q
1+10	6.9349	116.50	V Q
1+15	7.8249	129.22	V Q
1+20	8.7838	139.22	V Q
1+25	9.7815	144.87	V Q
1+30	10.8288	152.07	V Q
1+35	11.9531	163.26	V Q
1+40	13.1520	174.08	V Q
1+45	14.4075	182.30	V Q
1+50	15.7450	194.21	VQ
1+55	17.1866	209.31	VQ
2+ 0	18.6940	218.88	VQ
2+ 5	20.2227	221.97	Q
2+10	21.7943	228.20	QV
2+15	23.5020	247.97	QV
2+20	25.4194	278.40	Q
2+25	27.5544	310.01	Q
2+30	29.9538	348.39	VQ
2+35	32.7760	409.79	V Q
2+40	36.0765	479.23	V Q
2+45	39.5298	501.42	V Q
2+50	42.6498	453.02	QV
2+55	45.1203	358.71	Q V
3+ 0	47.0052	273.69	Q V
3+ 5	48.4955	216.39	Q V
3+10	49.6501	167.64	Q V
3+15	50.5182	126.05	Q V
3+20	51.1898	97.51	Q V
3+25	51.7345	79.10	Q V
3+30	52.1843	65.31	Q V
3+35	52.5598	54.52	Q V
3+40	52.8783	46.25	Q V
3+45	53.1504	39.50	Q V
3+50	53.3823	33.67	Q V
3+55	53.5779	28.41	Q V
4+ 0	53.7429	23.95	Q V
4+ 5	53.8832	20.37	Q V
4+10	54.0012	17.14	Q V
4+15	54.0980	14.06	Q V

4+20	54.1774	11.52	Q	|	|	|	V|
4+25	54.2456	9.90	Q	|	|	|	V|
4+30	54.2981	7.64	Q	|	|	|	V|
4+35	54.3349	5.34	Q	|	|	|	V|
4+40	54.3553	2.96	Q	|	|	|	V|
4+45	54.3648	1.38	Q	|	|	|	V|
4+50	54.3710	0.90	Q	|	|	|	V|
4+55	54.3743	0.48	Q	|	|	|	V|
5+ 0	54.3748	0.08	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 06/28/16 File: 3rdstA56100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A5 (DESIGN POINT AT CONARD AND WELCH)
100-YEAR STORM EVENT

Drainage Area = 330.00(Ac.) = 0.516 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 330.00(Ac.) = 0.516 Sq.
l

Length along longest watercourse = 11810.00(Ft.)
Length along longest watercourse measured to centroid = 5810.00(Ft.)
Length along longest watercourse = 2.237 Mi.
Length along longest watercourse measured to centroid = 1.100 Mi.
Difference in elevation = 344.00(Ft.)
Slope along watercourse = 153.7951 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.254 Hr.
Lag time = 15.27 Min.
25% of lag time = 3.82 Min.
40% of lag time = 6.11 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
330.00	1.35	445.50

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
330.00	3.30	1089.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.89 %
Adjusted average point rain = 3.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.410	92.10	0.750
0.340	95.60	0.900
30.550	78.50	0.150
8.250	79.00	0.400
98.350	86.30	0.500
43.500	86.20	0.500
8.820	86.50	0.500
108.620	86.10	0.500
13.360	89.50	0.500
7.800	84.20	0.400

Total Area Entered = 330.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.032	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.093	0.021
79.0	79.0	0.256	0.400	0.164	0.025	0.004
86.3	86.3	0.172	0.500	0.095	0.298	0.028
86.2	86.2	0.173	0.500	0.095	0.132	0.013
86.5	86.5	0.170	0.500	0.093	0.027	0.002
86.1	86.1	0.174	0.500	0.096	0.329	0.032
89.5	89.5	0.136	0.500	0.075	0.040	0.003
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.107

Area averaged mean soil loss (F) (In/Hr) = 0.107
Minimum soil loss rate ((In/Hr)) = 0.053
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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	32.751	3.269	10.873
2	0.167	65.503	12.473	41.483
3	0.250	98.254	21.238	70.632
4	0.333	131.006	20.210	67.215
5	0.417	163.757	11.358	37.774
6	0.500	196.509	6.468	21.511
7	0.583	229.260	4.519	15.029
8	0.667	262.012	3.502	11.646
9	0.750	294.763	2.866	9.530
10	0.833	327.514	2.261	7.518
11	0.917	360.266	1.944	6.467
12	1.000	393.017	1.565	5.203
13	1.083	425.769	1.319	4.388
14	1.167	458.520	1.055	3.508
15	1.250	491.272	1.000	3.327
16	1.333	524.023	0.912	3.033

17	1.417	556.774	0.727	2.418
18	1.500	589.526	0.631	2.098
19	1.583	622.277	0.559	1.860
20	1.667	655.029	0.464	1.542
21	1.750	687.780	0.374	1.245
22	1.833	720.532	0.328	1.089
23	1.917	753.283	0.328	1.089
24	2.000	786.035	0.328	1.089
25	2.083	818.786	0.303	1.009
			Sum = 100.000	Sum= 332.578

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	0.50	0.198	(0.107)	0.106	0.091
2	0.17	0.60	0.237	0.107	(0.128)	0.130
3	0.25	0.60	0.237	0.107	(0.128)	0.130
4	0.33	0.60	0.237	0.107	(0.128)	0.130
5	0.42	0.60	0.237	0.107	(0.128)	0.130
6	0.50	0.70	0.277	0.107	(0.149)	0.170
7	0.58	0.70	0.277	0.107	(0.149)	0.170
8	0.67	0.70	0.277	0.107	(0.149)	0.170
9	0.75	0.70	0.277	0.107	(0.149)	0.170
10	0.83	0.70	0.277	0.107	(0.149)	0.170
11	0.92	0.70	0.277	0.107	(0.149)	0.170
12	1.00	0.80	0.316	0.107	(0.170)	0.209
13	1.08	0.80	0.316	0.107	(0.170)	0.209
14	1.17	0.80	0.316	0.107	(0.170)	0.209
15	1.25	0.80	0.316	0.107	(0.170)	0.209
16	1.33	0.80	0.316	0.107	(0.170)	0.209
17	1.42	0.80	0.316	0.107	(0.170)	0.209
18	1.50	0.80	0.316	0.107	(0.170)	0.209
19	1.58	0.80	0.316	0.107	(0.170)	0.209
20	1.67	0.80	0.316	0.107	(0.170)	0.209
21	1.75	0.80	0.316	0.107	(0.170)	0.209
22	1.83	0.80	0.316	0.107	(0.170)	0.209
23	1.92	0.80	0.316	0.107	(0.170)	0.209
24	2.00	0.90	0.356	0.107	(0.192)	0.249
25	2.08	0.80	0.316	0.107	(0.170)	0.209
26	2.17	0.90	0.356	0.107	(0.192)	0.249
27	2.25	0.90	0.356	0.107	(0.192)	0.249
28	2.33	0.90	0.356	0.107	(0.192)	0.249
29	2.42	0.90	0.356	0.107	(0.192)	0.249
30	2.50	0.90	0.356	0.107	(0.192)	0.249
31	2.58	0.90	0.356	0.107	(0.192)	0.249
32	2.67	0.90	0.356	0.107	(0.192)	0.249
33	2.75	1.00	0.396	0.107	(0.213)	0.289
34	2.83	1.00	0.396	0.107	(0.213)	0.289
35	2.92	1.00	0.396	0.107	(0.213)	0.289
36	3.00	1.00	0.396	0.107	(0.213)	0.289
37	3.08	1.00	0.396	0.107	(0.213)	0.289
38	3.17	1.10	0.435	0.107	(0.234)	0.328
39	3.25	1.10	0.435	0.107	(0.234)	0.328
40	3.33	1.10	0.435	0.107	(0.234)	0.328
41	3.42	1.20	0.475	0.107	(0.255)	0.368
42	3.50	1.30	0.514	0.107	(0.277)	0.407
43	3.58	1.40	0.554	0.107	(0.298)	0.447
44	3.67	1.40	0.554	0.107	(0.298)	0.447
45	3.75	1.50	0.593	0.107	(0.319)	0.486

46	3.83	1.50	0.593	0.107	(0.319)	0.486
47	3.92	1.60	0.633	0.107	(0.340)	0.526
48	4.00	1.60	0.633	0.107	(0.340)	0.526
49	4.08	1.70	0.672	0.107	(0.362)	0.565
50	4.17	1.80	0.712	0.107	(0.383)	0.605
51	4.25	1.90	0.752	0.107	(0.404)	0.645
2	4.33	2.00	0.791	0.107	(0.426)	0.684
53	4.42	2.10	0.831	0.107	(0.447)	0.724
54	4.50	2.10	0.831	0.107	(0.447)	0.724
55	4.58	2.20	0.870	0.107	(0.468)	0.763
56	4.67	2.30	0.910	0.107	(0.489)	0.803
57	4.75	2.40	0.949	0.107	(0.511)	0.842
58	4.83	2.40	0.949	0.107	(0.511)	0.842
59	4.92	2.50	0.989	0.107	(0.532)	0.882
60	5.00	2.60	1.028	0.107	(0.553)	0.921
61	5.08	3.10	1.226	0.107	(0.660)	1.119
62	5.17	3.60	1.424	0.107	(0.766)	1.317
63	5.25	3.90	1.543	0.107	(0.830)	1.436
64	5.33	4.20	1.661	0.107	(0.894)	1.554
65	5.42	4.70	1.859	0.107	(1.000)	1.752
66	5.50	5.60	2.215	0.107	(1.192)	2.108
67	5.58	1.90	0.752	0.107	(0.404)	0.645
68	5.67	0.90	0.356	0.107	(0.192)	0.249
69	5.75	0.60	0.237	0.107	(0.128)	0.130
70	5.83	0.50	0.198	(0.107)	0.106	0.091
71	5.92	0.30	0.119	(0.107)	0.064	0.055
72	6.00	0.20	0.079	(0.107)	0.043	0.037

(Loss Rate Not Used)

Sum = 100.0 Sum = 32.0

Flood volume = Effective rainfall 2.66(In)
times area 330.0(Ac.)/[(In)/(Ft.)] = 73.2(Ac.Ft)
Total soil loss = 0.63(In)
Total soil loss = 17.401(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 3190589.8 Cubic Feet
Total soil loss = 757996.0 Cubic Feet

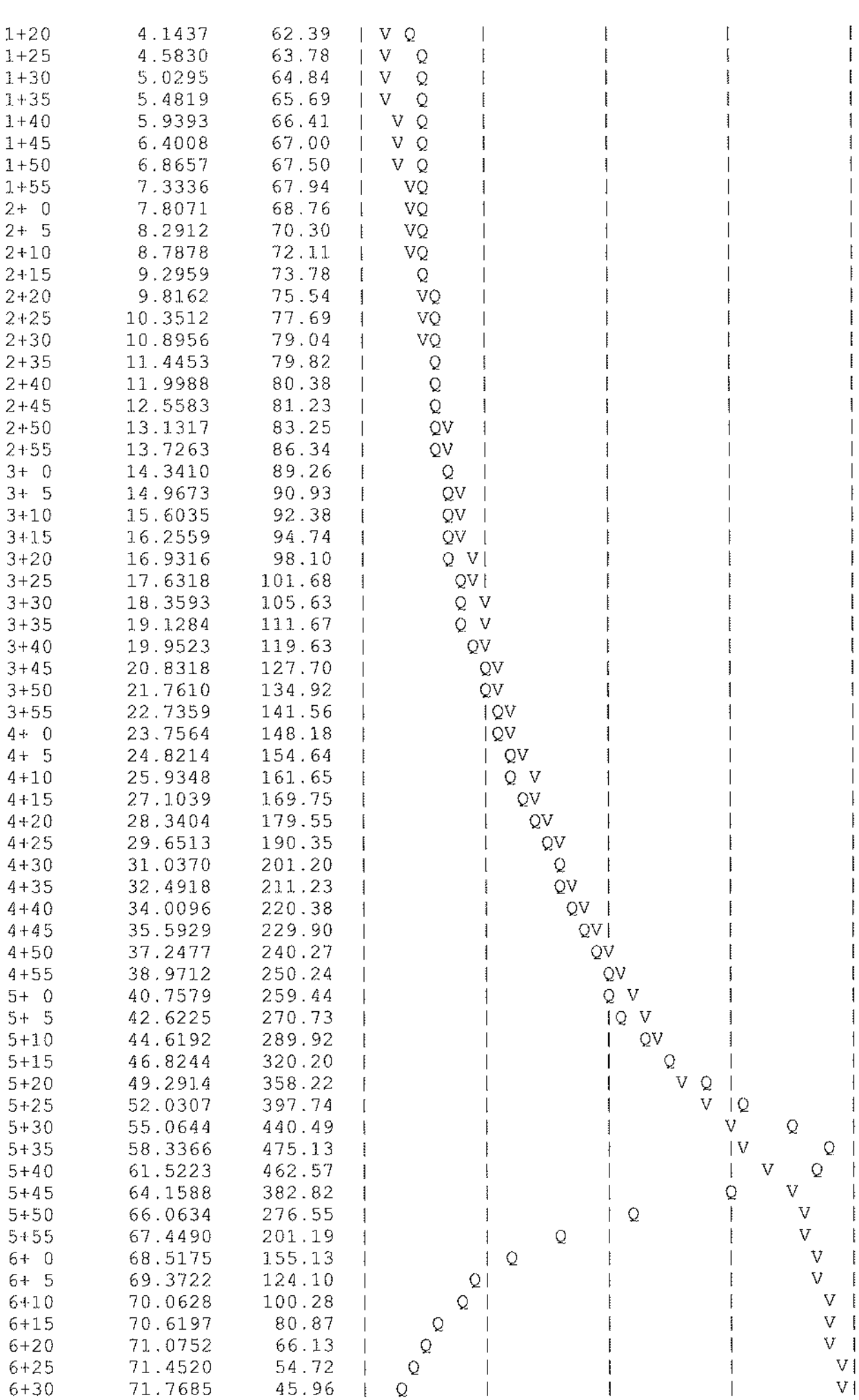
Peak flow rate of this hydrograph = 475.125(CFS)

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6 - 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	125.0	250.0	375.0	500.0
0+ 5	0.0068	0.99	Q				
0+10	0.0427	5.21	Q				
0+15	0.1342	13.29	VQ				
0+20	0.2870	22.19	VQ				
0+25	0.4817	28.26	V Q				
0+30	0.7029	32.13	V Q				
0+35	0.9508	35.99	V Q				
0+40	1.2292	40.43	V Q				
0+45	1.5351	44.42	V Q				
0+50	1.8586	46.97	|V Q				
0+55	2.1941	48.71	|V Q				
1+ 0	2.5416	50.46	|V Q				
1+ 5	2.9078	53.17	|V Q				
1+10	3.2992	56.83	|V Q				
1+15	3.7140	60.23	| V Q				



1+20	4.1437	62.39	V Q				
1+25	4.5830	63.78	V Q				
1+30	5.0295	64.84	V Q				
1+35	5.4819	65.69	V Q				
1+40	5.9393	66.41	V Q				
1+45	6.4008	67.00	V Q				
1+50	6.8657	67.50	V Q				
1+55	7.3336	67.94	VQ				
2+ 0	7.8071	68.76	VQ				
2+ 5	8.2912	70.30	VQ				
2+10	8.7878	72.11	VQ				
2+15	9.2959	73.78	Q				
2+20	9.8162	75.54	VQ				
2+25	10.3512	77.69	VQ				
2+30	10.8956	79.04	VQ				
2+35	11.4453	79.82	Q				
2+40	11.9988	80.38	Q				
2+45	12.5583	81.23	Q				
2+50	13.1317	83.25	QV				
2+55	13.7263	86.34	QV				
3+ 0	14.3410	89.26	Q				
3+ 5	14.9673	90.93	QV				
3+10	15.6035	92.38	QV				
3+15	16.2559	94.74	QV				
3+20	16.9316	98.10	Q V				
3+25	17.6318	101.68	QV				
3+30	18.3593	105.63	Q V				
3+35	19.1284	111.67	Q V				
3+40	19.9523	119.63	QV				
3+45	20.8318	127.70	QV				
3+50	21.7610	134.92	QV				
3+55	22.7359	141.56	QV				
4+ 0	23.7564	148.18	QV				
4+ 5	24.8214	154.64	QV				
4+10	25.9348	161.65	Q V				
4+15	27.1039	169.75	QV				
4+20	28.3404	179.55	QV				
4+25	29.6513	190.35	QV				
4+30	31.0370	201.20	Q				
4+35	32.4918	211.23	QV				
4+40	34.0096	220.38	QV				
4+45	35.5929	229.90	QV				
4+50	37.2477	240.27	QV				
4+55	38.9712	250.24	QV				
5+ 0	40.7579	259.44	Q V				
5+ 5	42.6225	270.73	Q V				
5+10	44.6192	289.92	QV				
5+15	46.8244	320.20	Q				
5+20	49.2914	358.22	V Q				
5+25	52.0307	397.74	V	Q			
5+30	55.0644	440.49	V	Q			
5+35	58.3366	475.13	V	Q			
5+40	61.5223	462.57	V	Q			
5+45	64.1588	382.82	Q	V			
5+50	66.0634	276.55	Q	V			
5+55	67.4490	201.19	Q	V			
6+ 0	68.5175	155.13	Q	V			
6+ 5	69.3722	124.10	Q	V			
6+10	70.0628	100.28	Q	V			
6+15	70.6197	80.87	Q	V			
6+20	71.0752	66.13	Q	V			
6+25	71.4520	54.72	Q	V			
6+30	71.7685	45.96	Q	V			

6+35	72.0363	38.88	| Q	|	|	|	V|
6+40	72.2665	33.43	| Q	|	|	|	V|
6+45	72.4623	28.43	| Q	|	|	|	V|
6+50	72.6257	23.73	|Q	|	|	|	V|
6+55	72.7629	19.92	|Q	|	|	|	V|
7+ 0	72.8781	16.72	|Q	|	|	|	V|
7+ 5	72.9737	13.88	|Q	|	|	|	V|
7+10	73.0520	11.36	Q	|	|	|	V|
7+15	73.1154	9.22	Q	|	|	|	V|
7+20	73.1661	7.36	Q	|	|	|	V|
7+25	73.2042	5.52	Q	|	|	|	V|
7+30	73.2284	3.51	Q	|	|	|	V|
7+35	73.2372	1.29	Q	|	|	|	V|
7+40	73.2414	0.60	Q	|	|	|	V|
7+45	73.2436	0.33	Q	|	|	|	V|
7+50	73.2450	0.19	Q	|	|	|	V|
7+55	73.2456	0.10	Q	|	|	|	V|
8+ 0	73.2459	0.04	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 06/28/16 File: 3rdstA524100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA A5 (DESIGN POINT AT CONARD AND WELCH)
100-YEAR STORM EVENT

Drainage Area = 330.00(Ac.) = 0.516 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 330.00(Ac.) = 0.516 Sq.

Length along longest watercourse = 11810.00(Ft.)
Length along longest watercourse measured to centroid = 5810.00(Ft.)
Length along longest watercourse = 2.237 Mi.
Length along longest watercourse measured to centroid = 1.100 Mi.
Difference in elevation = 344.00(Ft.)
Slope along watercourse = 153.7951 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.254 Hr.
Lag time = 15.27 Min.
25% of lag time = 3.82 Min.
40% of lag time = 6.11 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]
330.00	2.50	825.00

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
330.00	6.00	1980.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.94 %
Adjusted average point rain = 5.996(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.410	92.10	0.750
0.340	95.60	0.900
30.550	78.50	0.150
8.250	79.00	0.400
98.350	86.30	0.500
43.500	86.20	0.500
8.820	86.50	0.500
108.620	86.10	0.500
13.360	89.50	0.500
7.800	84.20	0.400

Total Area Entered = 330.00(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.032	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.093	0.021
79.0	79.0	0.256	0.400	0.164	0.025	0.004
86.3	86.3	0.172	0.500	0.095	0.298	0.028
86.2	86.2	0.173	0.500	0.095	0.132	0.013
86.5	86.5	0.170	0.500	0.093	0.027	0.002
86.1	86.1	0.174	0.500	0.096	0.329	0.032
89.5	89.5	0.136	0.500	0.075	0.040	0.003
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.107

Area averaged mean soil loss (F) (In/Hr) = 0.107
Minimum soil loss rate ((In/Hr)) = 0.053
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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	32.751	3.269	10.873
2	0.167	65.503	12.473	41.483
3	0.250	98.254	21.238	70.632
4	0.333	131.006	20.210	67.215
5	0.417	163.757	11.358	37.774
6	0.500	196.509	6.468	21.511
7	0.583	229.260	4.519	15.029
8	0.667	262.012	3.502	11.646
9	0.750	294.763	2.866	9.530
10	0.833	327.514	2.261	7.518
11	0.917	360.266	1.944	6.467
12	1.000	393.017	1.565	5.203
13	1.083	425.769	1.319	4.388
14	1.167	458.520	1.055	3.508
15	1.250	491.272	1.000	3.327
16	1.333	524.023	0.912	3.033

17	1.417	556.774	0.727	2.418
18	1.500	589.526	0.631	2.098
19	1.583	622.277	0.559	1.860
20	1.667	655.029	0.464	1.542
21	1.750	687.780	0.374	1.245
22	1.833	720.532	0.328	1.089
23	1.917	753.283	0.328	1.089
24	2.000	786.035	0.328	1.089
25	2.083	818.786	0.303	1.009
		Sum = 100.000	Sum=	332.578

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	0.048	(0.190)	0.026	0.022
2	0.17	0.07	0.048	(0.189)	0.026	0.022
3	0.25	0.07	0.048	(0.188)	0.026	0.022
4	0.33	0.10	0.072	(0.187)	0.039	0.033
5	0.42	0.10	0.072	(0.187)	0.039	0.033
6	0.50	0.10	0.072	(0.186)	0.039	0.033
7	0.58	0.10	0.072	(0.185)	0.039	0.033
8	0.67	0.10	0.072	(0.185)	0.039	0.033
9	0.75	0.10	0.072	(0.184)	0.039	0.033
10	0.83	0.13	0.096	(0.183)	0.052	0.044
11	0.92	0.13	0.096	(0.182)	0.052	0.044
12	1.00	0.13	0.096	(0.182)	0.052	0.044
13	1.08	0.10	0.072	(0.181)	0.039	0.033
14	1.17	0.10	0.072	(0.180)	0.039	0.033
15	1.25	0.10	0.072	(0.179)	0.039	0.033
16	1.33	0.10	0.072	(0.179)	0.039	0.033
17	1.42	0.10	0.072	(0.178)	0.039	0.033
18	1.50	0.10	0.072	(0.177)	0.039	0.033
19	1.58	0.10	0.072	(0.177)	0.039	0.033
20	1.67	0.10	0.072	(0.176)	0.039	0.033
21	1.75	0.10	0.072	(0.175)	0.039	0.033
22	1.83	0.13	0.096	(0.175)	0.052	0.044
23	1.92	0.13	0.096	(0.174)	0.052	0.044
24	2.00	0.13	0.096	(0.173)	0.052	0.044
25	2.08	0.13	0.096	(0.172)	0.052	0.044
26	2.17	0.13	0.096	(0.172)	0.052	0.044
27	2.25	0.13	0.096	(0.171)	0.052	0.044
28	2.33	0.13	0.096	(0.170)	0.052	0.044
29	2.42	0.13	0.096	(0.170)	0.052	0.044
30	2.50	0.13	0.096	(0.169)	0.052	0.044
31	2.58	0.17	0.120	(0.168)	0.065	0.055
32	2.67	0.17	0.120	(0.168)	0.065	0.055
33	2.75	0.17	0.120	(0.167)	0.065	0.055
34	2.83	0.17	0.120	(0.166)	0.065	0.055
35	2.92	0.17	0.120	(0.166)	0.065	0.055
36	3.00	0.17	0.120	(0.165)	0.065	0.055
37	3.08	0.17	0.120	(0.164)	0.065	0.055
38	3.17	0.17	0.120	(0.163)	0.065	0.055
39	3.25	0.17	0.120	(0.163)	0.065	0.055
40	3.33	0.17	0.120	(0.162)	0.065	0.055
41	3.42	0.17	0.120	(0.161)	0.065	0.055
42	3.50	0.17	0.120	(0.161)	0.065	0.055
43	3.58	0.17	0.120	(0.160)	0.065	0.055
44	3.67	0.17	0.120	(0.159)	0.065	0.055
45	3.75	0.17	0.120	(0.159)	0.065	0.055

46	3.83	0.20	0.144	(0.158)	0.077	0.066
47	3.92	0.20	0.144	(0.157)	0.077	0.066
48	4.00	0.20	0.144	(0.157)	0.077	0.066
49	4.08	0.20	0.144	(0.156)	0.077	0.066
50	4.17	0.20	0.144	(0.155)	0.077	0.066
51	4.25	0.20	0.144	(0.155)	0.077	0.066
2	4.33	0.23	0.168	(0.154)	0.090	0.078
53	4.42	0.23	0.168	(0.153)	0.090	0.078
54	4.50	0.23	0.168	(0.153)	0.090	0.078
55	4.58	0.23	0.168	(0.152)	0.090	0.078
56	4.67	0.23	0.168	(0.151)	0.090	0.078
57	4.75	0.23	0.168	(0.151)	0.090	0.078
58	4.83	0.27	0.192	(0.150)	0.103	0.089
59	4.92	0.27	0.192	(0.149)	0.103	0.089
60	5.00	0.27	0.192	(0.149)	0.103	0.089
61	5.08	0.20	0.144	(0.148)	0.077	0.066
62	5.17	0.20	0.144	(0.148)	0.077	0.066
63	5.25	0.20	0.144	(0.147)	0.077	0.066
64	5.33	0.23	0.168	(0.146)	0.090	0.078
65	5.42	0.23	0.168	(0.146)	0.090	0.078
66	5.50	0.23	0.168	(0.145)	0.090	0.078
67	5.58	0.27	0.192	(0.144)	0.103	0.089
68	5.67	0.27	0.192	(0.144)	0.103	0.089
69	5.75	0.27	0.192	(0.143)	0.103	0.089
70	5.83	0.27	0.192	(0.142)	0.103	0.089
71	5.92	0.27	0.192	(0.142)	0.103	0.089
72	6.00	0.27	0.192	(0.141)	0.103	0.089
73	6.08	0.30	0.216	(0.141)	0.116	0.100
74	6.17	0.30	0.216	(0.140)	0.116	0.100
75	6.25	0.30	0.216	(0.139)	0.116	0.100
76	6.33	0.30	0.216	(0.139)	0.116	0.100
77	6.42	0.30	0.216	(0.138)	0.116	0.100
8	6.50	0.30	0.216	(0.137)	0.116	0.100
79	6.58	0.33	0.240	(0.137)	0.129	0.111
80	6.67	0.33	0.240	(0.136)	0.129	0.111
81	6.75	0.33	0.240	(0.136)	0.129	0.111
82	6.83	0.33	0.240	(0.135)	0.129	0.111
83	6.92	0.33	0.240	(0.134)	0.129	0.111
84	7.00	0.33	0.240	(0.134)	0.129	0.111
85	7.08	0.33	0.240	(0.133)	0.129	0.111
86	7.17	0.33	0.240	(0.133)	0.129	0.111
87	7.25	0.33	0.240	(0.132)	0.129	0.111
88	7.33	0.37	0.264	0.131	(0.142)	0.132
89	7.42	0.37	0.264	0.131	(0.142)	0.133
90	7.50	0.37	0.264	0.130	(0.142)	0.134
91	7.58	0.40	0.288	0.130	(0.155)	0.158
92	7.67	0.40	0.288	0.129	(0.155)	0.159
93	7.75	0.40	0.288	0.128	(0.155)	0.159
94	7.83	0.43	0.312	0.128	(0.168)	0.184
95	7.92	0.43	0.312	0.127	(0.168)	0.185
96	8.00	0.43	0.312	0.127	(0.168)	0.185
97	8.08	0.50	0.360	0.126	(0.194)	0.234
98	8.17	0.50	0.360	0.125	(0.194)	0.234
99	8.25	0.50	0.360	0.125	(0.194)	0.235
100	8.33	0.50	0.360	0.124	(0.194)	0.236
101	8.42	0.50	0.360	0.124	(0.194)	0.236
102	8.50	0.50	0.360	0.123	(0.194)	0.237
3	8.58	0.53	0.384	0.123	(0.206)	0.261
4	8.67	0.53	0.384	0.122	(0.206)	0.262
105	8.75	0.53	0.384	0.121	(0.206)	0.262
106	8.83	0.57	0.408	0.121	(0.219)	0.287
107	8.92	0.57	0.408	0.120	(0.219)	0.288
108	9.00	0.57	0.408	0.120	(0.219)	0.288

109	9.08	0.63	0.456	0.119	(0.245)	0.337
110	9.17	0.63	0.456	0.119	(0.245)	0.337
111	9.25	0.63	0.456	0.118	(0.245)	0.338
112	9.33	0.67	0.480	0.117	(0.258)	0.362
113	9.42	0.67	0.480	0.117	(0.258)	0.363
114	9.50	0.67	0.480	0.116	(0.258)	0.363
5	9.58	0.70	0.504	0.116	(0.271)	0.388
116	9.67	0.70	0.504	0.115	(0.271)	0.389
117	9.75	0.70	0.504	0.115	(0.271)	0.389
118	9.83	0.73	0.528	0.114	(0.284)	0.414
119	9.92	0.73	0.528	0.114	(0.284)	0.414
120	10.00	0.73	0.528	0.113	(0.284)	0.415
121	10.08	0.50	0.360	0.112	(0.194)	0.247
122	10.17	0.50	0.360	0.112	(0.194)	0.248
123	10.25	0.50	0.360	0.111	(0.194)	0.248
124	10.33	0.50	0.360	0.111	(0.194)	0.249
125	10.42	0.50	0.360	0.110	(0.194)	0.250
126	10.50	0.50	0.360	0.110	(0.194)	0.250
127	10.58	0.67	0.480	0.109	(0.258)	0.371
128	10.67	0.67	0.480	0.109	(0.258)	0.371
129	10.75	0.67	0.480	0.108	(0.258)	0.372
130	10.83	0.67	0.480	0.108	(0.258)	0.372
131	10.92	0.67	0.480	0.107	(0.258)	0.373
132	11.00	0.67	0.480	0.107	(0.258)	0.373
133	11.08	0.63	0.456	0.106	(0.245)	0.350
134	11.17	0.63	0.456	0.105	(0.245)	0.350
135	11.25	0.63	0.456	0.105	(0.245)	0.351
136	11.33	0.63	0.456	0.104	(0.245)	0.351
137	11.42	0.63	0.456	0.104	(0.245)	0.352
138	11.50	0.63	0.456	0.103	(0.245)	0.352
139	11.58	0.57	0.408	0.103	(0.219)	0.305
140	11.67	0.57	0.408	0.102	(0.219)	0.305
1	11.75	0.57	0.408	0.102	(0.219)	0.306
142	11.83	0.60	0.432	0.101	(0.232)	0.330
143	11.92	0.60	0.432	0.101	(0.232)	0.331
144	12.00	0.60	0.432	0.100	(0.232)	0.331
145	12.08	0.83	0.600	0.100	(0.323)	0.500
146	12.17	0.83	0.600	0.099	(0.323)	0.500
147	12.25	0.83	0.600	0.099	(0.323)	0.501
148	12.33	0.87	0.624	0.098	(0.335)	0.525
149	12.42	0.87	0.624	0.098	(0.335)	0.526
150	12.50	0.87	0.624	0.097	(0.335)	0.526
151	12.58	0.93	0.672	0.097	(0.361)	0.575
152	12.67	0.93	0.672	0.096	(0.361)	0.575
153	12.75	0.93	0.672	0.096	(0.361)	0.576
154	12.83	0.97	0.696	0.095	(0.374)	0.600
155	12.92	0.97	0.696	0.095	(0.374)	0.601
156	13.00	0.97	0.696	0.094	(0.374)	0.601
157	13.08	1.13	0.815	0.094	(0.439)	0.721
158	13.17	1.13	0.815	0.094	(0.439)	0.722
159	13.25	1.13	0.815	0.093	(0.439)	0.722
160	13.33	1.13	0.815	0.093	(0.439)	0.723
161	13.42	1.13	0.815	0.092	(0.439)	0.723
162	13.50	1.13	0.815	0.092	(0.439)	0.724
163	13.58	0.77	0.552	0.091	(0.297)	0.460
164	13.67	0.77	0.552	0.091	(0.297)	0.461
165	13.75	0.77	0.552	0.090	(0.297)	0.461
166	13.83	0.77	0.552	0.090	(0.297)	0.462
7	13.92	0.77	0.552	0.089	(0.297)	0.462
168	14.00	0.77	0.552	0.089	(0.297)	0.463
169	14.08	0.90	0.648	0.088	(0.348)	0.559
170	14.17	0.90	0.648	0.088	(0.348)	0.560
171	14.25	0.90	0.648	0.088	(0.348)	0.560

172	14.33	0.87	0.624	0.087	(0.335)	0.537
173	14.42	0.87	0.624	0.087	(0.335)	0.537
174	14.50	0.87	0.624	0.086	(0.335)	0.537
175	14.58	0.87	0.624	0.086	(0.335)	0.538
176	14.67	0.87	0.624	0.085	(0.335)	0.538
177	14.75	0.87	0.624	0.085	(0.335)	0.539
8	14.83	0.83	0.600	0.084	(0.323)	0.515
179	14.92	0.83	0.600	0.084	(0.323)	0.516
180	15.00	0.83	0.600	0.084	(0.323)	0.516
181	15.08	0.80	0.576	0.083	(0.310)	0.493
182	15.17	0.80	0.576	0.083	(0.310)	0.493
183	15.25	0.80	0.576	0.082	(0.310)	0.493
184	15.33	0.77	0.552	0.082	(0.297)	0.470
185	15.42	0.77	0.552	0.081	(0.297)	0.470
186	15.50	0.77	0.552	0.081	(0.297)	0.471
187	15.58	0.63	0.456	0.081	(0.245)	0.375
188	15.67	0.63	0.456	0.080	(0.245)	0.376
189	15.75	0.63	0.456	0.080	(0.245)	0.376
190	15.83	0.63	0.456	0.079	(0.245)	0.376
191	15.92	0.63	0.456	0.079	(0.245)	0.377
192	16.00	0.63	0.456	0.079	(0.245)	0.377
193	16.08	0.13	0.096	(0.078)	0.052	0.044
194	16.17	0.13	0.096	(0.078)	0.052	0.044
195	16.25	0.13	0.096	(0.077)	0.052	0.044
196	16.33	0.13	0.096	(0.077)	0.052	0.044
197	16.42	0.13	0.096	(0.077)	0.052	0.044
198	16.50	0.13	0.096	(0.076)	0.052	0.044
199	16.58	0.10	0.072	(0.076)	0.039	0.033
200	16.67	0.10	0.072	(0.075)	0.039	0.033
201	16.75	0.10	0.072	(0.075)	0.039	0.033
202	16.83	0.10	0.072	(0.075)	0.039	0.033
203	16.92	0.10	0.072	(0.074)	0.039	0.033
4	17.00	0.10	0.072	(0.074)	0.039	0.033
205	17.08	0.17	0.120	(0.074)	0.065	0.055
206	17.17	0.17	0.120	(0.073)	0.065	0.055
207	17.25	0.17	0.120	(0.073)	0.065	0.055
208	17.33	0.17	0.120	(0.072)	0.065	0.055
209	17.42	0.17	0.120	(0.072)	0.065	0.055
210	17.50	0.17	0.120	(0.072)	0.065	0.055
211	17.58	0.17	0.120	(0.071)	0.065	0.055
212	17.67	0.17	0.120	(0.071)	0.065	0.055
213	17.75	0.17	0.120	(0.071)	0.065	0.055
214	17.83	0.13	0.096	(0.070)	0.052	0.044
215	17.92	0.13	0.096	(0.070)	0.052	0.044
216	18.00	0.13	0.096	(0.070)	0.052	0.044
217	18.08	0.13	0.096	(0.069)	0.052	0.044
218	18.17	0.13	0.096	(0.069)	0.052	0.044
219	18.25	0.13	0.096	(0.069)	0.052	0.044
220	18.33	0.13	0.096	(0.068)	0.052	0.044
221	18.42	0.13	0.096	(0.068)	0.052	0.044
222	18.50	0.13	0.096	(0.068)	0.052	0.044
223	18.58	0.10	0.072	(0.067)	0.039	0.033
224	18.67	0.10	0.072	(0.067)	0.039	0.033
225	18.75	0.10	0.072	(0.067)	0.039	0.033
226	18.83	0.07	0.048	(0.066)	0.026	0.022
227	18.92	0.07	0.048	(0.066)	0.026	0.022
228	19.00	0.07	0.048	(0.066)	0.026	0.022
229	19.08	0.10	0.072	(0.065)	0.039	0.033
30	19.17	0.10	0.072	(0.065)	0.039	0.033
231	19.25	0.10	0.072	(0.065)	0.039	0.033
232	19.33	0.13	0.096	(0.064)	0.052	0.044
233	19.42	0.13	0.096	(0.064)	0.052	0.044
234	19.50	0.13	0.096	(0.064)	0.052	0.044

235	19.58	0.10	0.072	(0.064)	0.039	0.033
236	19.67	0.10	0.072	(0.063)	0.039	0.033
237	19.75	0.10	0.072	(0.063)	0.039	0.033
238	19.83	0.07	0.048	(0.063)	0.026	0.022
239	19.92	0.07	0.048	(0.062)	0.026	0.022
240	20.00	0.07	0.048	(0.062)	0.026	0.022
1	20.08	0.10	0.072	(0.062)	0.039	0.033
242	20.17	0.10	0.072	(0.062)	0.039	0.033
243	20.25	0.10	0.072	(0.061)	0.039	0.033
244	20.33	0.10	0.072	(0.061)	0.039	0.033
245	20.42	0.10	0.072	(0.061)	0.039	0.033
246	20.50	0.10	0.072	(0.061)	0.039	0.033
247	20.58	0.10	0.072	(0.060)	0.039	0.033
248	20.67	0.10	0.072	(0.060)	0.039	0.033
249	20.75	0.10	0.072	(0.060)	0.039	0.033
250	20.83	0.07	0.048	(0.060)	0.026	0.022
251	20.92	0.07	0.048	(0.059)	0.026	0.022
252	21.00	0.07	0.048	(0.059)	0.026	0.022
253	21.08	0.10	0.072	(0.059)	0.039	0.033
254	21.17	0.10	0.072	(0.059)	0.039	0.033
255	21.25	0.10	0.072	(0.058)	0.039	0.033
256	21.33	0.07	0.048	(0.058)	0.026	0.022
257	21.42	0.07	0.048	(0.058)	0.026	0.022
258	21.50	0.07	0.048	(0.058)	0.026	0.022
259	21.58	0.10	0.072	(0.057)	0.039	0.033
260	21.67	0.10	0.072	(0.057)	0.039	0.033
261	21.75	0.10	0.072	(0.057)	0.039	0.033
262	21.83	0.07	0.048	(0.057)	0.026	0.022
263	21.92	0.07	0.048	(0.057)	0.026	0.022
264	22.00	0.07	0.048	(0.056)	0.026	0.022
265	22.08	0.10	0.072	(0.056)	0.039	0.033
266	22.17	0.10	0.072	(0.056)	0.039	0.033
7	22.25	0.10	0.072	(0.056)	0.039	0.033
268	22.33	0.07	0.048	(0.056)	0.026	0.022
269	22.42	0.07	0.048	(0.056)	0.026	0.022
270	22.50	0.07	0.048	(0.055)	0.026	0.022
271	22.58	0.07	0.048	(0.055)	0.026	0.022
272	22.67	0.07	0.048	(0.055)	0.026	0.022
273	22.75	0.07	0.048	(0.055)	0.026	0.022
274	22.83	0.07	0.048	(0.055)	0.026	0.022
275	22.92	0.07	0.048	(0.055)	0.026	0.022
276	23.00	0.07	0.048	(0.055)	0.026	0.022
277	23.08	0.07	0.048	(0.054)	0.026	0.022
278	23.17	0.07	0.048	(0.054)	0.026	0.022
279	23.25	0.07	0.048	(0.054)	0.026	0.022
280	23.33	0.07	0.048	(0.054)	0.026	0.022
281	23.42	0.07	0.048	(0.054)	0.026	0.022
282	23.50	0.07	0.048	(0.054)	0.026	0.022
283	23.58	0.07	0.048	(0.054)	0.026	0.022
284	23.67	0.07	0.048	(0.054)	0.026	0.022
285	23.75	0.07	0.048	(0.054)	0.026	0.022
286	23.83	0.07	0.048	(0.054)	0.026	0.022
287	23.92	0.07	0.048	(0.054)	0.026	0.022
288	24.00	0.07	0.048	(0.053)	0.026	0.022

(Loss Rate Not Used)

Sum = 100.0 Sum = 50.9

Flood volume = Effective rainfall 4.24(In)
times area 330.0(Ac.)/[(In)/(Ft.)] = 116.5(Ac.Ft)
Total soil loss = 1.76(In)
Total soil loss = 48.355(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 5076438.8 Cubic Feet
Total soil loss = 2106328.7 Cubic Feet

Peak flow rate of this hydrograph = 225.761(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	75.0	150.0	225.0	300.0
0+ 5	0.0017	0.24	Q				
0+10	0.0097	1.16	Q				
0+15	0.0284	2.73	Q				
0+20	0.0583	4.34	Q				
0+25	0.0971	5.64	Q				
0+30	0.1446	6.90	Q				
0+35	0.1995	7.97	VQ				
0+40	0.2591	8.65	VQ				
0+45	0.3218	9.10	VQ				
0+50	0.3876	9.55	VQ				
0+55	0.4584	10.29	VQ				
1+ 0	0.5362	11.29	VQ				
1+ 5	0.6195	12.10	VQ				
1+10	0.7036	12.20	VQ				
1+15	0.7848	11.79	VQ				
1+20	0.8628	11.33	VQ				
1+25	0.9395	11.13	VQ				
1+30	1.0158	11.08	VQ				
1+35	1.0920	11.07	VQ				
1+40	1.1683	11.08	VQ				
1+45	1.2447	11.08	VQ				
1+50	1.3219	11.21	VQ				
1+55	1.4023	11.68	VQ				
2+ 0	1.4882	12.48	VQ				
2+ 5	1.5795	13.24	VQ				
2+10	1.6736	13.66	VQ				
2+15	1.7693	13.90	VQ				
2+20	1.8662	14.06	VQ				
2+25	1.9638	14.18	VQ				
2+30	2.0622	14.28	VQ				
2+35	2.1619	14.48	VQ				
2+40	2.2652	15.00	V Q				
2+45	2.3743	15.84	V Q				
2+50	2.4889	16.63	V Q				
2+55	2.6065	17.08	V Q				
3+ 0	2.7259	17.34	V Q				
3+ 5	2.8467	17.53	V Q				
3+10	2.9685	17.69	|VQ				
3+15	3.0912	17.82	|VQ				
3+20	3.2146	17.92	|VQ				
3+25	3.3387	18.01	|VQ				
3+30	3.4632	18.08	|VQ				
3+35	3.5881	18.14	|VQ				
3+40	3.7134	18.19	|VQ				
3+45	3.8391	18.24	|VQ				
3+50	3.9658	18.41	|VQ				
3+55	4.0960	18.89	|VQ				
4+ 0	4.2316	19.70	|VQ				
4+ 5	4.3726	20.47	|VQ				
4+10	4.5165	20.90	|VQ				
4+15	4.6622	21.15	|VQ				

4+20	4.8100	21.45	VQ				
4+25	4.9619	22.05	VQ				
4+30	5.1200	22.96	V Q				
4+35	5.2839	23.80	V Q				
4+40	5.4511	24.29	V Q				
4+45	5.6204	24.58	V Q				
4+50	5.7920	24.92	V Q				
4+55	5.9680	25.55	VQ				
5+ 0	6.1503	26.47	VQ				
5+ 5	6.3368	27.09	VQ				
5+10	6.5207	26.69	VQ				
5+15	6.6959	25.44	VQ				
5+20	6.8633	24.31	VQ				
5+25	7.0294	24.12	VQ				
5+30	7.1987	24.58	VQ				
5+35	7.3725	25.24	VQ				
5+40	7.5514	25.97	VQ				
5+45	7.7365	26.87	VQ				
5+50	7.9272	27.70	VQ				
5+55	8.1212	28.16	VQ				
6+ 0	8.3171	28.44	VQ				
6+ 5	8.5151	28.76	VQ				
6+10	8.7175	29.38	VQ				
6+15	8.9261	30.29	VQ				
6+20	9.1405	31.13	VQ				
6+25	9.3583	31.62	VQ				
6+30	9.5781	31.92	VQ				
6+35	9.8003	32.26	VQ				
6+40	10.0269	32.90	VQ				
6+45	10.2599	33.83	VQ				
6+50	10.4989	34.70	VQ				
6+55	10.7414	35.21	VQ				
7+ 0	10.9860	35.52	VQ				
7+ 5	11.2322	35.74	VQ				
7+10	11.4797	35.94	VQ				
7+15	11.7284	36.11	Q				
7+20	11.9797	36.49	Q				
7+25	12.2380	37.50	VQ				
7+30	12.5076	39.16	VQ				
7+35	12.7902	41.03	VQ				
7+40	13.0865	43.01	VQ				
7+45	13.3989	45.36	V Q				
7+50	13.7278	47.76	V Q				
7+55	14.0729	50.11	V Q				
8+ 0	14.4360	52.73	V Q				
8+ 5	14.8188	55.58	V Q				
8+10	15.2258	59.09	V Q				
8+15	15.6633	63.53	V Q				
8+20	16.1288	67.58	V Q				
8+25	16.6116	70.10	V Q				
8+30	17.1058	71.76	V Q				
8+35	17.6105	73.29	V Q				
8+40	18.1292	75.32	V Q				
8+45	18.6657	77.91	V Q				
8+50	19.2205	80.55	V Q				
8+55	19.7930	83.12	V Q				
9+ 0	20.3848	85.93	V Q				
9+ 5	20.9975	88.97	V Q				
9+10	21.6354	92.62	V Q				
9+15	22.3048	97.21	V Q				
9+20	23.0050	101.66	V Q				
9+25	23.7300	105.27	V Q				
9+30	24.4786	108.70	V Q				

9+35	25.2493	111.91	V	Q			
9+40	26.0406	114.90	V	Q			
9+45	26.8536	118.04	V	Q			
9+50	27.6874	121.08	V	Q			
9+55	28.5411	123.95	V	Q			
10+ 0	29.4158	127.01	V	Q			
10+ 5	30.2966	127.89	V	Q			
10+10	31.1417	122.72	V	Q			
10+15	31.9141	112.14	V	Q			
10+20	32.6159	101.90	V	Q			
10+25	33.2800	96.43	VQ				
10+30	33.9246	93.59	VQ				
10+35	34.5654	93.05	VQ				
10+40	35.2310	96.65	Q				
10+45	35.9476	104.04	VQ				
10+50	36.7143	111.32	V Q				
10+55	37.5075	115.18	V Q				
11+ 0	38.3152	117.28	V Q				
11+ 5	39.1310	118.45	V Q				
11+10	39.9475	118.56	V Q				
11+15	40.7584	117.73	V Q				
11+20	41.5627	116.78	VQ				
11+25	42.3649	116.49	VQ				
11+30	43.1671	116.47	VQ				
11+35	43.9662	116.03	Q				
11+40	44.7521	114.12	Q				
11+45	45.5158	110.89	QV				
11+50	46.2604	108.12	QV				
11+55	47.0002	107.42	Q V				
12+ 0	47.7454	108.20	Q V				
12+ 5	48.5101	111.04	Q V				
12+10	49.3271	118.62	QV				
12+15	50.2278	130.79	Q				
12+20	51.2097	142.56	V Q				
12+25	52.2435	150.11	V Q				
12+30	53.3155	155.65	V Q				
12+35	54.4210	160.52	V Q				
12+40	55.5607	165.49	V Q				
12+45	56.7390	171.09	V Q				
12+50	57.9532	176.30	V Q				
12+55	59.1969	180.58	V Q				
13+ 0	60.4678	184.53	V Q				
13+ 5	61.7708	189.21	V Q				
13+10	63.1244	196.54	V Q				
13+15	64.5488	206.82	V Q				
13+20	66.0390	216.38	V Q				
13+25	67.5688	222.13	V Q				
13+30	69.1236	225.76	V Q				
13+35	70.6774	225.61	V Q				
13+40	72.1711	216.88	V Q				
13+45	73.5492	200.10	VQ				
13+50	74.8159	183.92	QV				
13+55	76.0232	175.30	Q V				
14+ 0	77.1995	170.80	Q V				
14+ 5	78.3628	168.91	Q V				
14+10	79.5374	170.55	Q V				
14+15	80.7461	175.50	Q V				
14+20	81.9882	180.35	Q V				
14+25	83.2402	181.80	Q V				
14+30	84.4888	181.28	Q V				
14+35	85.7312	180.40	Q V				
14+40	86.9712	180.05	Q V				
14+45	88.2101	179.89	Q V				

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20+ 5	113.4100	9.36	Q				V
20+10	113.4743	9.34	Q				V
20+15	113.5421	9.84	Q				V
20+20	113.6136	10.38	Q				V
20+25	113.6868	10.63	Q				V
20+30	113.7608	10.74	Q				V
20+35	113.8352	10.81	Q				V
20+40	113.9100	10.86	Q				V
20+45	113.9851	10.90	Q				V
20+50	114.0594	10.80	Q				V
20+55	114.1309	10.37	Q				V
21+ 0	114.1971	9.61	Q				V
21+ 5	114.2591	9.01	Q				V
21+10	114.3215	9.06	Q				V
21+15	114.3877	9.61	Q				V
21+20	114.4571	10.08	Q				V
21+25	114.5254	9.91	Q				V
21+30	114.5891	9.26	Q				V
21+35	114.6491	8.71	Q				V
21+40	114.7098	8.82	Q				V
21+45	114.7746	9.41	Q				V
21+50	114.8428	9.90	Q				V
21+55	114.9102	9.78	Q				V
22+ 0	114.9733	9.16	Q				V
22+ 5	115.0328	8.65	Q				V
22+10	115.0931	8.76	Q				V
22+15	115.1576	9.36	Q				V
22+20	115.2256	9.87	Q				V
22+25	115.2927	9.74	Q				V
22+30	115.3555	9.12	Q				V
22+35	115.4139	8.48	Q				V
22+40	115.4699	8.14	Q				V
22+45	115.5248	7.96	Q				V
22+50	115.5788	7.84	Q				V
22+55	115.6323	7.77	Q				V
23+ 0	115.6854	7.71	Q				V
23+ 5	115.7381	7.66	Q				V
23+10	115.7905	7.60	Q				V
23+15	115.8426	7.56	Q				V
23+20	115.8944	7.53	Q				V
23+25	115.9461	7.51	Q				V
23+30	115.9977	7.49	Q				V
23+35	116.0493	7.48	Q				V
23+40	116.1006	7.46	Q				V
23+45	116.1519	7.44	Q				V
23+50	116.2029	7.42	Q				V
23+55	116.2540	7.41	Q				V
24+ 0	116.3050	7.41	Q				V
24+ 5	116.3544	7.17	Q				V
24+10	116.3973	6.24	Q				V
24+15	116.4294	4.66	Q				V
24+20	116.4512	3.16	Q				V
24+25	116.4671	2.32	Q				V
24+30	116.4798	1.84	Q				V
24+35	116.4902	1.51	Q				V
24+40	116.4988	1.25	Q				V
24+45	116.5060	1.04	Q				V
24+50	116.5120	0.87	Q				V
24+55	116.5170	0.73	Q				V
25+ 0	116.5213	0.61	Q				V
25+ 5	116.5248	0.52	Q				V
25+10	116.5278	0.44	Q				V
25+15	116.5304	0.37	Q				V

25+20	116.5324	0.30	Q				V
25+25	116.5341	0.24	Q				V
25+30	116.5355	0.20	Q				V
25+35	116.5365	0.16	Q				V
25+40	116.5374	0.12	Q				V
25+45	116.5380	0.09	Q				V
25+50	116.5385	0.07	Q				V
25+55	116.5388	0.05	Q				V
26+ 0	116.5390	0.02	Q				V

TABLE 8.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.74	0.002	0.20		
	D	75.0%	75.0	92.3	9.67	0.029	2.70	10.41	92.1
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.03	0.000	0.01		
	D	90.0%	75.0	95.7	0.31	0.001	0.09	0.34	95.6
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	30.55	0.093	7.26	30.55	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.00	0.000	0.00		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	0.00	#DIV/0!
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	2.25	0.007	0.50		
	C	40.0%	69.0	80.6	4.85	0.015	1.18		
	D	40.0%	75.0	84.2	1.15	0.003	0.29	8.25	79.0
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.015	1.28		
	D	50.0%	75.0	86.5	93.29	0.283	24.45	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.015	1.25		
	D	50.0%	75.0	86.5	38.57	0.117	10.11	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	8.82	0.027	2.31	8.82	86.5
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.012	0.90		
	C	50.0%	69.0	83.5	1.75	0.005	0.44		
	D	50.0%	75.0	86.5	103.02	0.312	27.00	108.62	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.040	3.62	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	7.80	0.024	1.99	7.80	84.2
								330.00	
					330.00	1.000			
COMPOSITE RUN OFF INDEX - AMC II							85.6		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 8.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

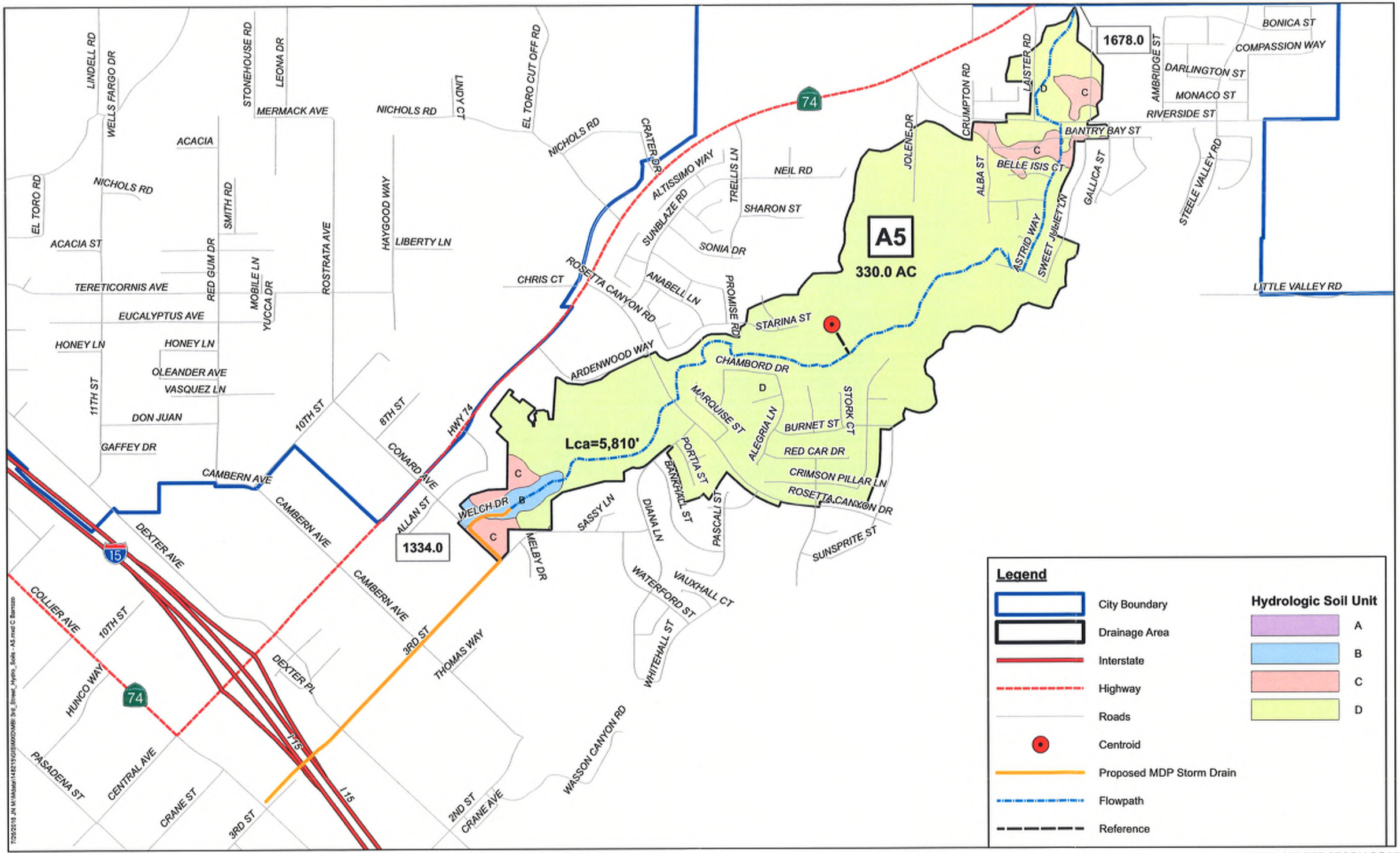
CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

WATERSHEAD "A"					
LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	10.41	0.032	0.009
BUSINESS PROFESSIONAL	0.9	0.18	0.00	0.000	0.000
COMMERCIAL	0.9	0.18	0.34	0.001	0.000
COMMERCIAL MIXED-USE	0.9	0.18	0.00	0.000	0.000
COMMUNITY PARK	0.15	0.78	30.55	0.093	0.072
GENERAL COMMERCIAL	0.9	0.18	0.00	0.000	0.000
HIGH DENSITY-R	0.75	0.3	0.00	0.000	0.000
LOW DENSITY-R	0.4	0.58	8.25	0.025	0.015
LOW-MEDIUM R	0.5	0.5	98.35	0.298	0.149
MEDIUM DENSITY	0.5	0.5	43.50	0.132	0.066
MEDIUM DENSITY-R	0.5	0.5	8.82	0.027	0.013
MEDIUM LOW DENSITY	0.5	0.5	108.62	0.329	0.165
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.040	0.035
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	7.80	0.024	0.014
			330.00	1.000	
COMPOSITE LOW LOSS RATE					**0.538**

TABLE 8.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

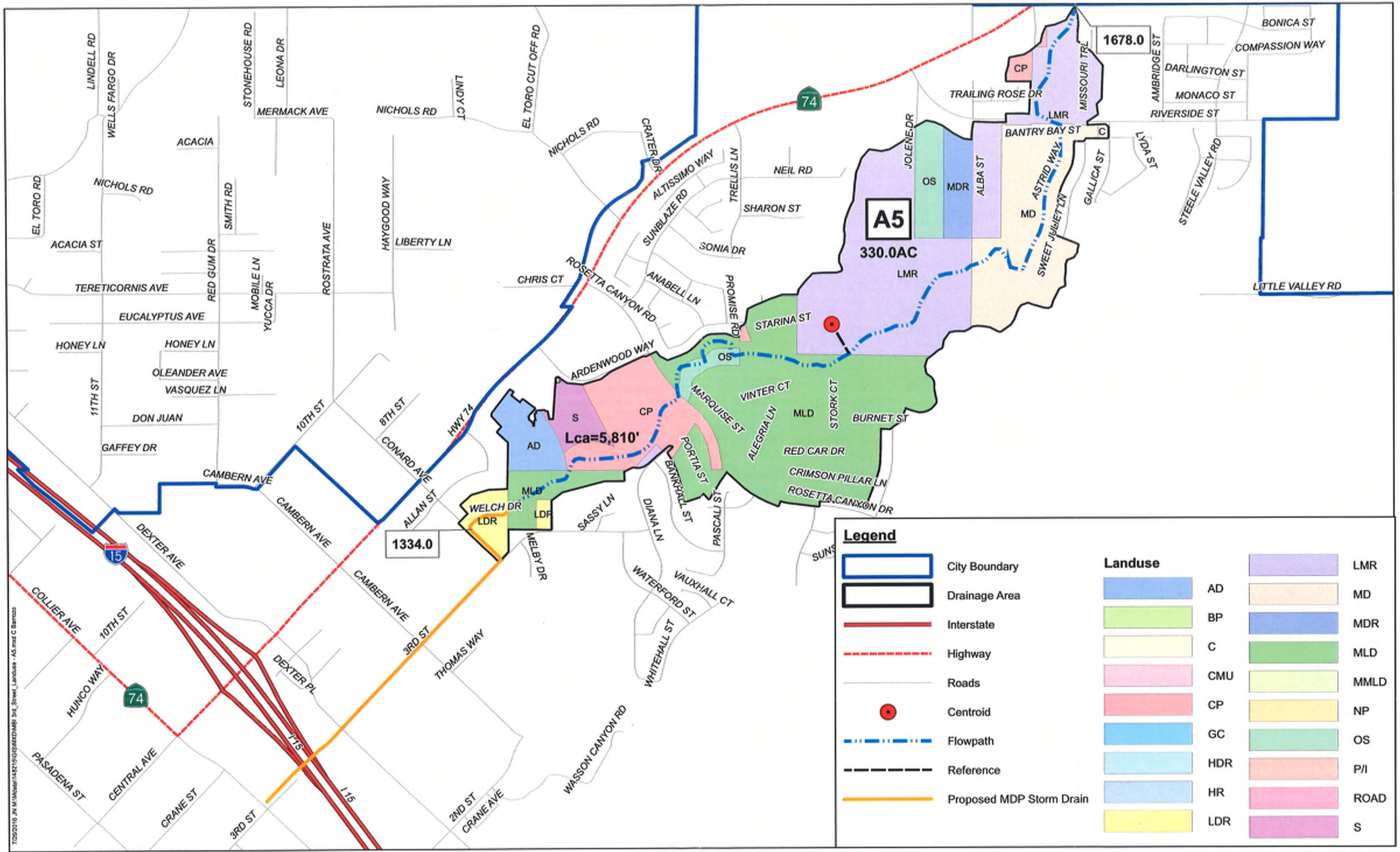
WATERSHEAD "A"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	10.41	0.032	0.0005
BUSINESS PROFESSIONAL	0.015	0.00	0.000	0.0000
COMMERCIAL	0.015	0.34	0.001	0.0000
COMMERCIAL MIXED-USE	0.015	0.00	0.000	0.0000
COMMUNITY PARK	0.035	30.55	0.093	0.0032
GENERAL COMMERCIAL	0.015	0.00	0.000	0.0000
HIGH DENSITY-R	0.015	0.00	0.000	0.0000
LOW DENSITY-R	0.02	8.25	0.025	0.0005
LOW-MEDIUM R	0.015	98.35	0.298	0.0045
MEDIUM DENSITY	0.015	43.50	0.132	0.0020
MEDIUM DENSITY-R	0.015	8.82	0.027	0.0004
MEDIUM LOW DENSITY	0.02	108.62	0.329	0.0066
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.040	0.0016
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	7.80	0.024	0.0004
		330.00	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0196**



THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map -WS A5

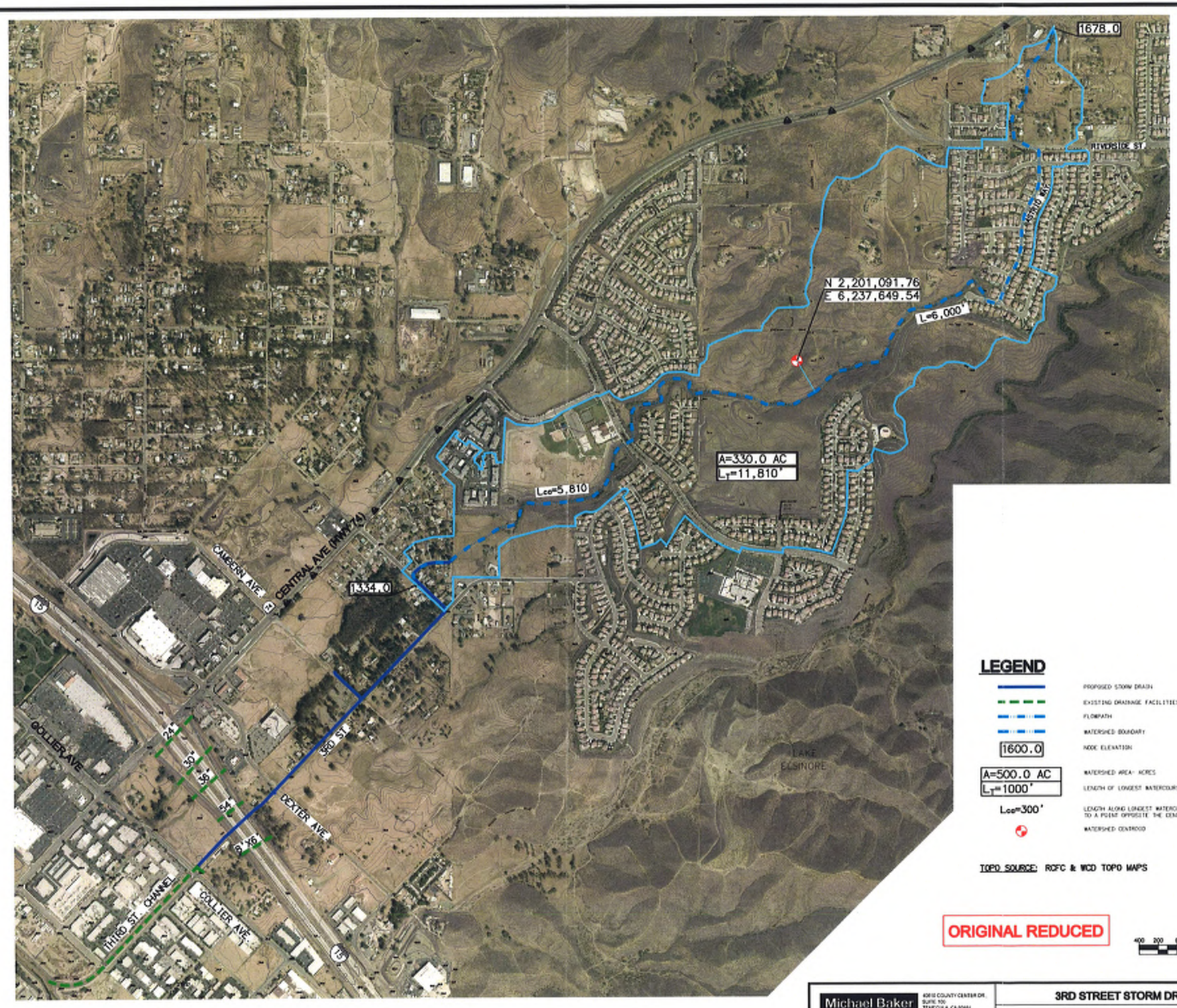
RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 16



THIRD STREET STORM DRAIN

Landuse Map -WS A5

RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 17



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- L_{CG}=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

SCALE: 1"=400'

Michael Baker INTERNATIONAL
4080 COUNTY CENTER DR.
SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8242
MBAKERINTL.COM

3RD STREET STORM DRAIN - EXHIBIT 18

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A5'

N:\PROJECTS\16073\CAD\STORM\TDY\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG YOCHYLL 7/28/16 12:55 pm

APPENDIX G

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 06/28/16 File: 3rdstA63100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA-A6 (DESIGN POINT AT CAMBERN AVE & 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 338.80(Ac.) = 0.529 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 338.80(Ac.) = 0.529 Sq. Mi.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 7470.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.415 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.299 Hr.
Lag time = 17.93 Min.
25% of lag time = 4.48 Min.
40% of lag time = 7.17 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
338.80	0.95	321.86

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
338.80	2.30	779.24

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.85 %
Adjusted average point rain = 2.297(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.420	92.10	0.750
0.350	95.60	0.900
0.070	95.10	0.900
30.550	78.50	0.150
1.150	90.80	0.750
14.580	79.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.050	86.10	0.500
108.620	86.10	0.500
13.360	89.50	0.050
7.800	84.20	0.400

Total Area Entered = 338.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.031	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
95.1	95.1	0.064	0.900	0.012	0.000	0.000
78.5	78.5	0.262	0.150	0.226	0.090	0.020
90.8	90.8	0.120	0.750	0.039	0.003	0.000
79.8	79.8	0.246	0.400	0.158	0.043	0.007
86.3	86.3	0.172	0.500	0.095	0.290	0.027
86.2	86.2	0.173	0.500	0.095	0.128	0.012
86.1	86.1	0.174	0.500	0.096	0.030	0.003
86.1	86.1	0.174	0.500	0.096	0.321	0.031
89.5	89.5	0.136	0.050	0.130	0.039	0.005
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.110

Area averaged mean soil loss (F) (In/Hr) = 0.110
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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	27.879	2.632	8.988
2	0.167	55.758	9.298	31.748
3	0.250	83.637	16.487	56.293
4	0.333	111.516	19.378	66.166
5	0.417	139.395	14.032	47.911
6	0.500	167.274	8.231	28.104
7	0.583	195.153	5.138	17.545
8	0.667	223.032	3.883	13.259
9	0.750	250.911	3.116	10.640
10	0.833	278.790	2.607	8.902
11	0.917	306.669	2.164	7.390
12	1.000	334.548	1.770	6.042

13	1.083	362.428	1.628	5.560
14	1.167	390.307	1.295	4.422
15	1.250	418.186	1.156	3.945
16	1.333	446.065	0.912	3.115
17	1.417	473.944	0.872	2.976
18	1.500	501.823	0.836	2.856
19	1.583	529.702	0.711	2.427
20	1.667	557.581	0.609	2.080
21	1.750	585.460	0.531	1.814
22	1.833	613.339	0.489	1.670
23	1.917	641.218	0.405	1.384
24	2.000	669.097	0.364	1.243
25	2.083	696.976	0.284	0.971
26	2.167	724.855	0.279	0.952
27	2.250	752.734	0.279	0.952
28	2.333	780.613	0.279	0.952
29	2.417	808.492	0.333	1.138
		Sum = 100.000	Sum=	341.447

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	1.30	0.358	0.110	(0.193)	0.249
2	0.17	1.30	0.358	0.110	(0.193)	0.249
3	0.25	1.10	0.303	0.110	(0.163)	0.193
4	0.33	1.50	0.413	0.110	(0.222)	0.304
5	0.42	1.50	0.413	0.110	(0.222)	0.304
6	0.50	1.80	0.496	0.110	(0.267)	0.386
7	0.58	1.50	0.413	0.110	(0.222)	0.304
8	0.67	1.80	0.496	0.110	(0.267)	0.386
9	0.75	1.80	0.496	0.110	(0.267)	0.386
10	0.83	1.50	0.413	0.110	(0.222)	0.304
11	0.92	1.60	0.441	0.110	(0.237)	0.331
12	1.00	1.80	0.496	0.110	(0.267)	0.386
13	1.08	2.20	0.606	0.110	(0.326)	0.497
14	1.17	2.20	0.606	0.110	(0.326)	0.497
15	1.25	2.20	0.606	0.110	(0.326)	0.497
16	1.33	2.00	0.551	0.110	(0.297)	0.441
17	1.42	2.60	0.717	0.110	(0.385)	0.607
18	1.50	2.70	0.744	0.110	(0.400)	0.634
19	1.58	2.40	0.661	0.110	(0.356)	0.552
20	1.67	2.70	0.744	0.110	(0.400)	0.634
21	1.75	3.30	0.909	0.110	(0.489)	0.800
22	1.83	3.10	0.854	0.110	(0.460)	0.745
23	1.92	2.90	0.799	0.110	(0.430)	0.690
24	2.00	3.00	0.827	0.110	(0.445)	0.717
25	2.08	3.10	0.854	0.110	(0.460)	0.745
26	2.17	4.20	1.157	0.110	(0.623)	1.048
27	2.25	5.00	1.378	0.110	(0.741)	1.268
28	2.33	3.50	0.965	0.110	(0.519)	0.855
29	2.42	6.80	1.874	0.110	(1.008)	1.764
30	2.50	7.30	2.012	0.110	(1.082)	1.902
31	2.58	8.20	2.260	0.110	(1.216)	2.150
32	2.67	5.90	1.626	0.110	(0.875)	1.516
33	2.75	2.00	0.551	0.110	(0.297)	0.441
34	2.83	1.80	0.496	0.110	(0.267)	0.386
35	2.92	1.80	0.496	0.110	(0.267)	0.386
36	3.00	0.60	0.165	(0.110)	0.089	0.076
		(Loss Rate Not Used)				

Sum = 100.0 Sum = 23.6

Flood volume = Effective rainfall 1.97(In)
times area 338.8(Ac.)/[(In)/(Ft.)] = 55.6(Ac.Ft)
Total soil loss = 0.33(In)
Total soil loss = 9.243(Ac.Ft)
Total rainfall = 2.30(In)
Flood volume = 2421803.6 Cubic Feet
Total soil loss = 402644.8 Cubic Feet

Peak flow rate of this hydrograph = 488.689(CFS)

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3 - 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	125.0	250.0	375.0	500.0
0+ 5	0.0154	2.24	Q				
0+10	0.0852	10.13	Q				
0+15	0.2479	23.63	VQ				
0+20	0.5188	39.33	V Q				
0+25	0.8745	51.64	V Q				
0+30	1.3010	61.93	V Q				
0+35	1.8026	72.84	V Q				
0+40	2.3718	82.64	V Q				
0+45	2.9976	90.86	V Q				
0+50	3.6634	96.68	V Q				
0+55	4.3580	100.85	V Q				
1+ 0	5.0663	102.84	V Q				
1+ 5	5.7935	105.59	V Q				
1+10	6.5709	112.87	V Q				
1+15	7.4250	124.02	V Q				
1+20	8.3526	134.69	V Q				
1+25	9.3325	142.28	V Q				
1+30	10.3640	149.78	V Q				
1+35	11.4590	158.98	V Q				
1+40	12.6280	169.75	V Q				
1+45	13.8657	179.70	V Q				
1+50	15.1785	190.63	V Q				
1+55	16.5822	203.81	V Q				
2+ 0	18.0648	215.27	V Q				
2+ 5	19.5891	221.34	V Q				
2+10	21.1567	227.61	V Q				
2+15	22.8344	243.60	V Q				
2+20	24.6844	268.62	V Q				
2+25	26.7513	300.12	V Q				
2+30	29.0846	338.79	V Q				
2+35	31.7734	390.42	V Q				
2+40	34.9005	454.05	V Q				
2+45	38.2661	488.69	V Q				
2+50	41.4836	467.18	V Q				
2+55	44.2056	395.23	V Q				
3+ 0	46.3405	309.99	V Q				
3+ 5	48.0134	242.90	V Q				
3+10	49.3397	192.58	V Q				
3+15	50.3747	150.28	V Q				
3+20	51.1845	117.58	V Q				
3+25	51.8429	95.60	V Q				
3+30	52.3922	79.77	V Q				
3+35	52.8617	68.17	V Q				

3+40	53.2633	58.31	| Q	|	|	| V |
3+45	53.6079	50.04	| Q	|	|	| V |
3+50	53.9071	43.44	| Q	|	|	| V |
3+55	54.1691	38.04	| Q	|	|	| V |
4+ 0	54.4004	33.58	| Q	|	|	| V|
4+ 5	54.6019	29.27	| Q	|	|	| V|
4+10	54.7751	25.15	| Q	|	|	| V|
4+15	54.9247	21.72	|Q	|	|	| V|
4+20	55.0550	18.92	|Q	|	|	| V|
4+25	55.1668	16.22	|Q	|	|	| V|
4+30	55.2628	13.95	|Q	|	|	| V|
4+35	55.3444	11.84	Q	|	|	| V|
4+40	55.4122	9.85	Q	|	|	| V|
4+45	55.4734	8.88	Q	|	|	| V|
4+50	55.5219	7.04	Q	|	|	| V|
4+55	55.5574	5.15	Q	|	|	| V|
5+ 0	55.5777	2.96	Q	|	|	| V|
5+ 5	55.5868	1.31	Q	|	|	| V|
5+10	55.5928	0.88	Q	|	|	| V|
5+15	55.5964	0.51	Q	|	|	| V|
5+20	55.5970	0.09	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 06/28/16 File: 3rdstA66100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA-A6 (DESIGN POINT AT CAMBERN AVE & 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 338.80(Ac.) = 0.529 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 338.80(Ac.) = 0.529 Sq.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 7470.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.415 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.299 Hr.
Lag time = 17.93 Min.
25% of lag time = 4.48 Min.
40% of lag time = 7.17 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
338.80	1.35	457.38

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
338.80	3.30	1118.04

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.88 %
Adjusted average point rain = 3.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.420	92.10	0.750
0.350	95.60	0.900
0.070	95.10	0.900
30.550	78.50	0.150
1.150	90.80	0.750
14.580	79.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.050	86.10	0.500
108.620	86.10	0.500
13.360	89.50	0.050
7.800	84.20	0.400

Total Area Entered = 338.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.031	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
95.1	95.1	0.064	0.900	0.012	0.000	0.000
78.5	78.5	0.262	0.150	0.226	0.090	0.020
90.8	90.8	0.120	0.750	0.039	0.003	0.000
79.8	79.8	0.246	0.400	0.158	0.043	0.007
86.3	86.3	0.172	0.500	0.095	0.290	0.027
86.2	86.2	0.173	0.500	0.095	0.128	0.012
86.1	86.1	0.174	0.500	0.096	0.030	0.003
86.1	86.1	0.174	0.500	0.096	0.321	0.031
89.5	89.5	0.136	0.050	0.130	0.039	0.005
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.110

Area averaged mean soil loss (F) (In/Hr) = 0.110
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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	27.879	2.632	8.988
2	0.167	55.758	9.298	31.748
3	0.250	83.637	16.487	56.293
4	0.333	111.516	19.378	66.166
5	0.417	139.395	14.032	47.911
6	0.500	167.274	8.231	28.104
7	0.583	195.153	5.138	17.545
8	0.667	223.032	3.883	13.259
9	0.750	250.911	3.116	10.640
10	0.833	278.790	2.607	8.902
11	0.917	306.669	2.164	7.390
12	1.000	334.548	1.770	6.042

13	1.083	362.428	1.628	5.560
14	1.167	390.307	1.295	4.422
15	1.250	418.186	1.156	3.945
16	1.333	446.065	0.912	3.115
17	1.417	473.944	0.872	2.976
18	1.500	501.823	0.836	2.856
19	1.583	529.702	0.711	2.427
20	1.667	557.581	0.609	2.080
21	1.750	585.460	0.531	1.814
22	1.833	613.339	0.489	1.670
23	1.917	641.218	0.405	1.384
24	2.000	669.097	0.364	1.243
25	2.083	696.976	0.284	0.971
26	2.167	724.855	0.279	0.952
27	2.250	752.734	0.279	0.952
28	2.333	780.613	0.279	0.952
29	2.417	808.492	0.333	1.138
		Sum =	100.000 Sum=	341.447

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	0.50	0.198	(0.110)	0.106	0.091
2	0.17	0.60	0.237	0.110	(0.128)	0.128
3	0.25	0.60	0.237	0.110	(0.128)	0.128
4	0.33	0.60	0.237	0.110	(0.128)	0.128
5	0.42	0.60	0.237	0.110	(0.128)	0.128
6	0.50	0.70	0.277	0.110	(0.149)	0.167
7	0.58	0.70	0.277	0.110	(0.149)	0.167
8	0.67	0.70	0.277	0.110	(0.149)	0.167
9	0.75	0.70	0.277	0.110	(0.149)	0.167
10	0.83	0.70	0.277	0.110	(0.149)	0.167
11	0.92	0.70	0.277	0.110	(0.149)	0.167
12	1.00	0.80	0.316	0.110	(0.170)	0.207
13	1.08	0.80	0.316	0.110	(0.170)	0.207
14	1.17	0.80	0.316	0.110	(0.170)	0.207
15	1.25	0.80	0.316	0.110	(0.170)	0.207
16	1.33	0.80	0.316	0.110	(0.170)	0.207
17	1.42	0.80	0.316	0.110	(0.170)	0.207
18	1.50	0.80	0.316	0.110	(0.170)	0.207
19	1.58	0.80	0.316	0.110	(0.170)	0.207
20	1.67	0.80	0.316	0.110	(0.170)	0.207
21	1.75	0.80	0.316	0.110	(0.170)	0.207
22	1.83	0.80	0.316	0.110	(0.170)	0.207
23	1.92	0.80	0.316	0.110	(0.170)	0.207
24	2.00	0.90	0.356	0.110	(0.192)	0.246
25	2.08	0.80	0.316	0.110	(0.170)	0.207
26	2.17	0.90	0.356	0.110	(0.192)	0.246
27	2.25	0.90	0.356	0.110	(0.192)	0.246
28	2.33	0.90	0.356	0.110	(0.192)	0.246
29	2.42	0.90	0.356	0.110	(0.192)	0.246
30	2.50	0.90	0.356	0.110	(0.192)	0.246
31	2.58	0.90	0.356	0.110	(0.192)	0.246
32	2.67	0.90	0.356	0.110	(0.192)	0.246
33	2.75	1.00	0.396	0.110	(0.213)	0.286
34	2.83	1.00	0.396	0.110	(0.213)	0.286
35	2.92	1.00	0.396	0.110	(0.213)	0.286
36	3.00	1.00	0.396	0.110	(0.213)	0.286
37	3.08	1.00	0.396	0.110	(0.213)	0.286

38	3.17	1.10	0.435	0.110	(0.234)	0.325
39	3.25	1.10	0.435	0.110	(0.234)	0.325
40	3.33	1.10	0.435	0.110	(0.234)	0.325
41	3.42	1.20	0.475	0.110	(0.255)	0.365
42	3.50	1.30	0.514	0.110	(0.277)	0.404
43	3.58	1.40	0.554	0.110	(0.298)	0.444
4	3.67	1.40	0.554	0.110	(0.298)	0.444
45	3.75	1.50	0.593	0.110	(0.319)	0.484
46	3.83	1.50	0.593	0.110	(0.319)	0.484
47	3.92	1.60	0.633	0.110	(0.340)	0.523
48	4.00	1.60	0.633	0.110	(0.340)	0.523
49	4.08	1.70	0.672	0.110	(0.362)	0.563
50	4.17	1.80	0.712	0.110	(0.383)	0.602
51	4.25	1.90	0.752	0.110	(0.404)	0.642
52	4.33	2.00	0.791	0.110	(0.426)	0.681
53	4.42	2.10	0.831	0.110	(0.447)	0.721
54	4.50	2.10	0.831	0.110	(0.447)	0.721
55	4.58	2.20	0.870	0.110	(0.468)	0.760
56	4.67	2.30	0.910	0.110	(0.489)	0.800
57	4.75	2.40	0.949	0.110	(0.511)	0.840
58	4.83	2.40	0.949	0.110	(0.511)	0.840
59	4.92	2.50	0.989	0.110	(0.532)	0.879
60	5.00	2.60	1.028	0.110	(0.553)	0.919
61	5.08	3.10	1.226	0.110	(0.660)	1.116
62	5.17	3.60	1.424	0.110	(0.766)	1.314
63	5.25	3.90	1.543	0.110	(0.830)	1.433
64	5.33	4.20	1.661	0.110	(0.894)	1.552
65	5.42	4.70	1.859	0.110	(1.000)	1.749
66	5.50	5.60	2.215	0.110	(1.192)	2.105
67	5.58	1.90	0.752	0.110	(0.404)	0.642
68	5.67	0.90	0.356	0.110	(0.192)	0.246
69	5.75	0.60	0.237	0.110	(0.128)	0.128
0	5.83	0.50	0.198	(0.110)	0.106	0.091
71	5.92	0.30	0.119	(0.110)	0.064	0.055
72	6.00	0.20	0.079	(0.110)	0.043	0.037

(Loss Rate Not Used)

Sum = 100.0 Sum = 31.8

Flood volume = Effective rainfall 2.65(In)
times area 338.8(Ac.)/[(In)/(Ft.)] = 74.8(Ac.Ft)
Total soil loss = 0.65(In)
Total soil loss = 18.303(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 3256477.0 Cubic Feet
Total soil loss = 797281.6 Cubic Feet

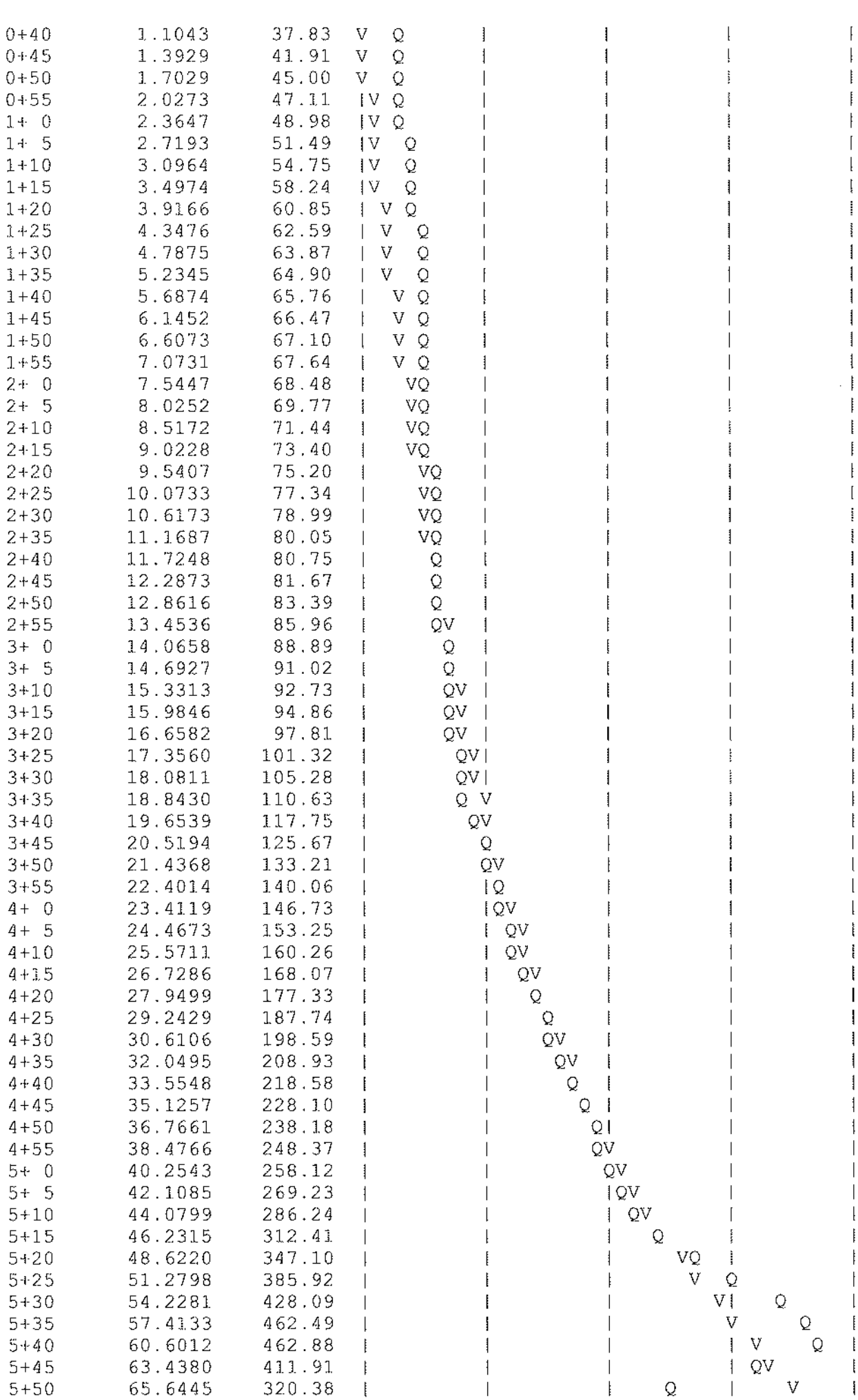
Peak flow rate of this hydrograph = 462.880(CFS)

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6 - 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	125.0	250.0	375.0	500.0
0+ 5	0.0057	0.82	Q	|	|	|	|
0+10	0.0336	4.05	Q	|	|	|	|
0+15	0.1048	10.35	Q	|	|	|	|
0+20	0.2318	18.44	VQ	|	|	|	|
0+25	0.4055	25.22	V Q	|	|	|	|
0+30	0.6112	29.88	V Q	|	|	|	|
0+35	0.8437	33.76	V Q	|	|	|	|



0+40	1.1043	37.83	V Q
0+45	1.3929	41.91	V Q
0+50	1.7029	45.00	V Q
0+55	2.0273	47.11	V Q
1+ 0	2.3647	48.98	V Q
1+ 5	2.7193	51.49	V Q
1+10	3.0964	54.75	V Q
1+15	3.4974	58.24	V Q
1+20	3.9166	60.85	V Q
1+25	4.3476	62.59	V Q
1+30	4.7875	63.87	V Q
1+35	5.2345	64.90	V Q
1+40	5.6874	65.76	V Q
1+45	6.1452	66.47	V Q
1+50	6.6073	67.10	V Q
1+55	7.0731	67.64	V Q
2+ 0	7.5447	68.48	VQ
2+ 5	8.0252	69.77	VQ
2+10	8.5172	71.44	VQ
2+15	9.0228	73.40	VQ
2+20	9.5407	75.20	VQ
2+25	10.0733	77.34	VQ
2+30	10.6173	78.99	VQ
2+35	11.1687	80.05	VQ
2+40	11.7248	80.75	Q
2+45	12.2873	81.67	Q
2+50	12.8616	83.39	Q
2+55	13.4536	85.96	QV
3+ 0	14.0658	88.89	Q
3+ 5	14.6927	91.02	Q
3+10	15.3313	92.73	QV
3+15	15.9846	94.86	QV
3+20	16.6582	97.81	QV
3+25	17.3560	101.32	QV
3+30	18.0811	105.28	QV
3+35	18.8430	110.63	Q V
3+40	19.6539	117.75	QV
3+45	20.5194	125.67	Q
3+50	21.4368	133.21	QV
3+55	22.4014	140.06	Q
4+ 0	23.4119	146.73	QV
4+ 5	24.4673	153.25	QV
4+10	25.5711	160.26	QV
4+15	26.7286	168.07	QV
4+20	27.9499	177.33	Q
4+25	29.2429	187.74	Q
4+30	30.6106	198.59	QV
4+35	32.0495	208.93	QV
4+40	33.5548	218.58	Q
4+45	35.1257	228.10	Q
4+50	36.7661	238.18	Q
4+55	38.4766	248.37	QV
5+ 0	40.2543	258.12	QV
5+ 5	42.1085	269.23	QV
5+10	44.0799	286.24	QV
5+15	46.2315	312.41	Q
5+20	48.6220	347.10	VQ
5+25	51.2798	385.92	V Q
5+30	54.2281	428.09	V Q
5+35	57.4133	462.49	V Q
5+40	60.6012	462.88	V Q
5+45	63.4380	411.91	QV
5+50	65.6445	320.38	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 06/28/16 File: 3rdstA624100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA-A6 (DESIGN POINT AT CAMBERN AVE & 3RD ST)
100-YEAR STORM EVENT

Drainage Area = 338.80(Ac.) = 0.529 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 338.80(Ac.) = 0.529 Sq.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 7470.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.415 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.020
Lag time = 0.299 Hr.
Lag time = 17.93 Min.
25% of lag time = 4.48 Min.
40% of lag time = 7.17 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]
338.80	2.50	847.00

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
338.80	6.00	2032.80

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.93 %
Adjusted average point rain = 5.996(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
10.420	92.10	0.750
0.350	95.60	0.900
0.070	95.10	0.900
30.550	78.50	0.150
1.150	90.80	0.750
14.580	79.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
10.050	86.10	0.500
108.620	86.10	0.500
13.360	89.50	0.050
7.800	84.20	0.400

Total Area Entered = 338.80(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.1	92.1	0.103	0.750	0.033	0.031	0.001
95.6	95.6	0.057	0.900	0.011	0.001	0.000
95.1	95.1	0.064	0.900	0.012	0.000	0.000
78.5	78.5	0.262	0.150	0.226	0.090	0.020
90.8	90.8	0.120	0.750	0.039	0.003	0.000
79.8	79.8	0.246	0.400	0.158	0.043	0.007
86.3	86.3	0.172	0.500	0.095	0.290	0.027
86.2	86.2	0.173	0.500	0.095	0.128	0.012
86.1	86.1	0.174	0.500	0.096	0.030	0.003
86.1	86.1	0.174	0.500	0.096	0.321	0.031
89.5	89.5	0.136	0.050	0.130	0.039	0.005
84.2	84.2	0.196	0.400	0.126	0.023	0.003
					Sum (F) =	0.110

Area averaged mean soil loss (F) (In/Hr) = 0.110
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.538

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

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28	2.333	780.613	0.279	0.952
29	2.417	808.492	0.333	1.138
		Sum = 100.000	Sum=	341.447

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	0.048	(0.194)	0.026	0.022
2	0.17	0.07	0.048	(0.194)	0.026	0.022
3	0.25	0.07	0.048	(0.193)	0.026	0.022
4	0.33	0.10	0.072	(0.192)	0.039	0.033
5	0.42	0.10	0.072	(0.191)	0.039	0.033
6	0.50	0.10	0.072	(0.191)	0.039	0.033
7	0.58	0.10	0.072	(0.190)	0.039	0.033
8	0.67	0.10	0.072	(0.189)	0.039	0.033
9	0.75	0.10	0.072	(0.189)	0.039	0.033
10	0.83	0.13	0.096	(0.188)	0.052	0.044
11	0.92	0.13	0.096	(0.187)	0.052	0.044
12	1.00	0.13	0.096	(0.186)	0.052	0.044
13	1.08	0.10	0.072	(0.186)	0.039	0.033
14	1.17	0.10	0.072	(0.185)	0.039	0.033
15	1.25	0.10	0.072	(0.184)	0.039	0.033
16	1.33	0.10	0.072	(0.183)	0.039	0.033
17	1.42	0.10	0.072	(0.183)	0.039	0.033
18	1.50	0.10	0.072	(0.182)	0.039	0.033
19	1.58	0.10	0.072	(0.181)	0.039	0.033
20	1.67	0.10	0.072	(0.180)	0.039	0.033
21	1.75	0.10	0.072	(0.180)	0.039	0.033
22	1.83	0.13	0.096	(0.179)	0.052	0.044
23	1.92	0.13	0.096	(0.178)	0.052	0.044
24	2.00	0.13	0.096	(0.178)	0.052	0.044
25	2.08	0.13	0.096	(0.177)	0.052	0.044
26	2.17	0.13	0.096	(0.176)	0.052	0.044
27	2.25	0.13	0.096	(0.175)	0.052	0.044
28	2.33	0.13	0.096	(0.175)	0.052	0.044
29	2.42	0.13	0.096	(0.174)	0.052	0.044
30	2.50	0.13	0.096	(0.173)	0.052	0.044
31	2.58	0.17	0.120	(0.173)	0.065	0.055
32	2.67	0.17	0.120	(0.172)	0.065	0.055
33	2.75	0.17	0.120	(0.171)	0.065	0.055
34	2.83	0.17	0.120	(0.170)	0.065	0.055
35	2.92	0.17	0.120	(0.170)	0.065	0.055
36	3.00	0.17	0.120	(0.169)	0.065	0.055
37	3.08	0.17	0.120	(0.168)	0.065	0.055

38	3.17	0.17	0.120	(0.168)	0.065	0.055
39	3.25	0.17	0.120	(0.167)	0.065	0.055
40	3.33	0.17	0.120	(0.166)	0.065	0.055
41	3.42	0.17	0.120	(0.166)	0.065	0.055
42	3.50	0.17	0.120	(0.165)	0.065	0.055
43	3.58	0.17	0.120	(0.164)	0.065	0.055
44	3.67	0.17	0.120	(0.163)	0.065	0.055
45	3.75	0.17	0.120	(0.163)	0.065	0.055
46	3.83	0.20	0.144	(0.162)	0.077	0.066
47	3.92	0.20	0.144	(0.161)	0.077	0.066
48	4.00	0.20	0.144	(0.161)	0.077	0.066
49	4.08	0.20	0.144	(0.160)	0.077	0.066
50	4.17	0.20	0.144	(0.159)	0.077	0.066
51	4.25	0.20	0.144	(0.159)	0.077	0.066
52	4.33	0.23	0.168	(0.158)	0.090	0.078
53	4.42	0.23	0.168	(0.157)	0.090	0.078
54	4.50	0.23	0.168	(0.157)	0.090	0.078
55	4.58	0.23	0.168	(0.156)	0.090	0.078
56	4.67	0.23	0.168	(0.155)	0.090	0.078
57	4.75	0.23	0.168	(0.155)	0.090	0.078
58	4.83	0.27	0.192	(0.154)	0.103	0.089
59	4.92	0.27	0.192	(0.153)	0.103	0.089
60	5.00	0.27	0.192	(0.153)	0.103	0.089
61	5.08	0.20	0.144	(0.152)	0.077	0.066
62	5.17	0.20	0.144	(0.151)	0.077	0.066
63	5.25	0.20	0.144	(0.151)	0.077	0.066
64	5.33	0.23	0.168	(0.150)	0.090	0.078
65	5.42	0.23	0.168	(0.149)	0.090	0.078
66	5.50	0.23	0.168	(0.149)	0.090	0.078
67	5.58	0.27	0.192	(0.148)	0.103	0.089
68	5.67	0.27	0.192	(0.147)	0.103	0.089
69	5.75	0.27	0.192	(0.147)	0.103	0.089
70	5.83	0.27	0.192	(0.146)	0.103	0.089
71	5.92	0.27	0.192	(0.145)	0.103	0.089
72	6.00	0.27	0.192	(0.145)	0.103	0.089
73	6.08	0.30	0.216	(0.144)	0.116	0.100
74	6.17	0.30	0.216	(0.144)	0.116	0.100
75	6.25	0.30	0.216	(0.143)	0.116	0.100
76	6.33	0.30	0.216	(0.142)	0.116	0.100
77	6.42	0.30	0.216	(0.142)	0.116	0.100
78	6.50	0.30	0.216	(0.141)	0.116	0.100
79	6.58	0.33	0.240	(0.140)	0.129	0.111
80	6.67	0.33	0.240	(0.140)	0.129	0.111
81	6.75	0.33	0.240	(0.139)	0.129	0.111
82	6.83	0.33	0.240	(0.138)	0.129	0.111
83	6.92	0.33	0.240	(0.138)	0.129	0.111
84	7.00	0.33	0.240	(0.137)	0.129	0.111
85	7.08	0.33	0.240	(0.137)	0.129	0.111
86	7.17	0.33	0.240	(0.136)	0.129	0.111
87	7.25	0.33	0.240	(0.135)	0.129	0.111
88	7.33	0.37	0.264	0.135	(0.142)	0.129
89	7.42	0.37	0.264	0.134	(0.142)	0.130
90	7.50	0.37	0.264	0.133	(0.142)	0.130
91	7.58	0.40	0.288	0.133	(0.155)	0.155
92	7.67	0.40	0.288	0.132	(0.155)	0.156
93	7.75	0.40	0.288	0.132	(0.155)	0.156
94	7.83	0.43	0.312	0.131	(0.168)	0.181
95	7.92	0.43	0.312	0.130	(0.168)	0.181
96	8.00	0.43	0.312	0.130	(0.168)	0.182
97	8.08	0.50	0.360	0.129	(0.194)	0.231
98	8.17	0.50	0.360	0.129	(0.194)	0.231
99	8.25	0.50	0.360	0.128	(0.194)	0.232
100	8.33	0.50	0.360	0.127	(0.194)	0.232

101	8.42	0.50	0.360	0.127	(0.194)	0.233
102	8.50	0.50	0.360	0.126	(0.194)	0.234
103	8.58	0.53	0.384	0.126	(0.206)	0.258
104	8.67	0.53	0.384	0.125	(0.206)	0.259
105	8.75	0.53	0.384	0.124	(0.206)	0.259
106	8.83	0.57	0.408	0.124	(0.219)	0.284
7	8.92	0.57	0.408	0.123	(0.219)	0.284
108	9.00	0.57	0.408	0.123	(0.219)	0.285
109	9.08	0.63	0.456	0.122	(0.245)	0.334
110	9.17	0.63	0.456	0.122	(0.245)	0.334
111	9.25	0.63	0.456	0.121	(0.245)	0.335
112	9.33	0.67	0.480	0.120	(0.258)	0.359
113	9.42	0.67	0.480	0.120	(0.258)	0.360
114	9.50	0.67	0.480	0.119	(0.258)	0.360
115	9.58	0.70	0.504	0.119	(0.271)	0.385
116	9.67	0.70	0.504	0.118	(0.271)	0.386
117	9.75	0.70	0.504	0.118	(0.271)	0.386
118	9.83	0.73	0.528	0.117	(0.284)	0.411
119	9.92	0.73	0.528	0.116	(0.284)	0.411
120	10.00	0.73	0.528	0.116	(0.284)	0.412
121	10.08	0.50	0.360	0.115	(0.194)	0.244
122	10.17	0.50	0.360	0.115	(0.194)	0.245
123	10.25	0.50	0.360	0.114	(0.194)	0.246
124	10.33	0.50	0.360	0.114	(0.194)	0.246
125	10.42	0.50	0.360	0.113	(0.194)	0.247
126	10.50	0.50	0.360	0.113	(0.194)	0.247
127	10.58	0.67	0.480	0.112	(0.258)	0.368
128	10.67	0.67	0.480	0.111	(0.258)	0.368
129	10.75	0.67	0.480	0.111	(0.258)	0.369
130	10.83	0.67	0.480	0.110	(0.258)	0.369
131	10.92	0.67	0.480	0.110	(0.258)	0.370
132	11.00	0.67	0.480	0.109	(0.258)	0.370
3	11.08	0.63	0.456	0.109	(0.245)	0.347
134	11.17	0.63	0.456	0.108	(0.245)	0.348
135	11.25	0.63	0.456	0.108	(0.245)	0.348
136	11.33	0.63	0.456	0.107	(0.245)	0.349
137	11.42	0.63	0.456	0.107	(0.245)	0.349
138	11.50	0.63	0.456	0.106	(0.245)	0.350
139	11.58	0.57	0.408	0.106	(0.219)	0.302
140	11.67	0.57	0.408	0.105	(0.219)	0.303
141	11.75	0.57	0.408	0.104	(0.219)	0.303
142	11.83	0.60	0.432	0.104	(0.232)	0.328
143	11.92	0.60	0.432	0.103	(0.232)	0.328
144	12.00	0.60	0.432	0.103	(0.232)	0.329
145	12.08	0.83	0.600	0.102	(0.323)	0.497
146	12.17	0.83	0.600	0.102	(0.323)	0.498
147	12.25	0.83	0.600	0.101	(0.323)	0.498
148	12.33	0.87	0.624	0.101	(0.335)	0.523
149	12.42	0.87	0.624	0.100	(0.335)	0.523
150	12.50	0.87	0.624	0.100	(0.335)	0.524
151	12.58	0.93	0.672	0.099	(0.361)	0.572
152	12.67	0.93	0.672	0.099	(0.361)	0.573
153	12.75	0.93	0.672	0.098	(0.361)	0.573
154	12.83	0.97	0.696	0.098	(0.374)	0.598
155	12.92	0.97	0.696	0.097	(0.374)	0.598
156	13.00	0.97	0.696	0.097	(0.374)	0.599
157	13.08	1.13	0.815	0.096	(0.439)	0.719
8	13.17	1.13	0.815	0.096	(0.439)	0.720
9	13.25	1.13	0.815	0.095	(0.439)	0.720
160	13.33	1.13	0.815	0.095	(0.439)	0.721
161	13.42	1.13	0.815	0.094	(0.439)	0.721
162	13.50	1.13	0.815	0.094	(0.439)	0.721
163	13.58	0.77	0.552	0.093	(0.297)	0.458

164	13.67	0.77	0.552	0.093	(0.297)	0.459
165	13.75	0.77	0.552	0.093	(0.297)	0.459
166	13.83	0.77	0.552	0.092	(0.297)	0.460
167	13.92	0.77	0.552	0.092	(0.297)	0.460
168	14.00	0.77	0.552	0.091	(0.297)	0.461
169	14.08	0.90	0.648	0.091	(0.348)	0.557
0	14.17	0.90	0.648	0.090	(0.348)	0.557
171	14.25	0.90	0.648	0.090	(0.348)	0.558
172	14.33	0.87	0.624	0.089	(0.335)	0.534
173	14.42	0.87	0.624	0.089	(0.335)	0.535
174	14.50	0.87	0.624	0.088	(0.335)	0.535
175	14.58	0.87	0.624	0.088	(0.335)	0.536
176	14.67	0.87	0.624	0.087	(0.335)	0.536
177	14.75	0.87	0.624	0.087	(0.335)	0.537
178	14.83	0.83	0.600	0.087	(0.323)	0.513
179	14.92	0.83	0.600	0.086	(0.323)	0.513
180	15.00	0.83	0.600	0.086	(0.323)	0.514
181	15.08	0.80	0.576	0.085	(0.310)	0.490
182	15.17	0.80	0.576	0.085	(0.310)	0.491
183	15.25	0.80	0.576	0.084	(0.310)	0.491
184	15.33	0.77	0.552	0.084	(0.297)	0.468
185	15.42	0.77	0.552	0.084	(0.297)	0.468
186	15.50	0.77	0.552	0.083	(0.297)	0.469
187	15.58	0.63	0.456	0.083	(0.245)	0.373
188	15.67	0.63	0.456	0.082	(0.245)	0.373
189	15.75	0.63	0.456	0.082	(0.245)	0.374
190	15.83	0.63	0.456	0.081	(0.245)	0.374
191	15.92	0.63	0.456	0.081	(0.245)	0.375
192	16.00	0.63	0.456	0.081	(0.245)	0.375
193	16.08	0.13	0.096	(0.080)	0.052	0.044
194	16.17	0.13	0.096	(0.080)	0.052	0.044
195	16.25	0.13	0.096	(0.079)	0.052	0.044
6	16.33	0.13	0.096	(0.079)	0.052	0.044
197	16.42	0.13	0.096	(0.079)	0.052	0.044
198	16.50	0.13	0.096	(0.078)	0.052	0.044
199	16.58	0.10	0.072	(0.078)	0.039	0.033
200	16.67	0.10	0.072	(0.077)	0.039	0.033
201	16.75	0.10	0.072	(0.077)	0.039	0.033
202	16.83	0.10	0.072	(0.077)	0.039	0.033
203	16.92	0.10	0.072	(0.076)	0.039	0.033
204	17.00	0.10	0.072	(0.076)	0.039	0.033
205	17.08	0.17	0.120	(0.075)	0.065	0.055
206	17.17	0.17	0.120	(0.075)	0.065	0.055
207	17.25	0.17	0.120	(0.075)	0.065	0.055
208	17.33	0.17	0.120	(0.074)	0.065	0.055
209	17.42	0.17	0.120	(0.074)	0.065	0.055
210	17.50	0.17	0.120	(0.074)	0.065	0.055
211	17.58	0.17	0.120	(0.073)	0.065	0.055
212	17.67	0.17	0.120	(0.073)	0.065	0.055
213	17.75	0.17	0.120	(0.072)	0.065	0.055
214	17.83	0.13	0.096	(0.072)	0.052	0.044
215	17.92	0.13	0.096	(0.072)	0.052	0.044
216	18.00	0.13	0.096	(0.071)	0.052	0.044
217	18.08	0.13	0.096	(0.071)	0.052	0.044
218	18.17	0.13	0.096	(0.071)	0.052	0.044
219	18.25	0.13	0.096	(0.070)	0.052	0.044
220	18.33	0.13	0.096	(0.070)	0.052	0.044
221	18.42	0.13	0.096	(0.070)	0.052	0.044
2	18.50	0.13	0.096	(0.069)	0.052	0.044
223	18.58	0.10	0.072	(0.069)	0.039	0.033
224	18.67	0.10	0.072	(0.069)	0.039	0.033
225	18.75	0.10	0.072	(0.068)	0.039	0.033
226	18.83	0.07	0.048	(0.068)	0.026	0.022

227	18.92	0.07	0.048	(0.068)	0.026	0.022
228	19.00	0.07	0.048	(0.067)	0.026	0.022
229	19.08	0.10	0.072	(0.067)	0.039	0.033
230	19.17	0.10	0.072	(0.067)	0.039	0.033
231	19.25	0.10	0.072	(0.066)	0.039	0.033
232	19.33	0.13	0.096	(0.066)	0.052	0.044
3	19.42	0.13	0.096	(0.066)	0.052	0.044
234	19.50	0.13	0.096	(0.065)	0.052	0.044
235	19.58	0.10	0.072	(0.065)	0.039	0.033
236	19.67	0.10	0.072	(0.065)	0.039	0.033
237	19.75	0.10	0.072	(0.065)	0.039	0.033
238	19.83	0.07	0.048	(0.064)	0.026	0.022
239	19.92	0.07	0.048	(0.064)	0.026	0.022
240	20.00	0.07	0.048	(0.064)	0.026	0.022
241	20.08	0.10	0.072	(0.063)	0.039	0.033
242	20.17	0.10	0.072	(0.063)	0.039	0.033
243	20.25	0.10	0.072	(0.063)	0.039	0.033
244	20.33	0.10	0.072	(0.063)	0.039	0.033
245	20.42	0.10	0.072	(0.062)	0.039	0.033
246	20.50	0.10	0.072	(0.062)	0.039	0.033
247	20.58	0.10	0.072	(0.062)	0.039	0.033
248	20.67	0.10	0.072	(0.062)	0.039	0.033
249	20.75	0.10	0.072	(0.061)	0.039	0.033
250	20.83	0.07	0.048	(0.061)	0.026	0.022
251	20.92	0.07	0.048	(0.061)	0.026	0.022
252	21.00	0.07	0.048	(0.061)	0.026	0.022
253	21.08	0.10	0.072	(0.060)	0.039	0.033
254	21.17	0.10	0.072	(0.060)	0.039	0.033
255	21.25	0.10	0.072	(0.060)	0.039	0.033
256	21.33	0.07	0.048	(0.060)	0.026	0.022
257	21.42	0.07	0.048	(0.059)	0.026	0.022
258	21.50	0.07	0.048	(0.059)	0.026	0.022
9	21.58	0.10	0.072	(0.059)	0.039	0.033
260	21.67	0.10	0.072	(0.059)	0.039	0.033
261	21.75	0.10	0.072	(0.059)	0.039	0.033
262	21.83	0.07	0.048	(0.058)	0.026	0.022
263	21.92	0.07	0.048	(0.058)	0.026	0.022
264	22.00	0.07	0.048	(0.058)	0.026	0.022
265	22.08	0.10	0.072	(0.058)	0.039	0.033
266	22.17	0.10	0.072	(0.058)	0.039	0.033
267	22.25	0.10	0.072	(0.057)	0.039	0.033
268	22.33	0.07	0.048	(0.057)	0.026	0.022
269	22.42	0.07	0.048	(0.057)	0.026	0.022
270	22.50	0.07	0.048	(0.057)	0.026	0.022
271	22.58	0.07	0.048	(0.057)	0.026	0.022
272	22.67	0.07	0.048	(0.057)	0.026	0.022
273	22.75	0.07	0.048	(0.056)	0.026	0.022
274	22.83	0.07	0.048	(0.056)	0.026	0.022
275	22.92	0.07	0.048	(0.056)	0.026	0.022
276	23.00	0.07	0.048	(0.056)	0.026	0.022
277	23.08	0.07	0.048	(0.056)	0.026	0.022
278	23.17	0.07	0.048	(0.056)	0.026	0.022
279	23.25	0.07	0.048	(0.056)	0.026	0.022
280	23.33	0.07	0.048	(0.055)	0.026	0.022
281	23.42	0.07	0.048	(0.055)	0.026	0.022
282	23.50	0.07	0.048	(0.055)	0.026	0.022
283	23.58	0.07	0.048	(0.055)	0.026	0.022
4	23.67	0.07	0.048	(0.055)	0.026	0.022
5	23.75	0.07	0.048	(0.055)	0.026	0.022
286	23.83	0.07	0.048	(0.055)	0.026	0.022
287	23.92	0.07	0.048	(0.055)	0.026	0.022
288	24.00	0.07	0.048	(0.055)	0.026	0.022

(Loss Rate Not Used)

Sum = 100.0 Sum = 50.6

Flood volume = Effective rainfall 4.21(In)
times area 338.8(Ac.)/[(In)/(Ft.)] = 119.0(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 50.296(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 5183273.3 Cubic Feet
Total soil loss = 2190907.9 Cubic Feet

Peak flow rate of this hydrograph = 227.670(CFS)

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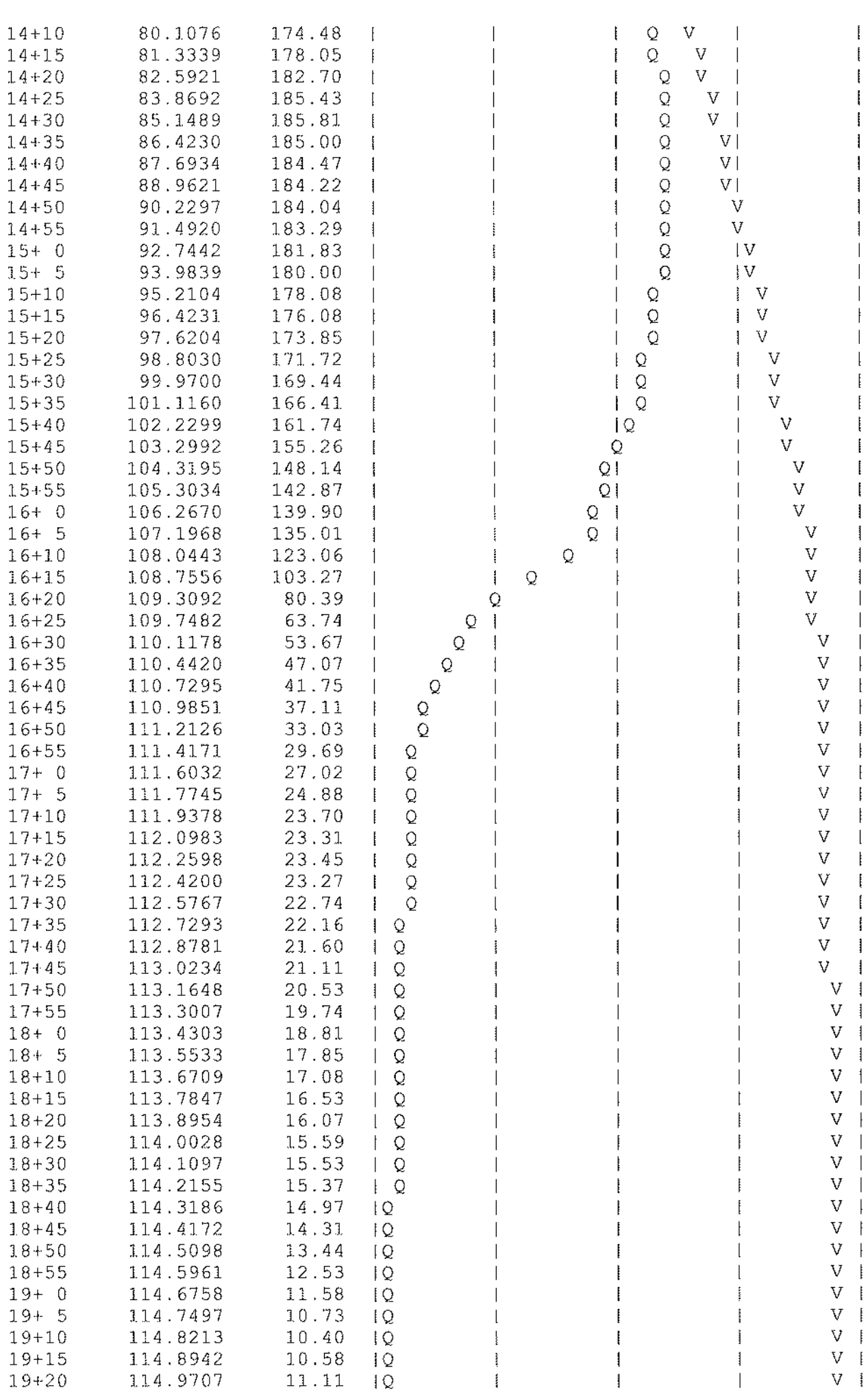
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0014	0.20	Q				
0+10	0.0076	0.90	Q				
0+15	0.0224	2.15	Q				
0+20	0.0480	3.72	Q				
0+25	0.0834	5.13	Q				
0+30	0.1273	6.38	Q				
0+35	0.1790	7.50	VQ				
0+40	0.2363	8.33	VQ				
0+45	0.2974	8.87	VQ				
0+50	0.3619	9.37	VQ				
0+55	0.4310	10.03	VQ				
1+ 0	0.5061	10.91	VQ				
1+ 5	0.5871	11.76	VQ				
1+10	0.6706	12.12	VQ				
1+15	0.7530	11.96	VQ				
1+20	0.8326	11.55	VQ				
1+25	0.9103	11.28	VQ				
1+30	0.9874	11.20	VQ				
1+35	1.0645	11.19	VQ				
1+40	1.1416	11.20	VQ				
1+45	1.2189	11.23	VQ				
1+50	1.2971	11.35	VQ				
1+55	1.3779	11.73	VQ				
2+ 0	1.4631	12.37	VQ				
2+ 5	1.5535	13.12	VQ				
2+10	1.6476	13.67	VQ				
2+15	1.7441	14.01	VQ				
2+20	1.8420	14.22	VQ				
2+25	1.9412	14.40	VQ				
2+30	2.0412	14.51	VQ				
2+35	2.1425	14.72	VQ				
2+40	2.2469	15.15	V Q				
2+45	2.3560	15.84	V Q				
2+50	2.4705	16.63	V Q				
2+55	2.5889	17.20	V Q				
3+ 0	2.7098	17.55	V Q				
3+ 5	2.8323	17.78	V Q				
3+10	2.9560	17.96	V Q				
3+15	3.0807	18.10	|VQ				
3+20	3.2062	18.22	|VQ				
3+25	3.3323	18.31	|VQ				
3+30	3.4590	18.40	|VQ				
3+35	3.5862	18.48	|VQ				

3+40	3.7139	18.54	VQ				
3+45	3.8420	18.60	VQ				
3+50	3.9711	18.75	VQ				
3+55	4.1030	19.14	VQ				
4+ 0	4.2394	19.81	VQ				
4+ 5	4.3811	20.58	VQ				
4+10	4.5267	21.14	VQ				
4+15	4.6746	21.48	VQ				
4+20	4.8247	21.79	VQ				
4+25	4.9783	22.30	VQ				
4+30	5.1371	23.06	V Q				
4+35	5.3017	23.90	V Q				
4+40	5.4706	24.53	V Q				
4+45	5.6422	24.91	V Q				
4+50	5.8163	25.28	V Q				
4+55	5.9943	25.84	VQ				
5+ 0	6.1777	26.63	VQ				
5+ 5	6.3657	27.30	VQ				
5+10	6.5533	27.24	VQ				
5+15	6.7351	26.40	VQ				
5+20	6.9094	25.31	VQ				
5+25	7.0804	24.82	VQ				
5+30	7.2526	25.01	VQ				
5+35	7.4289	25.60	VQ				
5+40	7.6102	26.32	VQ				
5+45	7.7971	27.13	VQ				
5+50	7.9897	27.96	VQ				
5+55	8.1864	28.56	VQ				
6+ 0	8.3856	28.93	VQ				
6+ 5	8.5872	29.26	VQ				
6+10	8.7924	29.81	VQ				
6+15	9.0030	30.57	VQ				
6+20	9.2195	31.44	VQ				
6+25	9.4404	32.07	VQ				
6+30	9.6639	32.46	VQ				
6+35	9.8899	32.82	VQ				
6+40	10.1199	33.39	VQ				
6+45	10.3552	34.18	VQ				
6+50	10.5966	35.04	VQ				
6+55	10.8424	35.69	VQ				
7+ 0	11.0911	36.11	VQ				
7+ 5	11.3417	36.40	VQ				
7+10	11.5940	36.62	VQ				
7+15	11.8474	36.80	VQ				
7+20	12.1029	37.10	Q				
7+25	12.3633	37.81	VQ				
7+30	12.6318	38.98	VQ				
7+35	12.9112	40.58	VQ				
7+40	13.2034	42.42	VQ				
7+45	13.5097	44.48	VQ				
7+50	13.8322	46.82	V Q				
7+55	14.1710	49.19	V Q				
8+ 0	14.5265	51.62	V Q				
8+ 5	14.9014	54.43	V Q				
8+10	15.2992	57.77	V Q				
8+15	15.7243	61.72	V Q				
8+20	16.1778	65.85	V Q				
8+25	16.6526	68.94	V Q				
8+30	17.1413	70.96	V Q				
8+35	17.6415	72.62	V Q				
8+40	18.1550	74.56	V Q				
8+45	18.6847	76.92	V Q				
8+50	19.2330	79.61	V Q				

8+55	19.7998	82.30	V Q			
9+ 0	20.3852	85.00	V |Q			
9+ 5	20.9917	88.07	V |Q			
9+10	21.6227	91.62	V | Q			
9+15	22.2823	95.77	V | Q			
9+20	22.9728	100.26	V | Q			
9+25	23.6908	104.26	V | Q			
9+30	24.4331	107.78	V | Q			
9+35	25.1987	111.17	V | Q			
9+40	25.9864	114.37	V | Q			
9+45	26.7955	117.49	V| Q			
9+50	27.6265	120.67	V| Q			
9+55	28.4788	123.74	V| Q			
10+ 0	29.3517	126.75	V| Q			
10+ 5	30.2342	128.13	V Q			
10+10	31.0953	125.04	V Q			
10+15	31.9025	117.20	V Q			
10+20	32.6418	107.34	V Q			
10+25	33.3331	100.37	|V Q			
10+30	33.9980	96.55	|VQ			
10+35	34.6555	95.47	|VQ			
10+40	35.3287	97.75	|V Q			
10+45	36.0405	103.36	| VQ			
10+50	36.8007	110.38	| V Q			
10+55	37.5957	115.42	| V Q			
11+ 0	38.4101	118.26	| V Q			
11+ 5	39.2341	119.64	| V Q			
11+10	40.0615	120.14	| V Q			
11+15	40.8864	119.78	| V Q			
11+20	41.7066	119.09	| VQ			
11+25	42.5239	118.67	| VQ			
11+30	43.3401	118.52	| VQ			
11+35	44.1542	118.20	| VQ			
11+40	44.9586	116.80	| Q			
11+45	45.7454	114.25	| Q			
11+50	46.5126	111.40	| QV			
11+55	47.2705	110.04	| QV			
12+ 0	48.0296	110.23	| Q V			
12+ 5	48.8057	112.68	| QV			
12+10	49.6233	118.72	| QV			
12+15	50.5082	128.48	| VQ			
12+20	51.4720	139.95	| VQ			
12+25	52.4968	148.80	| V Q|			
12+30	53.5649	155.09	| V Q			
12+35	54.6685	160.24	| V |Q			
12+40	55.8073	165.35	| V | Q			
12+45	56.9829	170.71	| V| Q			
12+50	58.1968	176.25	| V| Q			
12+55	59.4441	181.11	| V| Q			
13+ 0	60.7194	185.18	| V Q			
13+ 5	62.0275	189.94	| V Q			
13+10	63.3813	196.57	| |V Q			
13+15	64.7963	205.45	| |V Q			
13+20	66.2771	215.02	| | V Q |			
13+25	67.8072	222.17	| | V Q|			
13+30	69.3693	226.81	| | V Q			
13+35	70.9373	227.67	| | V Q			
13+40	72.4651	221.84	| | V Q|			
13+45	73.9054	209.12	| | V Q |			
13+50	75.2379	193.49	| | Q |			
13+55	76.4940	182.39	| | QV |			
14+ 0	77.7087	176.37	| | Q V |			
14+ 5	78.9060	173.85	| | Q V |			



14+10	80.1076	174.48	
14+15	81.3339	178.05	
14+20	82.5921	182.70	
14+25	83.8692	185.43	
14+30	85.1489	185.81	
14+35	86.4230	185.00	
14+40	87.6934	184.47	
14+45	88.9621	184.22	
14+50	90.2297	184.04	
14+55	91.4920	183.29	
15+ 0	92.7442	181.83	
15+ 5	93.9839	180.00	
15+10	95.2104	178.08	
15+15	96.4231	176.08	
15+20	97.6204	173.85	
15+25	98.8030	171.72	
15+30	99.9700	169.44	
15+35	101.1160	166.41	
15+40	102.2299	161.74	
15+45	103.2992	155.26	
15+50	104.3195	148.14	
15+55	105.3034	142.87	
16+ 0	106.2670	139.90	
16+ 5	107.1968	135.01	
16+10	108.0443	123.06	
16+15	108.7556	103.27	
16+20	109.3092	80.39	
16+25	109.7482	63.74	
16+30	110.1178	53.67	
16+35	110.4420	47.07	
16+40	110.7295	41.75	
16+45	110.9851	37.11	
16+50	111.2126	33.03	
16+55	111.4171	29.69	
17+ 0	111.6032	27.02	
17+ 5	111.7745	24.88	
17+10	111.9378	23.70	
17+15	112.0983	23.31	
17+20	112.2598	23.45	
17+25	112.4200	23.27	
17+30	112.5767	22.74	
17+35	112.7293	22.16	
17+40	112.8781	21.60	
17+45	113.0234	21.11	
17+50	113.1648	20.53	
17+55	113.3007	19.74	
18+ 0	113.4303	18.81	
18+ 5	113.5533	17.85	
18+10	113.6709	17.08	
18+15	113.7847	16.53	
18+20	113.8954	16.07	
18+25	114.0028	15.59	
18+30	114.1097	15.53	
18+35	114.2155	15.37	
18+40	114.3186	14.97	
18+45	114.4172	14.31	
18+50	114.5098	13.44	
18+55	114.5961	12.53	
19+ 0	114.6758	11.58	
19+ 5	114.7497	10.73	
19+10	114.8213	10.40	
19+15	114.8942	10.58	
19+20	114.9707	11.11	

19+25	115.0518	11.77	Q				V
19+30	115.1379	12.50	Q				V
19+35	115.2285	13.15	Q				V
19+40	115.3203	13.33	Q				V
19+45	115.4099	13.01	Q				V
19+50	115.4950	12.36	Q				V
19+55	115.5751	11.62	Q				V
20+ 0	115.6493	10.78	Q				V
20+ 5	115.7185	10.04	Q				V
20+10	115.7858	9.78	Q				V
20+15	115.8549	10.03	Q				V
20+20	115.9274	10.52	Q				V
20+25	116.0022	10.87	Q				V
20+30	116.0782	11.04	Q				V
20+35	116.1547	11.10	Q				V
20+40	116.2315	11.15	Q				V
20+45	116.3085	11.18	Q				V
20+50	116.3850	11.11	Q				V
20+55	116.4592	10.77	Q				V
21+ 0	116.5292	10.16	Q				V
21+ 5	116.5950	9.55	Q				V
21+10	116.6595	9.38	Q				V
21+15	116.7264	9.71	Q				V
21+20	116.7963	10.16	Q				V
21+25	116.8666	10.21	Q				V
21+30	116.9340	9.78	Q				V
21+35	116.9977	9.25	Q				V
21+40	117.0607	9.15	Q				V
21+45	117.1262	9.51	Q				V
21+50	117.1949	9.98	Q				V
21+55	117.2641	10.04	Q				V
22+ 0	117.3304	9.63	Q				V
22+ 5	117.3933	9.12	Q				V
22+10	117.4554	9.02	Q				V
22+15	117.5202	9.41	Q				V
22+20	117.5884	9.90	Q				V
22+25	117.6572	9.99	Q				V
22+30	117.7233	9.60	Q				V
22+35	117.7853	8.99	Q				V
22+40	117.8442	8.55	Q				V
22+45	117.9014	8.31	Q				V
22+50	117.9577	8.17	Q				V
22+55	118.0132	8.07	Q				V
23+ 0	118.0682	7.99	Q				V
23+ 5	118.1228	7.93	Q				V
23+10	118.1770	7.87	Q				V
23+15	118.2309	7.83	Q				V
23+20	118.2846	7.79	Q				V
23+25	118.3381	7.77	Q				V
23+30	118.3914	7.74	Q				V
23+35	118.4445	7.71	Q				V
23+40	118.4975	7.69	Q				V
23+45	118.5503	7.67	Q				V
23+50	118.6031	7.66	Q				V
23+55	118.6558	7.66	Q				V
24+ 0	118.7085	7.64	Q				V
24+ 5	118.7596	7.42	Q				V
24+10	118.8058	6.70	Q				V
24+15	118.8433	5.45	Q				V
24+20	118.8707	3.98	Q				V
24+25	118.8909	2.92	Q				V
24+30	118.9066	2.29	Q				V
24+35	118.9197	1.89	Q				V

24+40	118.9306	1.58	Q				V
24+45	118.9399	1.35	Q				V
24+50	118.9478	1.15	Q				V
24+55	118.9546	0.99	Q				V
25+ 0	118.9604	0.85	Q				V
25+ 5	118.9655	0.73	Q				V
25+10	118.9698	0.63	Q				V
25+15	118.9736	0.54	Q				V
25+20	118.9768	0.47	Q				V
25+25	118.9797	0.41	Q				V
25+30	118.9820	0.35	Q				V
25+35	118.9840	0.29	Q				V
25+40	118.9857	0.25	Q				V
25+45	118.9871	0.21	Q				V
25+50	118.9883	0.17	Q				V
25+55	118.9893	0.14	Q				V
26+ 0	118.9900	0.11	Q				V
26+ 5	118.9906	0.09	Q				V
26+10	118.9911	0.07	Q				V
26+15	118.9914	0.05	Q				V
26+20	118.9916	0.03	Q				V

TABLE 9.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.74	0.002	0.20		
	D	75.0%	75.0	92.3	9.68	0.029	2.64	10.42	92.1
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.03	0.000	0.01		
	D	90.0%	75.0	95.7	0.32	0.001	0.09	0.35	95.6
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.07	0.000	0.02		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.07	95.1
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	30.55	0.090	7.07	30.55	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	1.15	0.003	0.31		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	1.15	90.8
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	2.25	0.007	0.48		
	C	40.0%	69.0	80.6	10.88	0.032	2.59		
	D	40.0%	75.0	84.2	1.45	0.004	0.36	14.58	79.8
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.015	1.25		
	D	50.0%	75.0	86.5	93.29	0.275	23.82	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.015	1.22		
	D	50.0%	75.0	86.5	38.57	0.114	9.85	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.07	0.000	0.02		
	C	50.0%	69.0	83.5	1.16	0.003	0.29		
	D	50.0%	75.0	86.5	8.82	0.026	2.25	10.05	86.1
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.011	0.88		
	C	50.0%	69.0	83.5	1.75	0.005	0.43		
	D	50.0%	75.0	86.5	103.02	0.304	26.30	108.62	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.039	3.53	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	7.80	0.023	1.94	7.80	84.2
								338.80	
					338.80	1.000			
COMPOSITE RUN OFF INDEX - AMC II							85.5		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 9.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

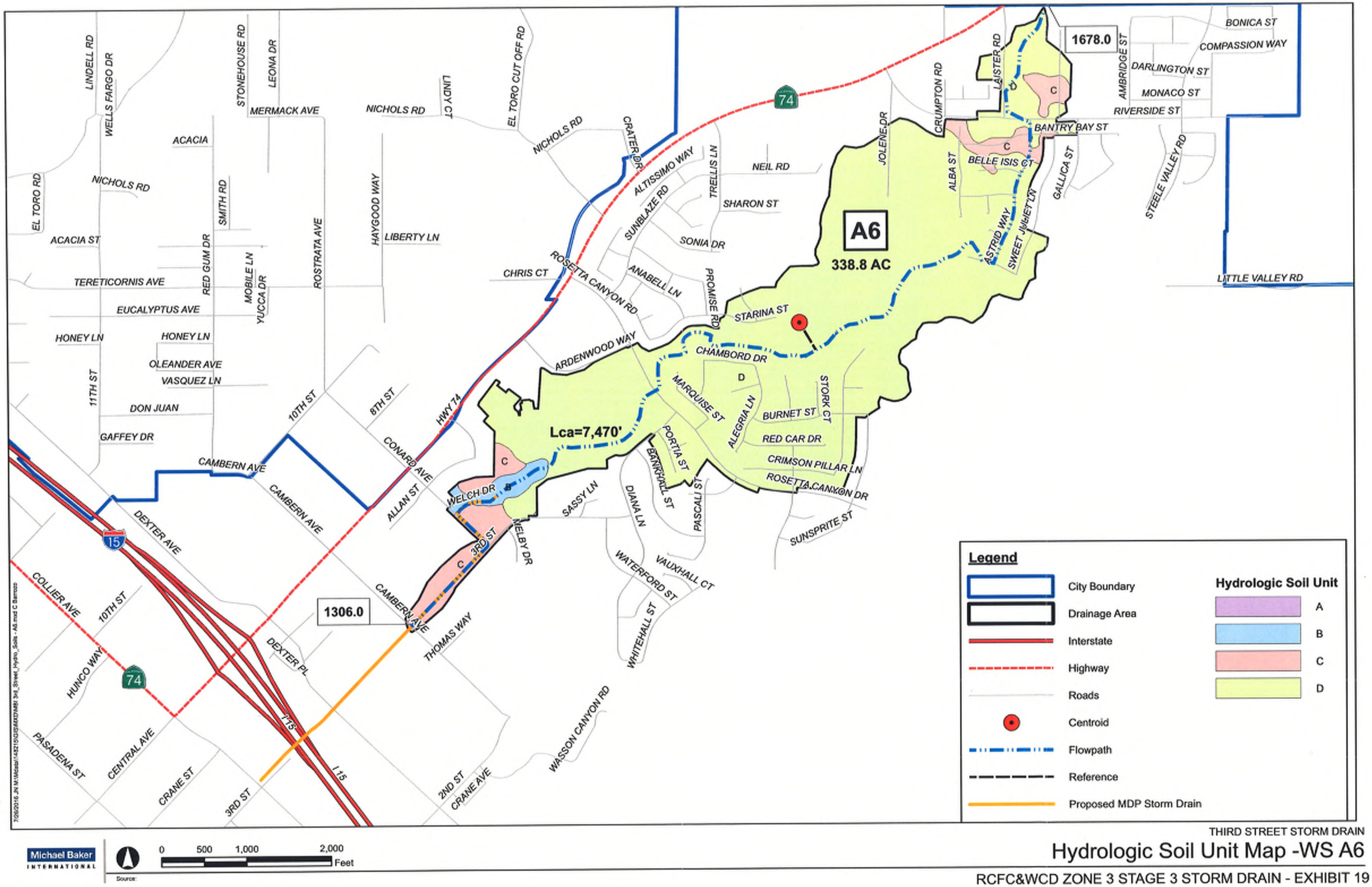
WATERSHEAD "A"

LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	10.42	0.031	0.009
BUSINESS PROFESSIONAL	0.9	0.18	0.00	0.000	0.000
COMMERCIAL	0.9	0.18	0.35	0.001	0.000
COMMERCIAL MIXED-USE	0.9	0.18	0.07	0.000	0.000
COMMUNITY PARK	0.15	0.78	30.55	0.090	0.070
GENERAL COMMERCIAL	0.9	0.18	0.00	0.000	0.000
HIGH DENSITY-R	0.75	0.3	1.15	0.003	0.001
LOW DENSITY-R	0.4	0.58	14.58	0.043	0.025
LOW-MEDIUM R	0.5	0.5	98.35	0.290	0.145
MEDIUM DENSITY	0.5	0.5	43.50	0.128	0.064
MEDIUM DENSITY-R	0.5	0.5	10.05	0.030	0.015
MEDIUM LOW DENSITY	0.5	0.5	108.62	0.321	0.160
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.039	0.034
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	7.80	0.023	0.013
			338.80	1.000	
COMPOSITE LOW LOSS RATE					**0.538**

TABLE 9.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

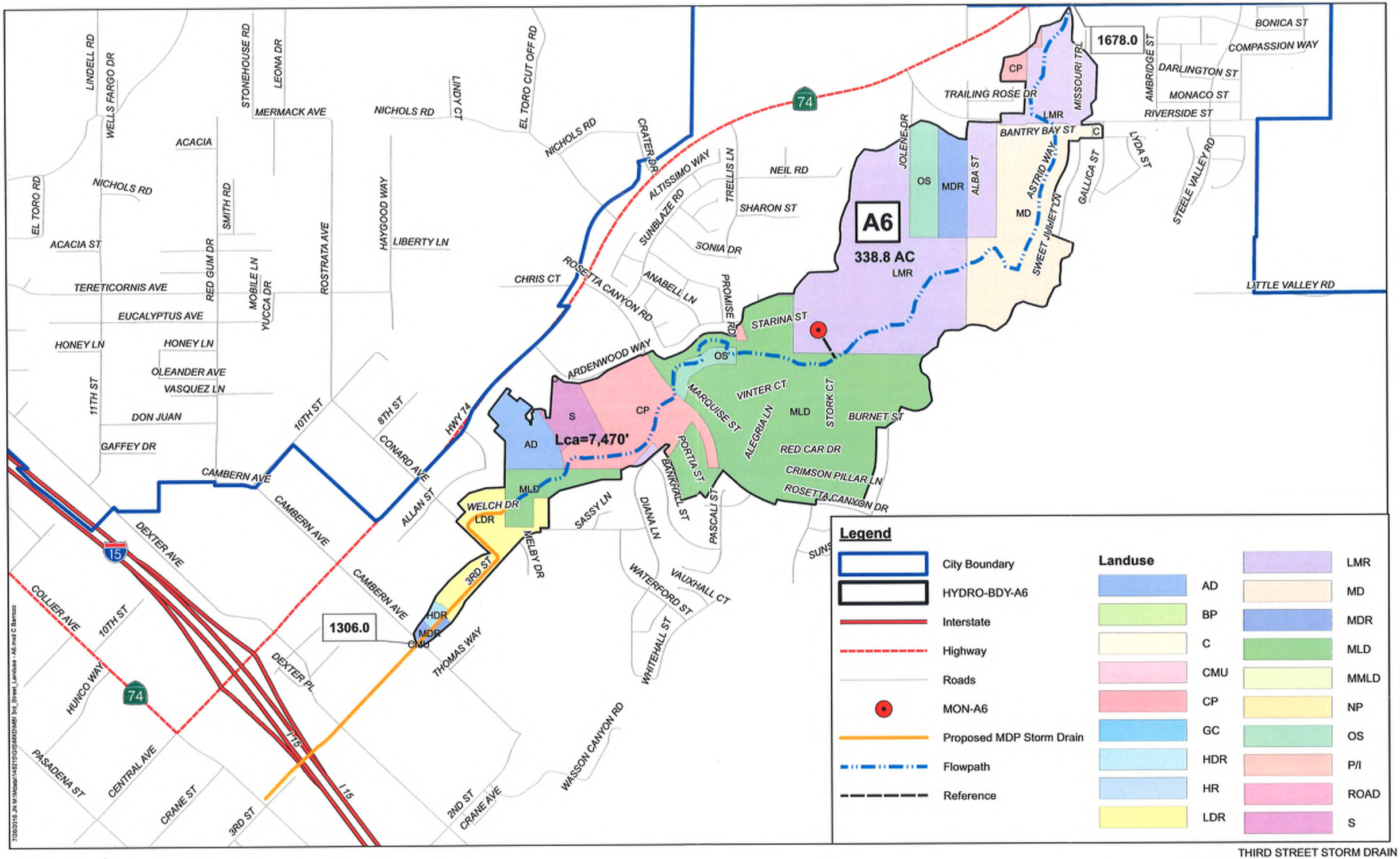
WATERSHEAD "A"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	10.42	0.031	0.0005
BUSINESS PROFESSIONAL	0.015	0.00	0.000	0.0000
COMMERCIAL	0.015	0.35	0.001	0.0000
COMMERCIAL MIXED-USE	0.015	0.07	0.000	0.0000
COMMUNITY PARK	0.035	30.55	0.090	0.0032
GENERAL COMMERCIAL	0.015	0.00	0.000	0.0000
HIGH DENSITY-R	0.015	1.15	0.003	0.0001
LOW DENSITY-R	0.02	14.58	0.043	0.0009
LOW-MEDIUM R	0.015	98.35	0.290	0.0044
MEDIUM DENSITY	0.015	43.50	0.128	0.0019
MEDIUM DENSITY-R	0.015	10.05	0.030	0.0004
MEDIUM LOW DENSITY	0.02	108.62	0.321	0.0064
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.039	0.0016
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	7.80	0.023	0.0003
		338.80	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0196**



THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map -WS A6

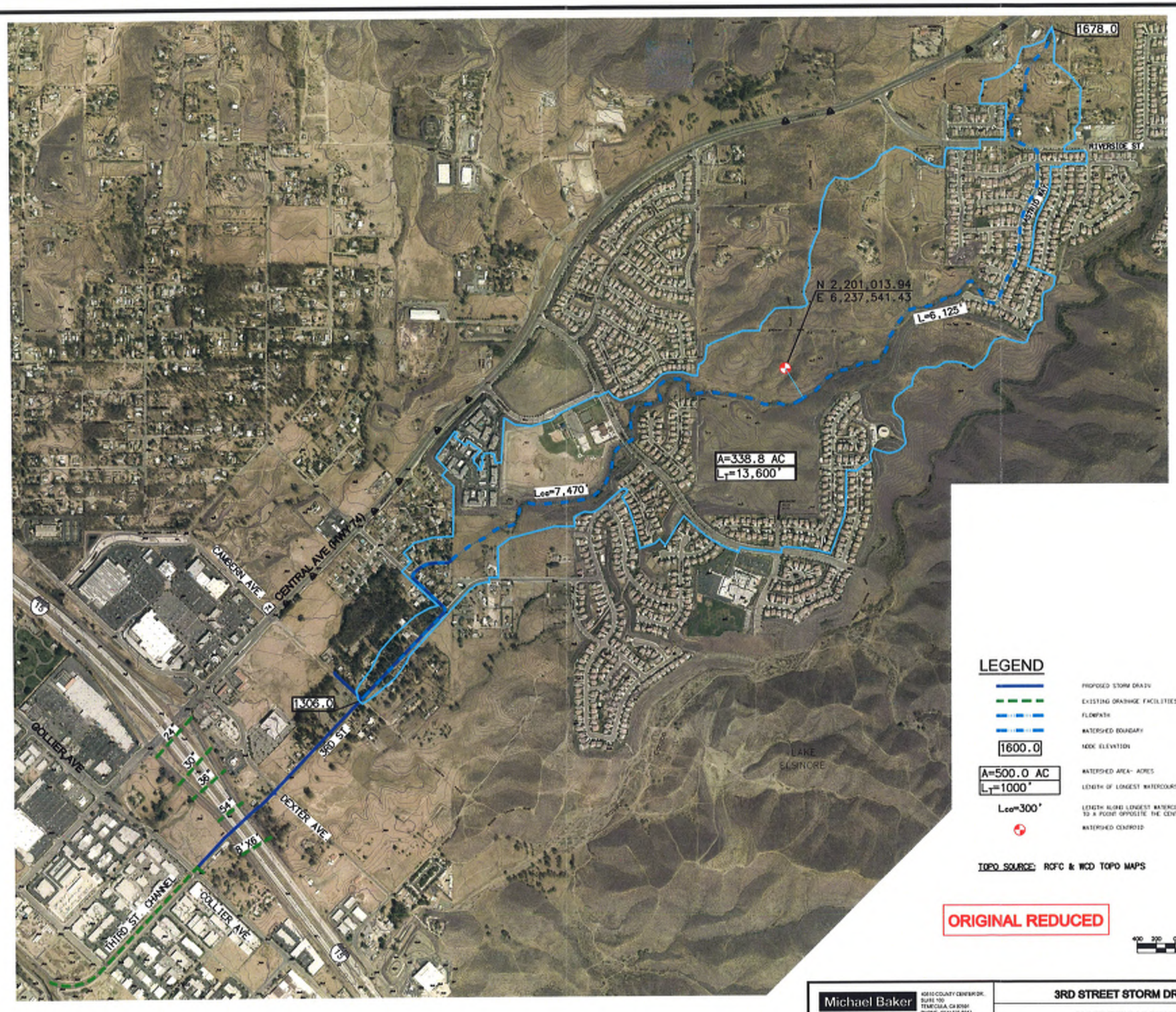
RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 19



THIRD STREET STORM DRAIN

Landuse Map -WS A6

RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 20



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- Lca=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

SCALE: 1"=400'

Michael Baker INTERNATIONAL

3RD STREET STORM DRAIN - EXHIBIT 21

SYNTHETIC UNIT HYDROGRAPH
HYDROLOGY MAP
WATERSHED AREA 'A8'

H:\PROJECTS\18015\CAD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG RDOHTLEGEND 2/16/17 12:19 pm

APPENDIX H

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 06/28/16 File: 3rdstA73100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A7 (DESIGN POINT @ CAMBERN AVE & 3RD ST FOR LATERAL FLOW)
100-YEAR STORM EVENT

Drainage Area = 402.60(Ac.) = 0.629 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 402.60(Ac.) = 0.629 Sq.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 6570.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.244 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.280 Hr.
Lag time = 16.82 Min.
25% of lag time = 4.20 Min.
40% of lag time = 6.73 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
402.60	0.95	382.47

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
402.60	2.30	925.98

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 2.300(In)

Point rain (area averaged) = 2.300(In)
Areal adjustment factor = 99.82 %
Adjusted average point rain = 2.296(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.280	94.20	0.900
31.340	78.50	0.150
11.010	95.10	0.900
5.160	88.90	0.750
47.030	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
12.770	84.70	0.500
108.640	86.10	0.500
13.360	89.50	0.050
9.800	84.20	0.400

Total Area Entered = 402.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.042	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
94.2	94.2	0.075	0.900	0.014	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.078	0.018
95.1	95.1	0.064	0.900	0.012	0.027	0.000
88.9	88.9	0.143	0.750	0.046	0.013	0.001
78.8	78.8	0.258	0.400	0.165	0.117	0.019
86.3	86.3	0.172	0.500	0.095	0.244	0.023
86.2	86.2	0.173	0.500	0.095	0.108	0.010
84.7	84.7	0.190	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.270	0.026
89.5	89.5	0.136	0.050	0.130	0.033	0.004
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.522

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	29.728	2.865	11.624
2	0.167	59.456	10.455	42.420
3	0.250	89.184	18.306	74.277
4	0.333	118.911	20.095	81.536
5	0.417	148.639	12.968	52.617
6	0.500	178.367	7.485	30.370
7	0.583	208.095	4.793	19.448
8	0.667	237.823	3.732	15.144

9	0.750	267.551	3.007	12.200
10	0.833	297.279	2.512	10.194
11	0.917	327.006	2.008	8.148
12	1.000	356.734	1.773	7.194
13	1.083	386.462	1.450	5.885
14	1.167	416.190	1.255	5.093
15	1.250	445.918	0.988	4.010
16	1.333	475.646	0.929	3.770
17	1.417	505.374	0.889	3.605
18	1.500	535.101	0.734	2.977
19	1.583	564.829	0.639	2.594
20	1.667	594.557	0.550	2.232
21	1.750	624.285	0.495	2.010
22	1.833	654.013	0.417	1.692
23	1.917	683.741	0.342	1.387
24	2.000	713.469	0.297	1.206
25	2.083	743.196	0.297	1.206
26	2.167	772.924	0.297	1.206
27	2.250	802.652	0.419	1.702
			Sum = 100.000	Sum= 405.745

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	1.30	0.358	0.109	(0.187)	0.249
2	0.17	1.30	0.358	0.109	(0.187)	0.249
3	0.25	1.10	0.303	0.109	(0.158)	0.194
4	0.33	1.50	0.413	0.109	(0.216)	0.304
5	0.42	1.50	0.413	0.109	(0.216)	0.304
6	0.50	1.80	0.496	0.109	(0.259)	0.387
7	0.58	1.50	0.413	0.109	(0.216)	0.304
8	0.67	1.80	0.496	0.109	(0.259)	0.387
9	0.75	1.80	0.496	0.109	(0.259)	0.387
10	0.83	1.50	0.413	0.109	(0.216)	0.304
11	0.92	1.60	0.441	0.109	(0.230)	0.331
12	1.00	1.80	0.496	0.109	(0.259)	0.387
13	1.08	2.20	0.606	0.109	(0.316)	0.497
14	1.17	2.20	0.606	0.109	(0.316)	0.497
15	1.25	2.20	0.606	0.109	(0.316)	0.497
16	1.33	2.00	0.551	0.109	(0.288)	0.442
17	1.42	2.60	0.716	0.109	(0.374)	0.607
18	1.50	2.70	0.744	0.109	(0.388)	0.635
19	1.58	2.40	0.661	0.109	(0.345)	0.552
20	1.67	2.70	0.744	0.109	(0.388)	0.635
21	1.75	3.30	0.909	0.109	(0.475)	0.800
22	1.83	3.10	0.854	0.109	(0.446)	0.745
23	1.92	2.90	0.799	0.109	(0.417)	0.690
24	2.00	3.00	0.827	0.109	(0.431)	0.717
25	2.08	3.10	0.854	0.109	(0.446)	0.745
26	2.17	4.20	1.157	0.109	(0.604)	1.048
27	2.25	5.00	1.378	0.109	(0.719)	1.268
28	2.33	3.50	0.964	0.109	(0.503)	0.855
29	2.42	6.80	1.873	0.109	(0.978)	1.764
30	2.50	7.30	2.011	0.109	(1.050)	1.902
31	2.58	8.20	2.259	0.109	(1.179)	2.150
32	2.67	5.90	1.626	0.109	(0.849)	1.516
33	2.75	2.00	0.551	0.109	(0.288)	0.442
34	2.83	1.80	0.496	0.109	(0.259)	0.387
35	2.92	1.80	0.496	0.109	(0.259)	0.387

```
36   3.00      0.60       0.165        (  0.109)        0.086         0.079
          (Loss Rate Not Used)
    Sum =      100.0                                              Sum =     23.6
    Flood volume = Effective rainfall       1.97(In)
     times area      402.6(Ac.)/[(In)/(Ft.)] =       66.1(Ac.Ft)
    Total soil loss =       0.33(In)
    Total soil loss =     10.945(Ac.Ft)
    Total rainfall =       2.30(In)
    Flood volume =      2878613.5 Cubic Feet
    Total soil loss =       476773.4 Cubic Feet
    ---------------------------------------------------------------------------
     Peak flow rate of this hydrograph =     593.567(CFS)
    ---------------------------------------------------------------------------
    +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          3 - 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        150.0      300.0      450.0      600.0
---------------------------------------------------------------------------------
  0+ 5        0.0199       2.89  Q          |          |          |          |
  0+10        0.1126      13.45  Q          |          |          |          |
  0+15        0.3281      31.30  V Q        |          |          |          |
  0+20        0.6762      50.54  V  Q       |          |          |          |
  0+25        1.1184      64.22  V   Q      |          |          |          |
  0+30        1.6448      76.43  V    Q     |          |          |          |
  0+35        2.2641      89.91  |V   Q     |          |          |          |
  0+40        2.9624     101.40  |V    Q    |          |          |          |
  0+45        3.7257     110.82  | V    Q   |          |          |          |
  0+50        4.5346     117.46  | V    Q   |          |          |          |
  0+55        5.3762     122.20  |  V    Q  |          |          |          |
  1+ 0        6.2294     123.89  |  V    Q  |          |          |          |
  1+ 5        7.1049     127.11  |   V   Q  |          |          |          |
  1+10        8.0478     136.91  |   V    Q|          |          |          |
  1+15        9.0884     151.09  |    V    Q          |          |          |
  1+20       10.2159     163.72  |     V   Q          |          |          |
  1+25       11.4009     172.06  |     V   |Q         |          |          |
  1+30       12.6452     180.67  |      V  | Q        |          |          |
  1+35       13.9712     192.54  |       V | Q        |          |          |
  1+40       15.3882     205.76  |        V|  Q       |          |          |
  1+45       16.8823     216.94  |         V   Q      |          |          |
  1+50       18.4685     230.31  |         |V   Q     |          |          |
  1+55       20.1696     247.00  |         | V   Q    |          |          |
  2+ 0       21.9616     260.20  |         |  V   Q   |          |          |
  2+ 5       23.7931     265.93  |         |   V  Q   |          |          |
  2+10       25.6760     273.40  |         |    V  Q  |          |          |
  2+15       27.7035     294.39  |         |     V  Q|          |          |
  2+20       29.9547     326.87  |         |        V |Q         |          |
  2+25       32.4689     365.07  |         |         V|   Q      |          |
  2+30       35.3034     411.57  |         |          |V     Q   |          |
  2+35       38.5897     477.16  |         |          |  V       |Q         |
  2+40       42.4294     557.52  |         |          |    V     |      Q   |
  2+45       46.5173     593.57  |         |          |       V  |        Q |
  2+50       50.3449     555.77  |         |          |          V       Q   |
  2+55       53.4948     457.37  |         |          |          Q V         |
  3+ 0       55.9280     353.30  |         |          |  Q       |  V        |
  3+ 5       57.8415     277.84  |         |        Q |          |    V      |
  3+10       59.3519     219.31  |         |   Q      |          |    V      |
  3+15       60.5130     168.58  |         |Q         |          |     V     |
  3+20       61.4181     131.42  |       Q  |          |          |      V    |
  3+25       62.1497     106.23  |      Q   |          |          |      V    |
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    3+30       62.7619      88.90  |     Q     |           |           |       V   |
    3+35       63.2801      75.24  |     Q     |           |           |        V  |
    3+40       63.7192      63.77  |    Q      |           |           |        V  |
    3+45       64.0955      54.64  |   Q       |           |           |        V  |
    3+50       64.4223      47.45  |   Q       |           |           |        V  |
    3+55       64.7083      41.53  |  Q        |           |           |         V |
    4+ 0       64.9534      35.58  |  Q        |           |           |         V |
    4+ 5       65.1621      30.30  |  Q        |           |           |         V |
    4+10       65.3421      26.13  | Q         |           |           |         V |
    4+15       65.4968      22.46  | Q         |           |           |         V |
    4+20       65.6292      19.23  | Q         |           |           |         V |
    4+25       65.7405      16.15  | Q         |           |           |         V |
    4+30       65.8312      13.17  Q           |           |           |         V |
    4+35       65.9134      11.94  Q           |           |           |         V |
    4+40       65.9792       9.54  Q           |           |           |         V |
    4+45       66.0285       7.16  Q           |           |           |         V |
    4+50       66.0571       4.16  Q           |           |           |         V |
    4+55       66.0694       1.78  Q           |           |           |         V |
    5+ 0       66.0778       1.22  Q           |           |           |         V |
    5+ 5       66.0829       0.75  Q           |           |           |         V |
    5+10       66.0839       0.13  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 06/28/16 File: 3rdstA76100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A7 (DESIGN POINT @ CAMBERN AVE & 3RD ST FOR LATERAL FLOW)
100-YEAR STORM EVENT

Drainage Area = 402.60(Ac.) = 0.629 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 402.60(Ac.) = 0.629 Sq.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 6570.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.244 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.280 Hr.
Lag time = 16.82 Min.
25% of lag time = 4.20 Min.
40% of lag time = 6.73 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
402.60	1.35	543.51

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
402.60	3.30	1328.58

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.350(In)
Area Averaged 100-Year Rainfall = 3.300(In)

Point rain (area averaged) = 3.300(In)
Areal adjustment factor = 99.86 %
Adjusted average point rain = 3.295(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.280	94.20	0.900
31.340	78.50	0.150
11.010	95.10	0.900
5.160	88.90	0.750
47.030	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
12.770	84.70	0.500
108.640	86.10	0.500
13.360	89.50	0.050
9.800	84.20	0.400

Total Area Entered = 402.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
92.2	92.2	0.101	0.750	0.033	0.042	0.001
94.4	94.4	0.073	0.900	0.014	0.003	0.000
95.4	95.4	0.060	0.900	0.011	0.008	0.000
94.2	94.2	0.075	0.900	0.014	0.001	0.000
78.5	78.5	0.262	0.150	0.226	0.078	0.018
95.1	95.1	0.064	0.900	0.012	0.027	0.000
88.9	88.9	0.143	0.750	0.046	0.013	0.001
78.8	78.8	0.258	0.400	0.165	0.117	0.019
86.3	86.3	0.172	0.500	0.095	0.244	0.023
86.2	86.2	0.173	0.500	0.095	0.108	0.010
84.7	84.7	0.190	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.270	0.026
89.5	89.5	0.136	0.050	0.130	0.033	0.004
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.522

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	29.728	2.865	11.624
2	0.167	59.456	10.455	42.420
3	0.250	89.184	18.306	74.277
4	0.333	118.911	20.095	81.536
5	0.417	148.639	12.968	52.617
6	0.500	178.367	7.485	30.370
7	0.583	208.095	4.793	19.448
8	0.667	237.823	3.732	15.144

9	0.750	267.551	3.007	12.200
10	0.833	297.279	2.512	10.194
11	0.917	327.006	2.008	8.148
12	1.000	356.734	1.773	7.194
13	1.083	386.462	1.450	5.885
14	1.167	416.190	1.255	5.093
15	1.250	445.918	0.988	4.010
16	1.333	475.646	0.929	3.770
17	1.417	505.374	0.889	3.605
18	1.500	535.101	0.734	2.977
19	1.583	564.829	0.639	2.594
20	1.667	594.557	0.550	2.232
21	1.750	624.285	0.495	2.010
22	1.833	654.013	0.417	1.692
23	1.917	683.741	0.342	1.387
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25	2.083	743.196	0.297	1.206
26	2.167	772.924	0.297	1.206
27	2.250	802.652	0.419	1.702
			Sum = 100.000	Sum= 405.745

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	0.50	0.198	(0.109)	0.103	0.095
2	0.17	0.60	0.237	0.109	(0.124)	0.128
3	0.25	0.60	0.237	0.109	(0.124)	0.128
4	0.33	0.60	0.237	0.109	(0.124)	0.128
5	0.42	0.60	0.237	0.109	(0.124)	0.128
6	0.50	0.70	0.277	0.109	(0.144)	0.167
7	0.58	0.70	0.277	0.109	(0.144)	0.167
8	0.67	0.70	0.277	0.109	(0.144)	0.167
9	0.75	0.70	0.277	0.109	(0.144)	0.167
10	0.83	0.70	0.277	0.109	(0.144)	0.167
11	0.92	0.70	0.277	0.109	(0.144)	0.167
12	1.00	0.80	0.316	0.109	(0.165)	0.207
13	1.08	0.80	0.316	0.109	(0.165)	0.207
14	1.17	0.80	0.316	0.109	(0.165)	0.207
15	1.25	0.80	0.316	0.109	(0.165)	0.207
16	1.33	0.80	0.316	0.109	(0.165)	0.207
17	1.42	0.80	0.316	0.109	(0.165)	0.207
18	1.50	0.80	0.316	0.109	(0.165)	0.207
19	1.58	0.80	0.316	0.109	(0.165)	0.207
20	1.67	0.80	0.316	0.109	(0.165)	0.207
21	1.75	0.80	0.316	0.109	(0.165)	0.207
22	1.83	0.80	0.316	0.109	(0.165)	0.207
23	1.92	0.80	0.316	0.109	(0.165)	0.207
24	2.00	0.90	0.356	0.109	(0.186)	0.247
25	2.08	0.80	0.316	0.109	(0.165)	0.207
26	2.17	0.90	0.356	0.109	(0.186)	0.247
27	2.25	0.90	0.356	0.109	(0.186)	0.247
28	2.33	0.90	0.356	0.109	(0.186)	0.247
29	2.42	0.90	0.356	0.109	(0.186)	0.247
0	2.50	0.90	0.356	0.109	(0.186)	0.247
31	2.58	0.90	0.356	0.109	(0.186)	0.247
32	2.67	0.90	0.356	0.109	(0.186)	0.247
33	2.75	1.00	0.395	0.109	(0.206)	0.286
34	2.83	1.00	0.395	0.109	(0.206)	0.286
35	2.92	1.00	0.395	0.109	(0.206)	0.286

36	3.00	1.00	0.395	0.109	(0.206)	0.286
37	3.08	1.00	0.395	0.109	(0.206)	0.286
38	3.17	1.10	0.435	0.109	(0.227)	0.326
39	3.25	1.10	0.435	0.109	(0.227)	0.326
40	3.33	1.10	0.435	0.109	(0.227)	0.326
41	3.42	1.20	0.475	0.109	(0.248)	0.365
2	3.50	1.30	0.514	0.109	(0.268)	0.405
43	3.58	1.40	0.554	0.109	(0.289)	0.444
44	3.67	1.40	0.554	0.109	(0.289)	0.444
45	3.75	1.50	0.593	0.109	(0.310)	0.484
46	3.83	1.50	0.593	0.109	(0.310)	0.484
47	3.92	1.60	0.633	0.109	(0.330)	0.523
48	4.00	1.60	0.633	0.109	(0.330)	0.523
49	4.08	1.70	0.672	0.109	(0.351)	0.563
50	4.17	1.80	0.712	0.109	(0.372)	0.602
51	4.25	1.90	0.751	0.109	(0.392)	0.642
52	4.33	2.00	0.791	0.109	(0.413)	0.682
53	4.42	2.10	0.830	0.109	(0.433)	0.721
54	4.50	2.10	0.830	0.109	(0.433)	0.721
55	4.58	2.20	0.870	0.109	(0.454)	0.761
56	4.67	2.30	0.910	0.109	(0.475)	0.800
57	4.75	2.40	0.949	0.109	(0.495)	0.840
58	4.83	2.40	0.949	0.109	(0.495)	0.840
59	4.92	2.50	0.989	0.109	(0.516)	0.879
60	5.00	2.60	1.028	0.109	(0.537)	0.919
61	5.08	3.10	1.226	0.109	(0.640)	1.117
62	5.17	3.60	1.424	0.109	(0.743)	1.314
63	5.25	3.90	1.542	0.109	(0.805)	1.433
64	5.33	4.20	1.661	0.109	(0.867)	1.552
65	5.42	4.70	1.859	0.109	(0.970)	1.749
66	5.50	5.60	2.215	0.109	(1.156)	2.105
67	5.58	1.90	0.751	0.109	(0.392)	0.642
8	5.67	0.90	0.356	0.109	(0.186)	0.247
69	5.75	0.60	0.237	0.109	(0.124)	0.128
70	5.83	0.50	0.198	(0.109)	0.103	0.095
71	5.92	0.30	0.119	(0.109)	0.062	0.057
72	6.00	0.20	0.079	(0.109)	0.041	0.038

(Loss Rate Not Used)

Sum = 100.0 Sum = 31.8

Flood volume = Effective rainfall 2.65(In)
times area 402.6(Ac.)/[(In)/(Ft.)] = 88.9(Ac.Ft)
Total soil loss = 0.65(In)
Total soil loss = 21.662(Ac.Ft)
Total rainfall = 3.30(In)
Flood volume = 3872476.2 Cubic Feet
Total soil loss = 943594.8 Cubic Feet

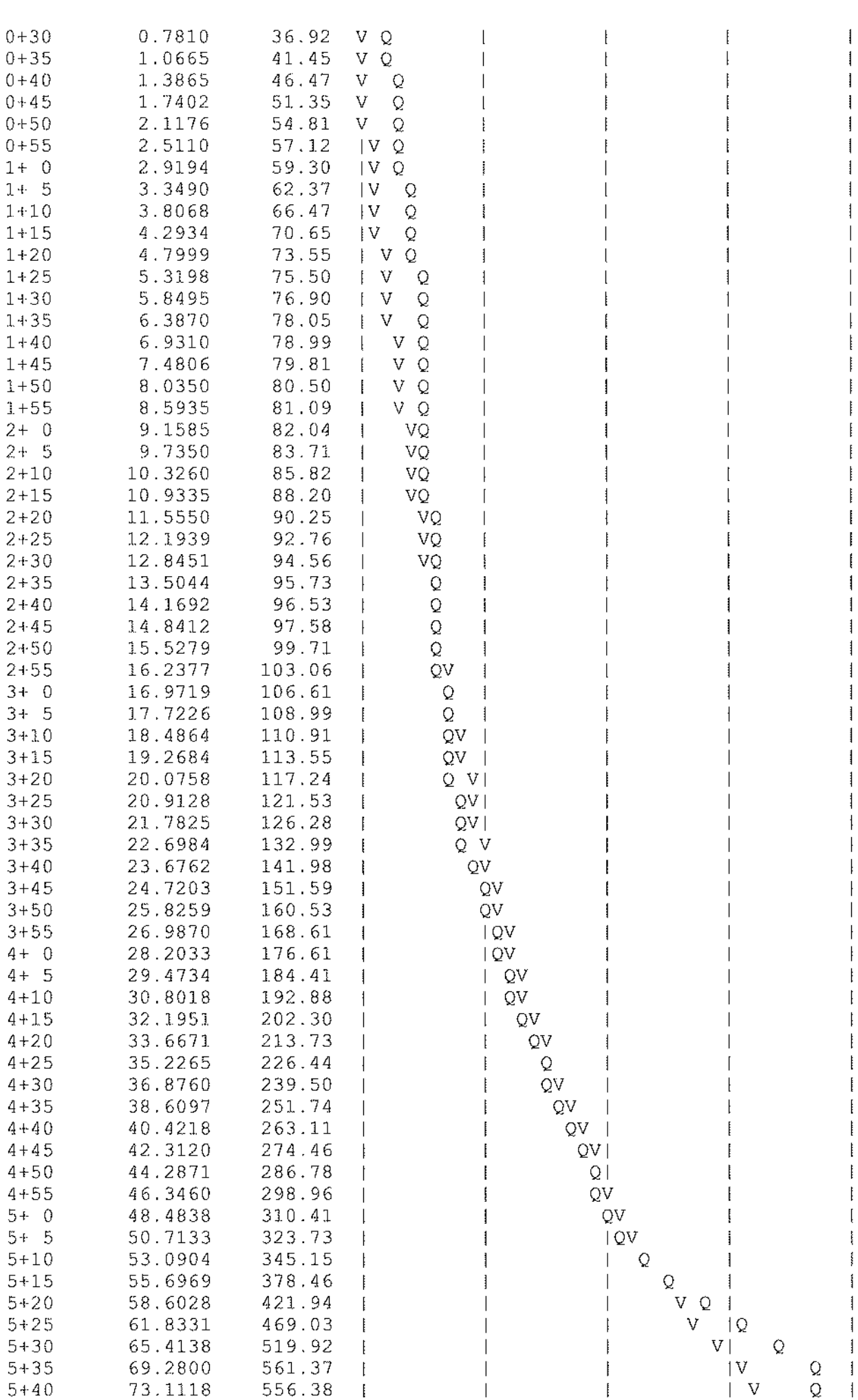
Peak flow rate of this hydrograph = 561.371(CFS)

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6 - 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	150.0	300.0	450.0	600.0
0+ 5	0.0076	1.10	Q				
0+10	0.0454	5.50	Q				
0+15	0.1414	13.94	Q				
0+20	0.3076	24.13	VQ				
0+25	0.5268	31.83	V Q				



0+30	0.7810	36.92	V Q	|	|	|	|
0+35	1.0665	41.45	V Q	|	|	|	|
0+40	1.3865	46.47	V Q	|	|	|	|
0+45	1.7402	51.35	V Q	|	|	|	|
0+50	2.1176	54.81	V Q	|	|	|	|
0+55	2.5110	57.12	|V Q	|	|	|	|
1+ 0	2.9194	59.30	|V Q	|	|	|	|
1+ 5	3.3490	62.37	|V Q	|	|	|	|
1+10	3.8068	66.47	|V Q	|	|	|	|
1+15	4.2934	70.65	|V Q	|	|	|	|
1+20	4.7999	73.55	| V Q	|	|	|	|
1+25	5.3198	75.50	| V Q	|	|	|	|
1+30	5.8495	76.90	| V Q	|	|	|	|
1+35	6.3870	78.05	| V Q	|	|	|	|
1+40	6.9310	78.99	| V Q	|	|	|	|
1+45	7.4806	79.81	| V Q	|	|	|	|
1+50	8.0350	80.50	| V Q	|	|	|	|
1+55	8.5935	81.09	| V Q	|	|	|	|
2+ 0	9.1585	82.04	| VQ	|	|	|	|
2+ 5	9.7350	83.71	| VQ	|	|	|	|
2+10	10.3260	85.82	| VQ	|	|	|	|
2+15	10.9335	88.20	| VQ	|	|	|	|
2+20	11.5550	90.25	| VQ	|	|	|	|
2+25	12.1939	92.76	| VQ	|	|	|	|
2+30	12.8451	94.56	| VQ	|	|	|	|
2+35	13.5044	95.73	| Q	|	|	|	|
2+40	14.1692	96.53	| Q	|	|	|	|
2+45	14.8412	97.58	| Q	|	|	|	|
2+50	15.5279	99.71	| Q	|	|	|	|
2+55	16.2377	103.06	| QV	|	|	|	|
3+ 0	16.9719	106.61	| Q	|	|	|	|
3+ 5	17.7226	108.99	| Q	|	|	|	|
3+10	18.4864	110.91	| QV	|	|	|	|
3+15	19.2684	113.55	| QV	|	|	|	|
3+20	20.0758	117.24	| Q V|	|	|	|	|
3+25	20.9128	121.53	| QV|	|	|	|	|
3+30	21.7825	126.28	| QV|	|	|	|	|
3+35	22.6984	132.99	| Q V	|	|	|	|
3+40	23.6762	141.98	| QV	|	|	|	|
3+45	24.7203	151.59	| QV	|	|	|	|
3+50	25.8259	160.53	| QV	|	|	|	|
3+55	26.9870	168.61	| |QV	|	|	|	|
4+ 0	28.2033	176.61	| |QV	|	|	|	|
4+ 5	29.4734	184.41	| | QV	|	|	|	|
4+10	30.8018	192.88	| | QV	|	|	|	|
4+15	32.1951	202.30	| | QV	|	|	|	|
4+20	33.6671	213.73	| | QV	|	|	|	|
4+25	35.2265	226.44	| | Q	|	|	|	|
4+30	36.8760	239.50	| | QV	|	|	|	|
4+35	38.6097	251.74	| | QV	|	|	|	|
4+40	40.4218	263.11	| | QV |	|	|	|	|
4+45	42.3120	274.46	| | QV|	|	|	|	|
4+50	44.2871	286.78	| | Q|	|	|	|	|
4+55	46.3460	298.96	| | QV	|	|	|	|
5+ 0	48.4838	310.41	| | QV	|	|	|	|
5+ 5	50.7133	323.73	| | |QV	|	|	|	|
5+10	53.0904	345.15	| | | Q	|	|	|	|
5+15	55.6969	378.46	| | | Q	|	|	|	|
5+20	58.6028	421.94	| | | V Q |	|	|	|	|
5+25	61.8331	469.03	| | | V | |Q	|	|	|	|
5+30	65.4138	519.92	| | | V| Q	|	|	|	|
5+35	69.2800	561.37	| | | |V Q	|	|	|	|
5+40	73.1118	556.38	| | | | V Q	|	|	|	|

5+45	76.4332	482.27						Q V	
5+50	78.9334	363.04					Q	V	
5+55	80.7660	266.09				Q		V	
6+ 0	82.1687	203.67			Q			V	
6+ 5	83.2970	163.83			Q			V	
6+10	84.2181	133.74			Q			V	
6+15	84.9732	109.65			Q			V	
6+20	85.5937	90.10			Q			V	
6+25	86.1153	75.73			Q			V	
6+30	86.5566	64.07			Q			V	
6+35	86.9339	54.79		Q				V	
6+40	87.2569	46.89		Q				V	
6+45	87.5389	40.95		Q				V	
6+50	87.7842	35.62		Q				V	
6+55	87.9935	30.39		Q				V	
7+ 0	88.1716	25.86	Q					V	
7+ 5	88.3232	22.01	Q					V	
7+10	88.4522	18.74	Q					V	
7+15	88.5616	15.88	Q					V	
7+20	88.6531	13.29	Q					V	
7+25	88.7289	11.00	Q					V	
7+30	88.7912	9.04	Q					V	
7+35	88.8402	7.13	Q					V	
7+40	88.8755	5.11	Q					V	
7+45	88.8879	1.80	Q					V	
7+50	88.8934	0.81	Q					V	
7+55	88.8965	0.45	Q					V	
8+ 0	88.8984	0.27	Q					V	
8+ 5	88.8994	0.14	Q					V	
8+10	88.8998	0.06	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 06/28/16 File: 3rdstA724100.out

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

Program License Serial Number 6341

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

English Units used in output format

LAKE ELSINORE 3RD STREET STORM DRAIN
WATERSHED AREA - A7 (DESIGN POINT @ CAMBERN AVE & 3RD ST FOR LATERAL FLOW)
100-YEAR STORM EVENT

Drainage Area = 402.60(Ac.) = 0.629 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 402.60(Ac.) = 0.629 Sq.

Length along longest watercourse = 13600.00(Ft.)
Length along longest watercourse measured to centroid = 6570.00(Ft.)
Length along longest watercourse = 2.576 Mi.
Length along longest watercourse measured to centroid = 1.244 Mi.
Difference in elevation = 372.00(Ft.)
Slope along watercourse = 144.4235 Ft./Mi.
Average Manning's 'N' = 0.019
Lag time = 0.280 Hr.
Lag time = 16.82 Min.
25% of lag time = 4.20 Min.
40% of lag time = 6.73 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]
402.60	2.50	1006.50

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
402.60	6.00	2415.60

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.500(In)
Area Averaged 100-Year Rainfall = 6.000(In)

Point rain (area averaged) = 6.000(In)
Areal adjustment factor = 99.92 %
Adjusted average point rain = 5.995(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
17.090	92.20	0.750
1.110	94.40	0.900
3.160	95.40	0.900
0.280	94.20	0.900
31.340	78.50	0.150
11.010	95.10	0.900
5.160	88.90	0.750
47.030	78.80	0.400
98.350	86.30	0.500
43.500	86.20	0.500
12.770	84.70	0.500
108.640	86.10	0.500
13.360	89.50	0.050
9.800	84.20	0.400

Total Area Entered = 402.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
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78.5	78.5	0.262	0.150	0.226	0.078	0.018
95.1	95.1	0.064	0.900	0.012	0.027	0.000
88.9	88.9	0.143	0.750	0.046	0.013	0.001
78.8	78.8	0.258	0.400	0.165	0.117	0.019
86.3	86.3	0.172	0.500	0.095	0.244	0.023
86.2	86.2	0.173	0.500	0.095	0.108	0.010
84.7	84.7	0.190	0.500	0.105	0.032	0.003
86.1	86.1	0.174	0.500	0.096	0.270	0.026
89.5	89.5	0.136	0.050	0.130	0.033	0.004
84.2	84.2	0.196	0.400	0.126	0.024	0.003
					Sum (F) =	0.109

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Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.522

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VALLEY S-Curve

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6	0.500	178.367	7.485	30.370
7	0.583	208.095	4.793	19.448
8	0.667	237.823	3.732	15.144

9	0.750	267.551	3.007	12.200
10	0.833	297.279	2.512	10.194
11	0.917	327.006	2.008	8.148
12	1.000	356.734	1.773	7.194
13	1.083	386.462	1.450	5.885
14	1.167	416.190	1.255	5.093
15	1.250	445.918	0.988	4.010
16	1.333	475.646	0.929	3.770
17	1.417	505.374	0.889	3.605
18	1.500	535.101	0.734	2.977
19	1.583	564.829	0.639	2.594
20	1.667	594.557	0.550	2.232
21	1.750	624.285	0.495	2.010
22	1.833	654.013	0.417	1.692
23	1.917	683.741	0.342	1.387
24	2.000	713.469	0.297	1.206
25	2.083	743.196	0.297	1.206
26	2.167	772.924	0.297	1.206
27	2.250	802.652	0.419	1.702
			Sum = 100.000	Sum= 405.745

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Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.048	(0.194)	0.025	0.023
2	0.17	0.07	0.048	(0.193)	0.025	0.023
3	0.25	0.07	0.048	(0.192)	0.025	0.023
4	0.33	0.10	0.072	(0.192)	0.038	0.034
5	0.42	0.10	0.072	(0.191)	0.038	0.034
6	0.50	0.10	0.072	(0.190)	0.038	0.034
7	0.58	0.10	0.072	(0.189)	0.038	0.034
8	0.67	0.10	0.072	(0.189)	0.038	0.034
9	0.75	0.10	0.072	(0.188)	0.038	0.034
10	0.83	0.13	0.096	(0.187)	0.050	0.046
11	0.92	0.13	0.096	(0.186)	0.050	0.046
12	1.00	0.13	0.096	(0.186)	0.050	0.046
13	1.08	0.10	0.072	(0.185)	0.038	0.034
14	1.17	0.10	0.072	(0.184)	0.038	0.034
15	1.25	0.10	0.072	(0.184)	0.038	0.034
16	1.33	0.10	0.072	(0.183)	0.038	0.034
17	1.42	0.10	0.072	(0.182)	0.038	0.034
18	1.50	0.10	0.072	(0.181)	0.038	0.034
19	1.58	0.10	0.072	(0.181)	0.038	0.034
20	1.67	0.10	0.072	(0.180)	0.038	0.034
21	1.75	0.10	0.072	(0.179)	0.038	0.034
22	1.83	0.13	0.096	(0.178)	0.050	0.046
23	1.92	0.13	0.096	(0.178)	0.050	0.046
24	2.00	0.13	0.096	(0.177)	0.050	0.046
25	2.08	0.13	0.096	(0.176)	0.050	0.046
26	2.17	0.13	0.096	(0.176)	0.050	0.046
27	2.25	0.13	0.096	(0.175)	0.050	0.046
28	2.33	0.13	0.096	(0.174)	0.050	0.046
29	2.42	0.13	0.096	(0.173)	0.050	0.046
30	2.50	0.13	0.096	(0.173)	0.050	0.046
31	2.58	0.17	0.120	(0.172)	0.063	0.057
32	2.67	0.17	0.120	(0.171)	0.063	0.057
33	2.75	0.17	0.120	(0.171)	0.063	0.057
34	2.83	0.17	0.120	(0.170)	0.063	0.057
35	2.92	0.17	0.120	(0.169)	0.063	0.057

36	3.00	0.17	0.120	(0.169)	0.063	0.057
37	3.08	0.17	0.120	(0.168)	0.063	0.057
38	3.17	0.17	0.120	(0.167)	0.063	0.057
39	3.25	0.17	0.120	(0.166)	0.063	0.057
40	3.33	0.17	0.120	(0.166)	0.063	0.057
41	3.42	0.17	0.120	(0.165)	0.063	0.057
2	3.50	0.17	0.120	(0.164)	0.063	0.057
43	3.58	0.17	0.120	(0.164)	0.063	0.057
44	3.67	0.17	0.120	(0.163)	0.063	0.057
45	3.75	0.17	0.120	(0.162)	0.063	0.057
46	3.83	0.20	0.144	(0.162)	0.075	0.069
47	3.92	0.20	0.144	(0.161)	0.075	0.069
48	4.00	0.20	0.144	(0.160)	0.075	0.069
49	4.08	0.20	0.144	(0.160)	0.075	0.069
50	4.17	0.20	0.144	(0.159)	0.075	0.069
51	4.25	0.20	0.144	(0.158)	0.075	0.069
52	4.33	0.23	0.168	(0.158)	0.088	0.080
53	4.42	0.23	0.168	(0.157)	0.088	0.080
54	4.50	0.23	0.168	(0.156)	0.088	0.080
55	4.58	0.23	0.168	(0.156)	0.088	0.080
56	4.67	0.23	0.168	(0.155)	0.088	0.080
57	4.75	0.23	0.168	(0.154)	0.088	0.080
58	4.83	0.27	0.192	(0.154)	0.100	0.092
59	4.92	0.27	0.192	(0.153)	0.100	0.092
60	5.00	0.27	0.192	(0.152)	0.100	0.092
61	5.08	0.20	0.144	(0.152)	0.075	0.069
62	5.17	0.20	0.144	(0.151)	0.075	0.069
63	5.25	0.20	0.144	(0.150)	0.075	0.069
64	5.33	0.23	0.168	(0.150)	0.088	0.080
65	5.42	0.23	0.168	(0.149)	0.088	0.080
66	5.50	0.23	0.168	(0.148)	0.088	0.080
67	5.58	0.27	0.192	(0.148)	0.100	0.092
8	5.67	0.27	0.192	(0.147)	0.100	0.092
69	5.75	0.27	0.192	(0.146)	0.100	0.092
70	5.83	0.27	0.192	(0.146)	0.100	0.092
71	5.92	0.27	0.192	(0.145)	0.100	0.092
72	6.00	0.27	0.192	(0.144)	0.100	0.092
73	6.08	0.30	0.216	(0.144)	0.113	0.103
74	6.17	0.30	0.216	(0.143)	0.113	0.103
75	6.25	0.30	0.216	(0.142)	0.113	0.103
76	6.33	0.30	0.216	(0.142)	0.113	0.103
77	6.42	0.30	0.216	(0.141)	0.113	0.103
78	6.50	0.30	0.216	(0.141)	0.113	0.103
79	6.58	0.33	0.240	(0.140)	0.125	0.115
80	6.67	0.33	0.240	(0.139)	0.125	0.115
81	6.75	0.33	0.240	(0.139)	0.125	0.115
82	6.83	0.33	0.240	(0.138)	0.125	0.115
83	6.92	0.33	0.240	(0.137)	0.125	0.115
84	7.00	0.33	0.240	(0.137)	0.125	0.115
85	7.08	0.33	0.240	(0.136)	0.125	0.115
86	7.17	0.33	0.240	(0.136)	0.125	0.115
87	7.25	0.33	0.240	(0.135)	0.125	0.115
88	7.33	0.37	0.264	0.134	(0.138)	0.129
89	7.42	0.37	0.264	0.134	(0.138)	0.130
90	7.50	0.37	0.264	0.133	(0.138)	0.131
91	7.58	0.40	0.288	0.132	(0.150)	0.155
92	7.67	0.40	0.288	0.132	(0.150)	0.156
93	7.75	0.40	0.288	0.131	(0.150)	0.157
4	7.83	0.43	0.312	0.131	(0.163)	0.181
95	7.92	0.43	0.312	0.130	(0.163)	0.182
96	8.00	0.43	0.312	0.129	(0.163)	0.182
97	8.08	0.50	0.360	0.129	(0.188)	0.231
98	8.17	0.50	0.360	0.128	(0.188)	0.231

99	8.25	0.50	0.360	0.128	(0.188)	0.232
100	8.33	0.50	0.360	0.127	(0.188)	0.233
101	8.42	0.50	0.360	0.126	(0.188)	0.233
102	8.50	0.50	0.360	0.126	(0.188)	0.234
103	8.58	0.53	0.384	0.125	(0.200)	0.258
104	8.67	0.53	0.384	0.125	(0.200)	0.259
5	8.75	0.53	0.384	0.124	(0.200)	0.260
106	8.83	0.57	0.408	0.124	(0.213)	0.284
107	8.92	0.57	0.408	0.123	(0.213)	0.285
108	9.00	0.57	0.408	0.122	(0.213)	0.285
109	9.08	0.63	0.456	0.122	(0.238)	0.334
110	9.17	0.63	0.456	0.121	(0.238)	0.334
111	9.25	0.63	0.456	0.121	(0.238)	0.335
112	9.33	0.67	0.480	0.120	(0.250)	0.360
113	9.42	0.67	0.480	0.119	(0.250)	0.360
114	9.50	0.67	0.480	0.119	(0.250)	0.361
115	9.58	0.70	0.504	0.118	(0.263)	0.385
116	9.67	0.70	0.504	0.118	(0.263)	0.386
117	9.75	0.70	0.504	0.117	(0.263)	0.386
118	9.83	0.73	0.528	0.117	(0.275)	0.411
119	9.92	0.73	0.528	0.116	(0.275)	0.412
120	10.00	0.73	0.528	0.116	(0.275)	0.412
121	10.08	0.50	0.360	0.115	(0.188)	0.245
122	10.17	0.50	0.360	0.114	(0.188)	0.245
123	10.25	0.50	0.360	0.114	(0.188)	0.246
124	10.33	0.50	0.360	0.113	(0.188)	0.246
125	10.42	0.50	0.360	0.113	(0.188)	0.247
126	10.50	0.50	0.360	0.112	(0.188)	0.248
127	10.58	0.67	0.480	0.112	(0.250)	0.368
128	10.67	0.67	0.480	0.111	(0.250)	0.369
129	10.75	0.67	0.480	0.111	(0.250)	0.369
130	10.83	0.67	0.480	0.110	(0.250)	0.370
1	10.92	0.67	0.480	0.109	(0.250)	0.370
132	11.00	0.67	0.480	0.109	(0.250)	0.371
133	11.08	0.63	0.456	0.108	(0.238)	0.347
134	11.17	0.63	0.456	0.108	(0.238)	0.348
135	11.25	0.63	0.456	0.107	(0.238)	0.348
136	11.33	0.63	0.456	0.107	(0.238)	0.349
137	11.42	0.63	0.456	0.106	(0.238)	0.349
138	11.50	0.63	0.456	0.106	(0.238)	0.350
139	11.58	0.57	0.408	0.105	(0.213)	0.302
140	11.67	0.57	0.408	0.105	(0.213)	0.303
141	11.75	0.57	0.408	0.104	(0.213)	0.304
142	11.83	0.60	0.432	0.104	(0.225)	0.328
143	11.92	0.60	0.432	0.103	(0.225)	0.329
144	12.00	0.60	0.432	0.103	(0.225)	0.329
145	12.08	0.83	0.600	0.102	(0.313)	0.497
146	12.17	0.83	0.600	0.102	(0.313)	0.498
147	12.25	0.83	0.600	0.101	(0.313)	0.498
148	12.33	0.87	0.624	0.101	(0.325)	0.523
149	12.42	0.87	0.624	0.100	(0.325)	0.523
150	12.50	0.87	0.624	0.100	(0.325)	0.524
151	12.58	0.93	0.671	0.099	(0.351)	0.572
152	12.67	0.93	0.671	0.099	(0.351)	0.573
153	12.75	0.93	0.671	0.098	(0.351)	0.573
154	12.83	0.97	0.695	0.098	(0.363)	0.598
155	12.92	0.97	0.695	0.097	(0.363)	0.598
156	13.00	0.97	0.695	0.097	(0.363)	0.599
157	13.08	1.13	0.815	0.096	(0.426)	0.719
158	13.17	1.13	0.815	0.096	(0.426)	0.720
159	13.25	1.13	0.815	0.095	(0.426)	0.720
160	13.33	1.13	0.815	0.095	(0.426)	0.721
161	13.42	1.13	0.815	0.094	(0.426)	0.721

162	13.50	1.13	0.815	0.094	(0.426)	0.722
163	13.58	0.77	0.552	0.093	(0.288)	0.458
164	13.67	0.77	0.552	0.093	(0.288)	0.459
165	13.75	0.77	0.552	0.092	(0.288)	0.459
166	13.83	0.77	0.552	0.092	(0.288)	0.460
167	13.92	0.77	0.552	0.091	(0.288)	0.460
3	14.00	0.77	0.552	0.091	(0.288)	0.461
169	14.08	0.90	0.647	0.090	(0.338)	0.557
170	14.17	0.90	0.647	0.090	(0.338)	0.558
171	14.25	0.90	0.647	0.089	(0.338)	0.558
172	14.33	0.87	0.624	0.089	(0.325)	0.534
173	14.42	0.87	0.624	0.089	(0.325)	0.535
174	14.50	0.87	0.624	0.088	(0.325)	0.535
175	14.58	0.87	0.624	0.088	(0.325)	0.536
176	14.67	0.87	0.624	0.087	(0.325)	0.536
177	14.75	0.87	0.624	0.087	(0.325)	0.537
178	14.83	0.83	0.600	0.086	(0.313)	0.513
179	14.92	0.83	0.600	0.086	(0.313)	0.514
180	15.00	0.83	0.600	0.085	(0.313)	0.514
181	15.08	0.80	0.576	0.085	(0.300)	0.491
182	15.17	0.80	0.576	0.085	(0.300)	0.491
183	15.25	0.80	0.576	0.084	(0.300)	0.491
184	15.33	0.77	0.552	0.084	(0.288)	0.468
185	15.42	0.77	0.552	0.083	(0.288)	0.468
186	15.50	0.77	0.552	0.083	(0.288)	0.469
187	15.58	0.63	0.456	0.082	(0.238)	0.373
188	15.67	0.63	0.456	0.082	(0.238)	0.374
189	15.75	0.63	0.456	0.082	(0.238)	0.374
190	15.83	0.63	0.456	0.081	(0.238)	0.374
191	15.92	0.63	0.456	0.081	(0.238)	0.375
192	16.00	0.63	0.456	0.080	(0.238)	0.375
193	16.08	0.13	0.096	(0.080)	0.050	0.046
4	16.17	0.13	0.096	(0.080)	0.050	0.046
195	16.25	0.13	0.096	(0.079)	0.050	0.046
196	16.33	0.13	0.096	(0.079)	0.050	0.046
197	16.42	0.13	0.096	(0.078)	0.050	0.046
198	16.50	0.13	0.096	(0.078)	0.050	0.046
199	16.58	0.10	0.072	(0.078)	0.038	0.034
200	16.67	0.10	0.072	(0.077)	0.038	0.034
201	16.75	0.10	0.072	(0.077)	0.038	0.034
202	16.83	0.10	0.072	(0.076)	0.038	0.034
203	16.92	0.10	0.072	(0.076)	0.038	0.034
204	17.00	0.10	0.072	(0.076)	0.038	0.034
205	17.08	0.17	0.120	(0.075)	0.063	0.057
206	17.17	0.17	0.120	(0.075)	0.063	0.057
207	17.25	0.17	0.120	(0.074)	0.063	0.057
208	17.33	0.17	0.120	(0.074)	0.063	0.057
209	17.42	0.17	0.120	(0.074)	0.063	0.057
210	17.50	0.17	0.120	(0.073)	0.063	0.057
211	17.58	0.17	0.120	(0.073)	0.063	0.057
212	17.67	0.17	0.120	(0.073)	0.063	0.057
213	17.75	0.17	0.120	(0.072)	0.063	0.057
214	17.83	0.13	0.096	(0.072)	0.050	0.046
215	17.92	0.13	0.096	(0.072)	0.050	0.046
216	18.00	0.13	0.096	(0.071)	0.050	0.046
217	18.08	0.13	0.096	(0.071)	0.050	0.046
218	18.17	0.13	0.096	(0.070)	0.050	0.046
219	18.25	0.13	0.096	(0.070)	0.050	0.046
0	18.33	0.13	0.096	(0.070)	0.050	0.046
221	18.42	0.13	0.096	(0.069)	0.050	0.046
222	18.50	0.13	0.096	(0.069)	0.050	0.046
223	18.58	0.10	0.072	(0.069)	0.038	0.034
224	18.67	0.10	0.072	(0.068)	0.038	0.034

225	18.75	0.10	0.072	(0.068)	0.038	0.034
226	18.83	0.07	0.048	(0.068)	0.025	0.023
227	18.92	0.07	0.048	(0.067)	0.025	0.023
228	19.00	0.07	0.048	(0.067)	0.025	0.023
229	19.08	0.10	0.072	(0.067)	0.038	0.034
230	19.17	0.10	0.072	(0.066)	0.038	0.034
1	19.25	0.10	0.072	(0.066)	0.038	0.034
232	19.33	0.13	0.096	(0.066)	0.050	0.046
233	19.42	0.13	0.096	(0.066)	0.050	0.046
234	19.50	0.13	0.096	(0.065)	0.050	0.046
235	19.58	0.10	0.072	(0.065)	0.038	0.034
236	19.67	0.10	0.072	(0.065)	0.038	0.034
237	19.75	0.10	0.072	(0.064)	0.038	0.034
238	19.83	0.07	0.048	(0.064)	0.025	0.023
239	19.92	0.07	0.048	(0.064)	0.025	0.023
240	20.00	0.07	0.048	(0.064)	0.025	0.023
241	20.08	0.10	0.072	(0.063)	0.038	0.034
242	20.17	0.10	0.072	(0.063)	0.038	0.034
243	20.25	0.10	0.072	(0.063)	0.038	0.034
244	20.33	0.10	0.072	(0.062)	0.038	0.034
245	20.42	0.10	0.072	(0.062)	0.038	0.034
246	20.50	0.10	0.072	(0.062)	0.038	0.034
247	20.58	0.10	0.072	(0.062)	0.038	0.034
248	20.67	0.10	0.072	(0.061)	0.038	0.034
249	20.75	0.10	0.072	(0.061)	0.038	0.034
250	20.83	0.07	0.048	(0.061)	0.025	0.023
251	20.92	0.07	0.048	(0.061)	0.025	0.023
252	21.00	0.07	0.048	(0.060)	0.025	0.023
253	21.08	0.10	0.072	(0.060)	0.038	0.034
254	21.17	0.10	0.072	(0.060)	0.038	0.034
255	21.25	0.10	0.072	(0.060)	0.038	0.034
256	21.33	0.07	0.048	(0.059)	0.025	0.023
7	21.42	0.07	0.048	(0.059)	0.025	0.023
258	21.50	0.07	0.048	(0.059)	0.025	0.023
259	21.58	0.10	0.072	(0.059)	0.038	0.034
260	21.67	0.10	0.072	(0.059)	0.038	0.034
261	21.75	0.10	0.072	(0.058)	0.038	0.034
262	21.83	0.07	0.048	(0.058)	0.025	0.023
263	21.92	0.07	0.048	(0.058)	0.025	0.023
264	22.00	0.07	0.048	(0.058)	0.025	0.023
265	22.08	0.10	0.072	(0.058)	0.038	0.034
266	22.17	0.10	0.072	(0.057)	0.038	0.034
267	22.25	0.10	0.072	(0.057)	0.038	0.034
268	22.33	0.07	0.048	(0.057)	0.025	0.023
269	22.42	0.07	0.048	(0.057)	0.025	0.023
270	22.50	0.07	0.048	(0.057)	0.025	0.023
271	22.58	0.07	0.048	(0.057)	0.025	0.023
272	22.67	0.07	0.048	(0.056)	0.025	0.023
273	22.75	0.07	0.048	(0.056)	0.025	0.023
274	22.83	0.07	0.048	(0.056)	0.025	0.023
275	22.92	0.07	0.048	(0.056)	0.025	0.023
276	23.00	0.07	0.048	(0.056)	0.025	0.023
277	23.08	0.07	0.048	(0.056)	0.025	0.023
278	23.17	0.07	0.048	(0.056)	0.025	0.023
279	23.25	0.07	0.048	(0.055)	0.025	0.023
280	23.33	0.07	0.048	(0.055)	0.025	0.023
281	23.42	0.07	0.048	(0.055)	0.025	0.023
282	23.50	0.07	0.048	(0.055)	0.025	0.023
3	23.58	0.07	0.048	(0.055)	0.025	0.023
284	23.67	0.07	0.048	(0.055)	0.025	0.023
285	23.75	0.07	0.048	(0.055)	0.025	0.023
286	23.83	0.07	0.048	(0.055)	0.025	0.023
287	23.92	0.07	0.048	(0.055)	0.025	0.023

288 24.00 0.07 0.048 (0.055) 0.025 0.023
(Loss Rate Not Used)
Sum = 100.0 Sum = 50.9
Flood volume = Effective rainfall 4.24(In)
times area 402.6(Ac.)/[(In)/(Ft.)] = 142.3(Ac.Ft)
Total soil loss = 1.75(In)
Total soil loss = 58.820(Ac.Ft)
Total rainfall = 6.00(In)
Flood volume = 6199521.4 Cubic Feet
Total soil loss = 2562211.6 Cubic Feet

Peak flow rate of this hydrograph = 272.206(CFS)

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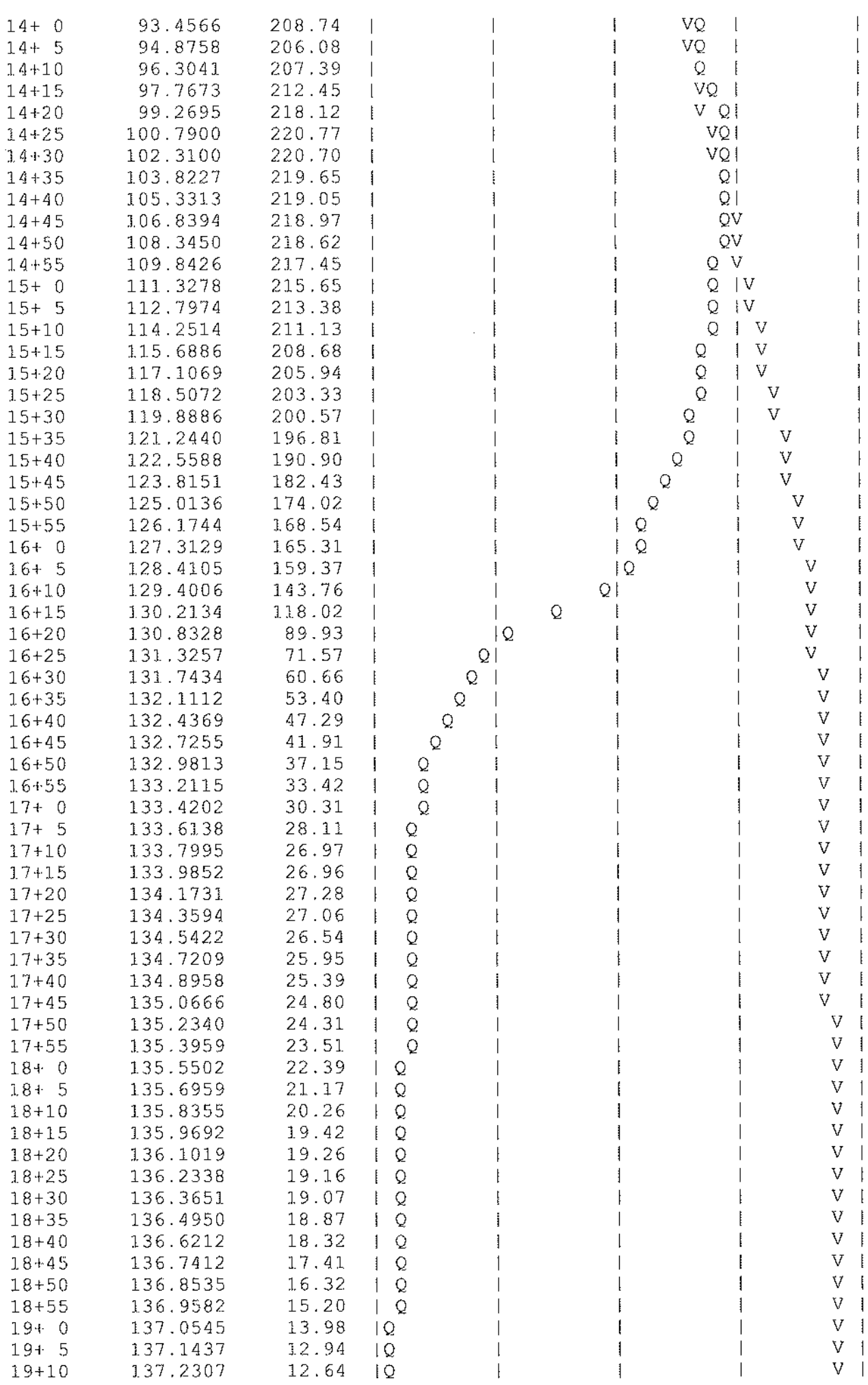
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	75.0	150.0	225.0	300.0
0+ 5	0.0018	0.27	Q				
0+10	0.0104	1.24	Q				
0+15	0.0306	2.94	Q				
0+20	0.0647	4.95	Q				
0+25	0.1104	6.64	Q				
0+30	0.1668	8.19	VQ				
0+35	0.2328	9.57	VQ				
0+40	0.3052	10.52	VQ				
0+45	0.3820	11.15	VQ				
0+50	0.4628	11.74	VQ				
0+55	0.5495	12.59	VQ				
1+ 0	0.6442	13.74	VQ				
1+ 5	0.7461	14.80	VQ				
1+10	0.8502	15.12	V Q				
1+15	0.9521	14.79	VQ				
1+20	1.0502	14.24	VQ				
1+25	1.1463	13.95	VQ				
1+30	1.2417	13.85	VQ				
1+35	1.3371	13.85	VQ				
1+40	1.4325	13.86	VQ				
1+45	1.5282	13.89	VQ				
1+50	1.6248	14.04	VQ				
1+55	1.7250	14.55	VQ				
2+ 0	1.8312	15.41	V Q				
2+ 5	1.9439	16.37	V Q				
2+10	2.0610	17.00	V Q				
2+15	2.1808	17.39	V Q				
2+20	2.3021	17.61	V Q				
2+25	2.4246	17.79	V Q				
2+30	2.5481	17.93	V Q				
2+35	2.6733	18.17	V Q				
2+40	2.8024	18.74	V Q				
2+45	2.9378	19.67	V Q				
2+50	3.0802	20.67	V Q				
2+55	3.2270	21.33	V Q				
3+ 0	3.3767	21.73	V Q				
3+ 5	3.5280	21.98	V Q				
3+10	3.6808	22.18	|VQ				
3+15	3.8346	22.33	|VQ				
3+20	3.9894	22.48	|VQ				
3+25	4.1451	22.60	|V Q				

3+30	4.3014	22.71	V Q			
3+35	4.4584	22.79	V Q			
3+40	4.6159	22.87	V Q			
3+45	4.7738	22.93	V Q			
3+50	4.9330	23.12	V Q			
3+55	5.0959	23.66	V Q			
4+ 0	5.2651	24.56	V Q			
4+ 5	5.4409	25.53	V Q			
4+10	5.6211	26.16	V Q			
4+15	5.8038	26.53	V Q			
4+20	5.9891	26.91	V Q			
4+25	6.1791	27.58	V Q			
4+30	6.3759	28.59	V Q			
4+35	6.5802	29.65	V Q			
4+40	6.7893	30.36	V Q			
4+45	7.0015	30.81	V Q			
4+50	7.2166	31.24	V Q			
4+55	7.4367	31.96	V Q			
5+ 0	7.6639	32.99	V Q			
5+ 5	7.8969	33.82	V Q			
5+10	8.1282	33.59	V Q			
5+15	8.3510	32.35	V Q			
5+20	8.5640	30.93	V Q			
5+25	8.7739	30.47	V Q			
5+30	8.9862	30.83	V Q			
5+35	9.2041	31.64	V Q			
5+40	9.4282	32.53	V Q			
5+45	9.6594	33.58	V Q			
5+50	9.8978	34.62	V Q			
5+55	10.1410	35.30	V Q			
6+ 0	10.3869	35.72	V Q			
6+ 5	10.6357	36.12	V Q			
6+10	10.8892	36.81	VQ			
6+15	11.1498	37.84	V Q			
6+20	11.4178	38.92	V Q			
6+25	11.6908	39.63	V Q			
6+30	11.9668	40.08	V Q			
6+35	12.2458	40.51	V Q			
6+40	12.5297	41.23	V Q			
6+45	12.8209	42.27	V Q			
6+50	13.1196	43.37	V Q			
6+55	13.4234	44.12	V Q			
7+ 0	13.7306	44.60	V Q			
7+ 5	14.0398	44.91	V Q			
7+10	14.3508	45.16	V Q			
7+15	14.6631	45.34	V Q			
7+20	14.9779	45.71	V Q			
7+25	15.2982	46.51	V Q			
7+30	15.6273	47.79	V Q			
7+35	15.9680	49.47	V Q			
7+40	16.3227	51.50	V Q			
7+45	16.6945	53.98	V Q			
7+50	17.0853	56.75	V Q			
7+55	17.4950	59.50	V Q			
8+ 0	17.9250	62.44	V Q			
8+ 5	18.3783	65.82	V Q			
8+10	18.8594	69.85	V Q			
8+15	19.3746	74.80	V Q			
8+20	19.9239	79.75	V Q			
8+25	20.4965	83.15	V Q			
8+30	21.0845	85.37	V Q			
8+35	21.6856	87.27	V Q			
8+40	22.3028	89.63	V Q			

8+45	22.9403	92.56	V	Q			
8+50	23.6000	95.79	V	Q			
8+55	24.2813	98.93	V	Q			
9+ 0	24.9853	102.22	V	Q			
9+ 5	25.7146	105.89	V	Q			
9+10	26.4735	110.19	V	Q			
9+15	27.2679	115.34	V	Q			
9+20	28.0997	120.78	V	Q			
9+25	28.9633	125.40	V	Q			
9+30	29.8557	129.58	V	Q			
9+35	30.7756	133.56	V	Q			
9+40	31.7212	137.29	V	Q			
9+45	32.6926	141.06	V	Q			
9+50	33.6900	144.82	V	Q			
9+55	34.7120	148.39	V	Q			
10+ 0	35.7591	152.04	V	Q			
10+ 5	36.8161	153.48	V	Q			
10+10	37.8412	148.85	V	Q			
10+15	38.7930	138.19	V	Q			
10+20	39.6597	125.86	V	Q			
10+25	40.4737	118.19	V	Q			
10+30	41.2595	114.10	V	Q			
10+35	42.0386	113.12	V	Q			
10+40	42.8407	116.47	V	Q			
10+45	43.6951	124.06	V	Q			
10+50	44.6094	132.76	V	Q			
10+55	45.5617	138.28	V	Q			
11+ 0	46.5346	141.25	V	Q			
11+ 5	47.5180	142.79	V	Q			
11+10	48.5041	143.19	V	Q			
11+15	49.4865	142.65	V	Q			
11+20	50.4619	141.63	V	Q			
11+25	51.4335	141.07	V	Q			
11+30	52.4049	141.04	V	Q			
11+35	53.3730	140.58	V	Q			
11+40	54.3282	138.69	V	Q			
11+45	55.2598	135.26	V	Q			
11+50	56.1674	131.80	V	Q			
11+55	57.0665	130.54	V	Q			
12+ 0	57.9693	131.10	V	Q			
12+ 5	58.8939	134.25	V	Q			
12+10	59.8723	142.07	V	Q			
12+15	60.9381	154.75	V	Q			
12+20	62.1022	169.03	V	Q			
12+25	63.3360	179.14	V	Q			
12+30	64.6188	186.26	V	Q			
12+35	65.9431	192.29	V	Q			
12+40	67.3093	198.38	V	Q			
12+45	68.7216	205.06	V	Q			
12+50	70.1786	211.56	V	Q			
12+55	71.6728	216.95	V	Q			
13+ 0	73.2005	221.82	V	Q			
13+ 5	74.7672	227.48	V	Q			
13+10	76.3909	235.76	V	Q			
13+15	78.0917	246.97	V	Q			
13+20	79.8731	258.66	V	Q			
13+25	81.7095	266.64	V	Q			
13+30	83.5808	271.71	V	Q			
13+35	85.4555	272.21	V	Q			
13+40	87.2730	263.90	V	Q			
13+45	88.9718	246.68	V	Q			
13+50	90.5371	227.27	V	Q			
13+55	92.0190	215.17	V	Q			



| | | |

19+15	137.3203	13.01	Q				V
19+20	137.4147	13.71	Q				V
19+25	137.5145	14.50	Q				V
19+30	137.6210	15.46	Q				V
19+35	137.7331	16.28	Q				V
19+40	137.8461	16.40	Q				V
19+45	137.9555	15.90	Q				V
19+50	138.0591	15.04	Q				V
19+55	138.1563	14.11	Q				V
20+ 0	138.2460	13.03	Q				V
20+ 5	138.3294	12.11	Q				V
20+10	138.4114	11.91	Q				V
20+15	138.4965	12.34	Q				V
20+20	138.5860	13.00	Q				V
20+25	138.6783	13.40	Q				V
20+30	138.7717	13.56	Q				V
20+35	138.8656	13.64	Q				V
20+40	138.9600	13.70	Q				V
20+45	139.0546	13.74	Q				V
20+50	139.1486	13.65	Q				V
20+55	139.2394	13.18	Q				V
21+ 0	139.3244	12.35	Q				V
21+ 5	139.4041	11.57	Q				V
21+10	139.4832	11.48	Q				V
21+15	139.5658	12.00	Q				V
21+20	139.6525	12.59	Q				V
21+25	139.7390	12.55	Q				V
21+30	139.8211	11.92	Q				V
21+35	139.8983	11.22	Q				V
21+40	139.9753	11.18	Q				V
21+45	140.0561	11.73	Q				V
21+50	140.1413	12.37	Q				V
21+55	140.2263	12.35	Q				V
22+ 0	140.3071	11.73	Q				V
22+ 5	140.3834	11.08	Q				V
22+10	140.4596	11.07	Q				V
22+15	140.5400	11.66	Q				V
22+20	140.6247	12.30	Q				V
22+25	140.7094	12.30	Q				V
22+30	140.7900	11.70	Q				V
22+35	140.8651	10.91	Q				V
22+40	140.9368	10.41	Q				V
22+45	141.0066	10.14	Q				V
22+50	141.0754	9.99	Q				V
22+55	141.1434	9.87	Q				V
23+ 0	141.2106	9.77	Q				V
23+ 5	141.2774	9.70	Q				V
23+10	141.3439	9.65	Q				V
23+15	141.4100	9.60	Q				V
23+20	141.4758	9.56	Q				V
23+25	141.5414	9.52	Q				V
23+30	141.6066	9.47	Q				V
23+35	141.6717	9.46	Q				V
23+40	141.7367	9.44	Q				V
23+45	141.8017	9.43	Q				V
23+50	141.8665	9.41	Q				V
23+55	141.9311	9.38	Q				V
24+ 0	141.9956	9.36	Q				V
24+ 5	142.0581	9.08	Q				V
24+10	142.1140	8.11	Q				V
24+15	142.1581	6.41	Q				V
24+20	142.1893	4.53	Q				V
24+25	142.2121	3.31	Q				V

24+30	142.2299	2.59	Q				V
24+35	142.2447	2.14	Q				V
24+40	142.2570	1.80	Q				V
24+45	142.2675	1.52	Q				V
24+50	142.2763	1.28	Q				V
24+55	142.2838	1.10	Q				V
25+ 0	142.2903	0.93	Q				V
25+ 5	142.2957	0.80	Q				V
25+10	142.3004	0.68	Q				V
25+15	142.3045	0.59	Q				V
25+20	142.3079	0.50	Q				V
25+25	142.3108	0.42	Q				V
25+30	142.3132	0.35	Q				V
25+35	142.3152	0.29	Q				V
25+40	142.3168	0.24	Q				V
25+45	142.3182	0.19	Q				V
25+50	142.3192	0.15	Q				V
25+55	142.3201	0.12	Q				V
26+ 0	142.3207	0.09	Q				V
26+ 5	142.3212	0.07	Q				V
26+10	142.3214	0.04	Q				V

TABLE 10.1
THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE RUNOFF INDEX - AMC II

WATERSHEAD "A"									
LAND USE	SOIL TYPE	PERCENT IMPERVIOUS	PERVIOUS RI	INDEX	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE INDEX	LAND USE AREA (ACRES)	LAND USE COMPOSITE INDEX
APARTMENT DENSITY	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	0.00	0.000	0.00		
	C	75.0%	69.0	90.8	0.76	0.002	0.17		
	D	75.0%	75.0	92.3	16.33	0.041	3.74	17.09	92.2
BUSINESS PROFESSIONAL	A	90.0%	32.0	91.4	0.33	0.001	0.07		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.10	0.000	0.02		
	D	90.0%	75.0	95.7	0.68	0.002	0.16	1.11	94.4
COMMERCIAL	A	90.0%	32.0	91.4	0.21	0.001	0.05		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.26	0.001	0.06		
	D	90.0%	75.0	95.7	2.69	0.007	0.64	3.16	95.4
COMMERCIAL MIXED-USE	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.20	0.000	0.05		
	C	90.0%	69.0	95.1	0.08	0.000	0.02		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.28	94.2
COMMUNITY PARK	A	15.0%	32.0	41.9	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	31.34	0.078	6.11	31.34	78.5
GENERAL COMMERCIAL	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.18	0.000	0.04		
	C	90.0%	69.0	95.1	10.83	0.027	2.56		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	11.01	95.1
HIGH DENSITY-R	A	75.0%	32.0	81.5	0.00	0.000	0.00		
	B	75.0%	56.0	87.5	2.96	0.007	0.64		
	C	75.0%	69.0	90.8	2.20	0.005	0.50		
	D	75.0%	75.0	92.3	0.00	0.000	0.00	5.16	88.9
LOW DENSITY-R	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	12.03	0.030	2.18		
	C	40.0%	69.0	80.6	32.24	0.080	6.45		
	D	40.0%	75.0	84.2	2.76	0.007	0.58	47.03	78.8
LOW-MEDIUM R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	5.06	0.013	1.05		
	D	50.0%	75.0	86.5	93.29	0.232	20.04	98.35	86.3
MEDIUM DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	4.93	0.012	1.02		
	D	50.0%	75.0	86.5	38.57	0.096	8.29	43.50	86.2
MEDIUM DENSITY-R	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	1.64	0.004	0.31		
	C	50.0%	69.0	83.5	2.31	0.006	0.48		
	D	50.0%	75.0	86.5	8.82	0.022	1.90	12.77	84.7
MEDIUM LOW DENSITY	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	3.85	0.010	0.74		
	C	50.0%	69.0	83.5	1.77	0.004	0.37		
	D	50.0%	75.0	86.5	103.02	0.256	22.13	108.64	86.1
MODIFIED MLD	A	50.0%	32.0	65.0	0.00	0.000	0.00		
	B	50.0%	56.0	77.0	0.00	0.000	0.00		
	C	50.0%	69.0	83.5	0.00	0.000	0.00		
	D	50.0%	75.0	86.5	0.00	0.000	0.00	0.00	#DIV/0!
NP - PARK	A	15.0%	56.0	62.3	0.00	0.000	0.00		
	B	15.0%	56.0	62.3	0.00	0.000	0.00		
	C	15.0%	69.0	73.4	0.00	0.000	0.00		
	D	15.0%	75.0	78.5	0.00	0.000	0.00	0.00	#DIV/0!
OPEN SPACE	A	5.0%	67.0	68.6	0.00	0.000	0.00		
	B	5.0%	78.0	79.0	0.00	0.000	0.00		
	C	5.0%	86.0	86.6	0.00	0.000	0.00		
	D	5.0%	89.0	89.5	13.36	0.033	2.97	13.36	89.5
PUBLIC INSTITUTIONAL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	0.00	0.000	0.00	0.00	#DIV/0!
ROAD	A	90.0%	32.0	91.4	0.00	0.000	0.00		
	B	90.0%	56.0	93.8	0.00	0.000	0.00		
	C	90.0%	69.0	95.1	0.00	0.000	0.00		
	D	90.0%	75.0	95.7	0.00	0.000	0.00	0.00	#DIV/0!
SCHOOL	A	40.0%	32.0	58.4	0.00	0.000	0.00		
	B	40.0%	56.0	72.8	0.00	0.000	0.00		
	C	40.0%	69.0	80.6	0.00	0.000	0.00		
	D	40.0%	75.0	84.2	9.80	0.024	2.05	9.80	84.2
								402.60	
					402.60	1.000			
COMPOSITE RUN OFF INDEX - AMC II							85.4		

RUNOFF INDEX (RI) NO. PER RCFC&WCD HYDROLOGY MANUAL PLATE D-5.5 THE URBAN COVERS RI IN PLATE D-5.5 IS FOR THE PERVIOUS PORTION ONLY. THE IMPERVIOUS PORTIONS ARE ASSIGNED AN RI OF 98 AND THE RI IS A COMPOSITE OF THE IMPERVIOUS PERCENTAGE WITH RI EQUAL TO 100 AND THE RI FOR THE PERVIOUS PORTION PER PLATE D-5.5. VALUES USED FOR IMPERVIOUS PERCENTAGES ARE AS RECOMMENDED IN THE MEMORANDUM OF UNDERSTANDING (REF.2)

TABLE 10.2

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
LOW LOSS RATES

CRITERIA:
UNDEVELOPED AREAS = 0.9
DEVELOPED AREAS = 0.9-(0.8 X % IMPERVIOUS)

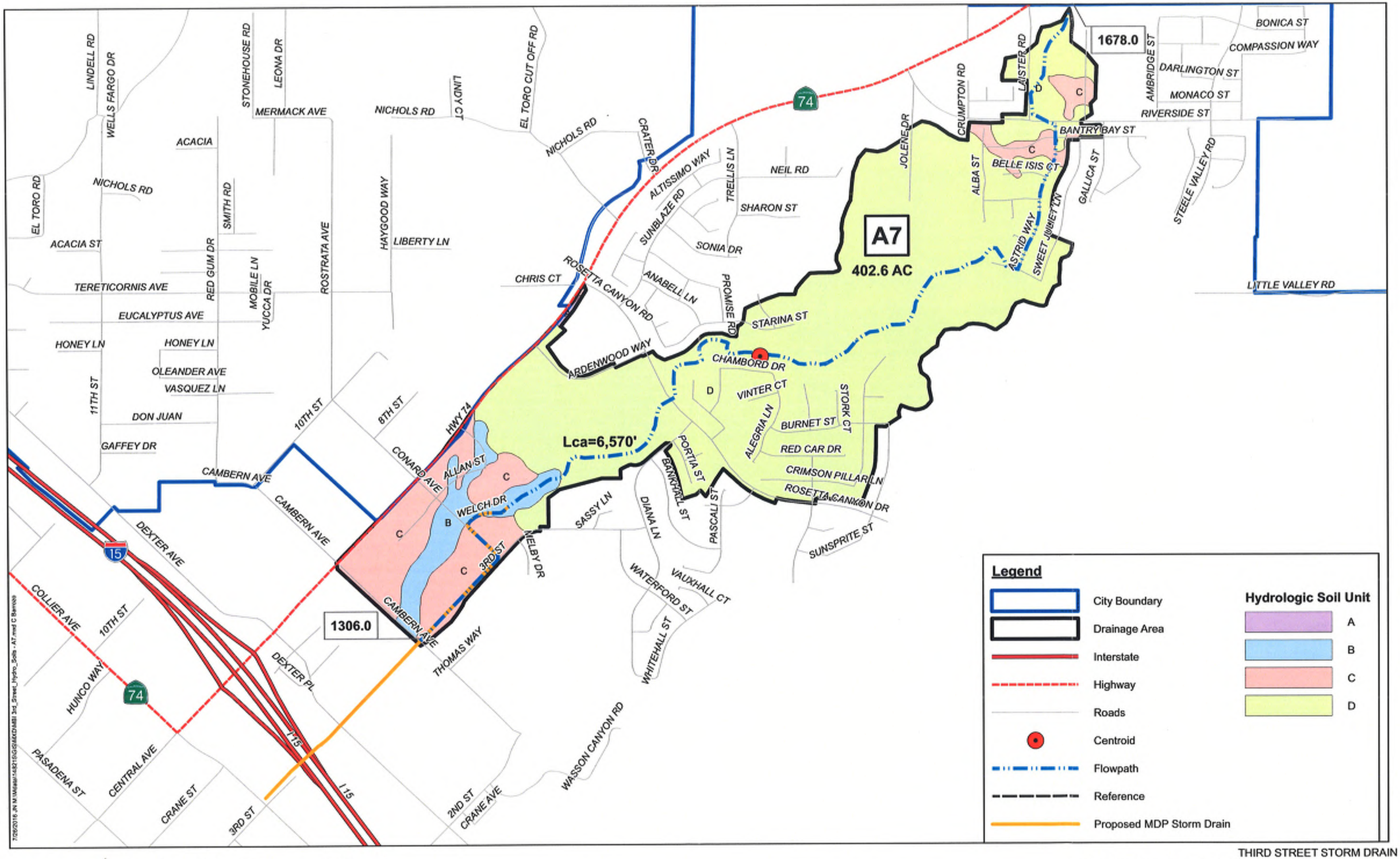
WATERSHEAD "A"

LAND USE	[1] % IMPERVIOUS	[2] LOW LOSS RATE 0.9-(0.8x[1])	[3] AREA ACRES	[4] DECIMAL PORTION OF TOTAL AREA [3]/SUM [3]	[5] COMPOSITE LOW LOSS RATE [2] x [4]
APARTMENT DENSITY	0.75	0.3	17.09	0.042	0.013
BUSINESS PROFESSIONAL	0.9	0.18	1.11	0.003	0.000
COMMERCIAL	0.9	0.18	3.16	0.008	0.001
COMMERCIAL MIXED-USE	0.9	0.18	0.28	0.001	0.000
COMMUNITY PARK	0.15	0.78	31.34	0.078	0.061
GENERAL COMMERCIAL	0.9	0.18	11.01	0.027	0.005
HIGH DENSITY-R	0.75	0.3	5.16	0.013	0.004
LOW DENSITY-R	0.4	0.58	47.03	0.117	0.068
LOW-MEDIUM R	0.5	0.5	98.35	0.244	0.122
MEDIUM DENSITY	0.5	0.5	43.50	0.108	0.054
MEDIUM DENSITY-R	0.5	0.5	12.77	0.032	0.016
MEDIUM LOW DENSITY	0.5	0.5	108.64	0.270	0.135
MODIFIED MLD	0.5	0.5	0.00	0.000	0.000
NP - PARK	0.15	0.78	0.00	0.000	0.000
OPEN SPACE	0.05	0.86	13.36	0.033	0.029
PUBLIC INSTITUTIONAL	0.4	0.58	0.00	0.000	0.000
ROAD	0.9	0.18	0.00	0.000	0.000
SCHOOL	0.4	0.58	9.80	0.024	0.014
			402.60	1.000	
COMPOSITE LOW LOSS RATE					**0.522**

TABLE 10.3

THIRD STREET STORM DRAIN
POST-DEVELOPMENT
COMPOSITE MANNING'S "n" VALUE

WATERSHEAD "A"				
LAND USE	"n" VALUE	AREA ACRES	DECIMAL PORTION OF TOTAL AREA	COMPOSITE "n" VALUE
APARTMENT DENSITY	0.015	17.09	0.042	0.0006
BUSINESS PROFESSIONAL	0.015	1.11	0.003	0.0000
COMMERCIAL	0.015	3.16	0.008	0.0001
COMMERCIAL MIXED-USE	0.015	0.28	0.001	0.0000
COMMUNITY PARK	0.035	31.34	0.078	0.0027
GENERAL COMMERCIAL	0.015	11.01	0.027	0.0004
HIGH DENSITY-R	0.015	5.16	0.013	0.0002
LOW DENSITY-R	0.02	47.03	0.117	0.0023
LOW-MEDIUM R	0.015	98.35	0.244	0.0037
MEDIUM DENSITY	0.015	43.50	0.108	0.0016
MEDIUM DENSITY-R	0.015	12.77	0.032	0.0005
MEDIUM LOW DENSITY	0.02	108.64	0.270	0.0054
MODIFIED MLD	0.02	0.00	0.000	0.0000
NP - PARK	0.035	0.00	0.000	0.0000
OPEN SPACE (Natural)	0.04	13.36	0.033	0.0013
PUBLIC INSTITUTIONAL	0.015	0.00	0.000	0.0000
ROAD	0.015	0.00	0.000	0.0000
SCHOOL	0.015	9.80	0.024	0.0004
		402.60	1.000	
COMPOSITE MANNING'S "n" VALUE				**0.0193**

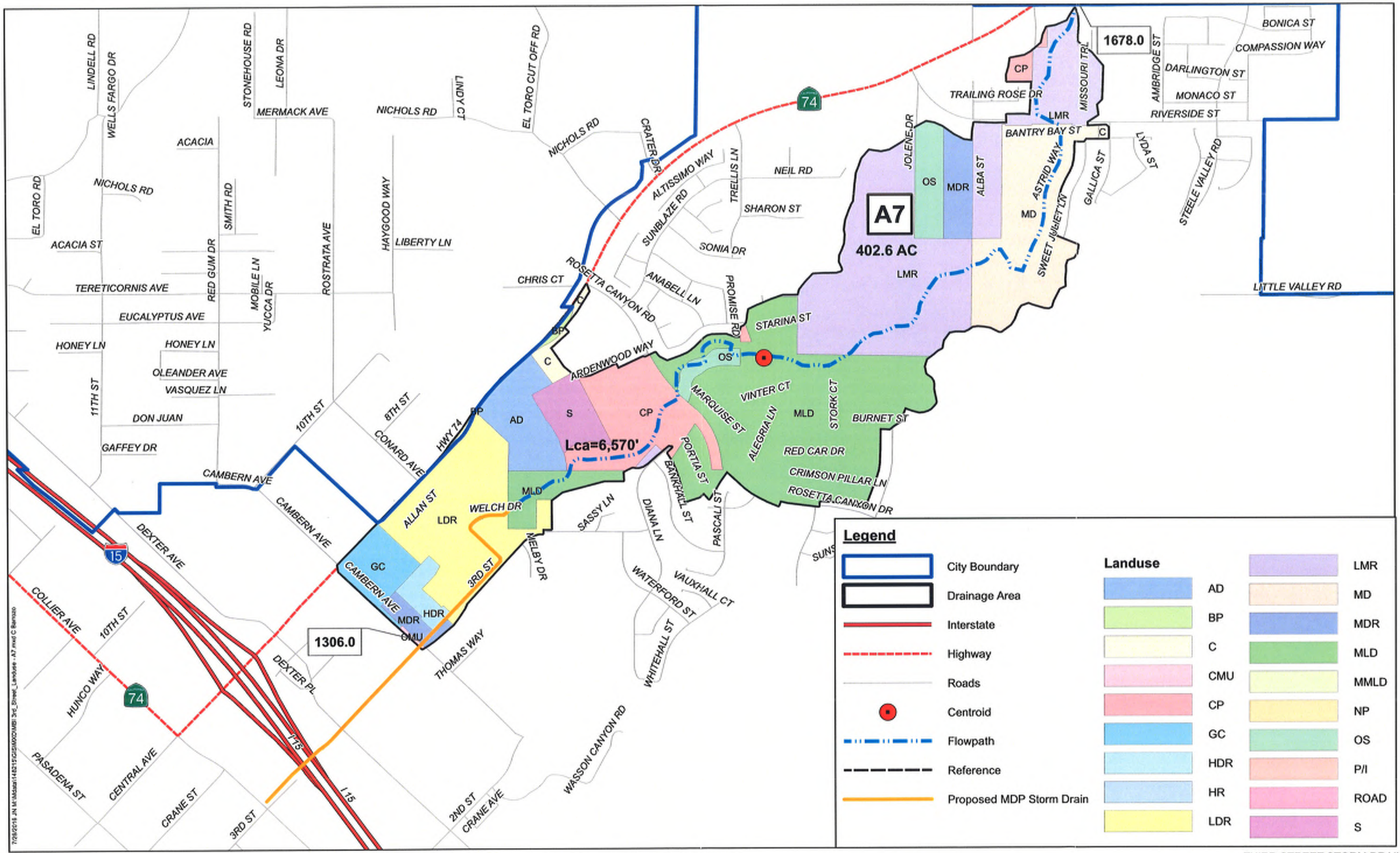


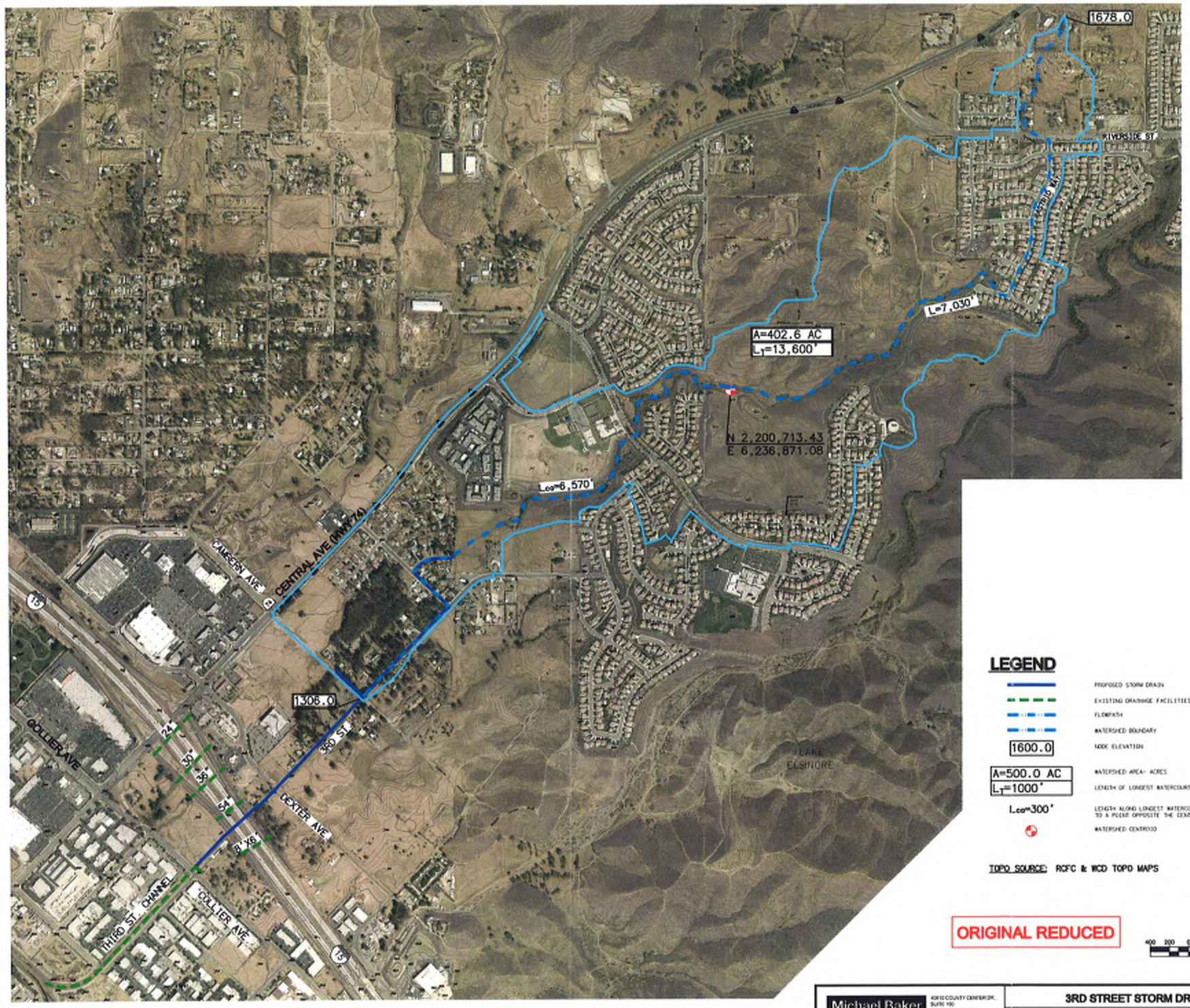
THIRD STREET STORM DRAIN

Hydrologic Soil Unit Map -WS A7

RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 22

Michael Baker INTERNATIONAL


A7
402.6 AC
Lca=6,570'
1678.0
1306.0
LMR
MD
OS
MDR
CP
AD
BP
C
S
MLD
LDR
GC
HDR
CMU
HR
MMLD
NP
P/I
ROAD
LINDELL RD
WELLS FARGO DR
STONEHOUSE RD
LEONA DR
MERMACK AVE
NICHOLS RD
LINDY CT
EL TORO CUT OFF RD
CRATER DR
ALTISSIMO WAY
TRELLIS LN
NEIL RD
SUNBLAZE RD
SHARON ST
SONIA DR
ANABELL LN
PROMISE RD
ROSETTA CANYON RD
CHRIS CT
HAYGOOD WAY
LIBERTY LN
ACACIA
EL TORO RD
SMITH RD
ACACIA ST
RED GUM DR
MOBILE LN
YUCCA DR
ROSTRATA AVE
TERETICORNIS AVE
EUCALYPTUS AVE
HONEY LN
OLEANDER AVE
VASQUEZ LN
11TH ST
DON JUAN
GAFFEY DR
10TH ST
8TH ST
CONARD AVE
CAMBERN AVE
DEXTER AVE
COLLIER AVE
HUNCO WAY
PASADENA ST
CENTRAL AVE
CRANE ST
3RD ST
2ND ST
CRANE AVE
WASSON CANYON RD
DEXTER PL
THOMAS WAY
WELCH DR
ALLAN ST
MELBY DR
SASSY LN
DIANA LN
PASCALI ST
BANKHALL ST
WATERFORD ST
VAUXHALL CT
WHITEHALL ST
HWY 74
I-15
I-15
STARINA ST
ARDENWOOD WAY
MARQUISE ST
VINTER CT
ALEGRIA LN
STORK CT
BURNET ST
RED CAR DR
CRIMSON PILLAR LN
ROSETTA CANYON DR
TRAILING ROSE DR
MISSOURI TRL
BANTRY BAY ST
JOLENE DR
ALBA ST
ASTRID WAY
SWEET JULIET LN
GALLICA ST
LYDA ST
AMBRIDGE ST
BONICA ST
COMPASSION WAY
DARLINGTON ST
MONACO ST
RIVERSIDE ST
STEELE VALLEY RD
LITTLE VALLEY RD
74
15
Legend
City Boundary
Drainage Area
Interstate
Highway
Roads
Centroid
Flowpath
Reference
Proposed MDP Storm Drain
Landuse
AD
BP
C
CMU
CP
GC
HDR
HR
LDR
LMR
MD
MDR
MLD
MMLD
NP
OS
P/I
ROAD
S
0
500
1,000
2,000
Feet
Source:
Michael Baker INTERNATIONAL
THIRD STREET STORM DRAIN
Landuse Map -WS A7
RCFC&WCD ZONE 3 STAGE 3 STORM DRAIN - EXHIBIT 23



LEGEND

- PROPOSED STORM DRAIN
- EXISTING DRAINAGE FACILITIES
- FLOWPATH
- WATERSHED BOUNDARY
- 1600.0 — NODE ELEVATION
- A=500.0 AC — WATERSHED AREA- ACRES
- L_T=1000' — LENGTH OF LONGEST WATERCOURSE- FEET
- L_{CG}=300' — LENGTH ALONG LONGEST WATERCOURSE, MEASURE UPSTREAM TO A POINT OPPOSITE THE CENTROID OF THE AREA- FEET
- WATERSHED CENTROID

TOPO SOURCE: RCFC & WCD TOPO MAPS

ORIGINAL REDUCED

400 200 0 400 800 1200
SCALE: 1"=400'

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR.
SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

3RD STREET STORM DRAIN - EXHIBIT 24

SYNTHETIC UNIT HYDROGRAPH HYDROLOGY MAP WATERSHED AREA 'A7'

J:\PROJECTS\CAD\STORMWATER\EXHIBITS\HYDRO MAP_WATERSHED MAP.DWG XDOM-PLOTSTAMP 7/28/16 12:01 pm

APPENDIX I

```
T1 THIRD STREET STORM DRAIN-STAGE III                                                    0
T2 CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
T3 100-YEAR WSPG
SO   1750.0001260.400  2                          1265.350
R    2115.2001261.130  2      .020                                  .000
TS   2165.9001261.230  3      .035                                  .000
R    2246.4001261.530  3      .014                                  .000    .000 0
JX   2254.5701261.600  3  9   .014   18.300         1262.120         83.6          .000
TS   2347.8301262.430  5      .014                                  .000
R    2658.0001265.180  5      .014                                  .000    .000 0
JX   2685.0001265.420  5 11   .014   87.000         1266.930        -30.0          .000
TS   2698.0001265.530 13      .014                                  .000
R    2698.0001265.530 13      .013                                  .000    .000 0
R    2702.6601265.580 13      .014                                  .000   3.980 1
R    3118.6501269.830 13      .013                                  .000    .000 0
R    3128.7801269.930 13      .013                                 6.449    .000 0
TS   3133.4401269.980 13      .014                                  .000
R    3228.7101270.960 13      .013                                  .000    .000 0
R    3245.0701271.120 13      .013                                -10.415   .000 0
R    3395.3701272.660 13      .013                                  .000    .000 0
JX   3414.4001272.850 13  6   .014  317.500         1273.510         30.0          .000
R    3697.6701275.750 13      .013                                  .000    .000 0
TS   3702.3301276.800 14      .014                                  .000
R    4197.6701283.190 14      .013                                  .000    .000 0
TS   4202.3301283.750  6      .014                                  .000
R    4764.9901291.010  6      .013                                  .000    .000 0
JX   4779.9001291.260  6  7   .014  119.700         1292.410        -30.0          .000
R    5247.6701302.950  6      .013                                  .000   .000 0
R    5252.3301303.060  6      .014                                  .000   .000 0
R    5747.6701313.780  6      .013                                  .000   .000 0
R    5752.3301313.840  6      .014                                  .000   .000 0
R    6070.4001315.430  6      .013                                  .000   .000 0
R    6141.0901315.780  6      .013                                -90.005   .000 0
R    6145.7501315.810  6      .014                                  .000   .000 0
R    6582.7101317.990  6      .013                                  .000   .000 0
R    6587.3701318.020  6      .014                                  .000   .000 0
R    6658.0601318.370  6      .013                                 90.005
R    6694.0301318.550  6      .013                                  .000   .000 0
R    6747.6701318.820  6      .013                                 10.245   .000 0
TS   6752.3301318.910  6      .014                                  .890
R    6938.8501325.010  6      .013                                 35.623   .000 0
R    6943.5101325.120  6      .014                                  .000   .000 0
R    7120.6301327.580  6      .013                                  .000   .000 0
R    7130.6301327.780  6      .013                                  .000   .000 0
R    7176.5101328.700  6      .013                                -58.416   .000 0
R    7216.5101329.500  6      .013                                  .000   .000 0
WE   7216.5101329.500  6      .500
TS   7238.5101335.000 15      .013                                  .000
R    7248.5101335.180 15      .040                                  .000    .000 0
R    7294.0101336.000 15      .030                                  .000    .000 0
R    7324.0101342.000 15      .030                                  .000  21.171 0
SH   7324.0101342.000 15                          1342.000
CD   1  3   1    .670   5.000   12.670  .000  .000   .00
CD   2  1   0    .000   6.000   22.000 4.000 4.000   .00
CD   3  3   1    .670   4.500   28.670  .000  .000   .00
CD   4  3   0    .000   6.000   12.000  .000  .000  -.01
CD   6  4   1    .000   6.500     .000  .000  .000   .00
CD   7  4   1    .000   4.500     .000  .000  .000   .00
CD   8  4   1    .000   6.000     .000  .000  .000   .00
CD   9  4   1    .000   3.500     .000  .000  .000   .00
CD  10  4   1    .000   5.000     .000  .000  .000   .00
CD  11  4   1    .000   4.000     .000  .000  .000   .00
CD  12  4   1    .000   7.500     .000  .000  .000   .00
CD  13  4   1    .000   8.000     .000  .000  .000   .00
CD  14  4   1    .000   7.000     .000  .000  .000   .00
CD  15  1   0    .000   3.000   32.000 5.000 5.000   .00
CD   5  6   0    .000             .00   .00   .00   .00   .00   .00   .00   .00   .00   .00
PTS  5 8  1.000   .000  9.000    .000 10.000  1.000 10.000  5.000  9.000  6.000
PTS       1.000  6.000   .000  5.000   .000  1.000
Q           501.400   .0
```

Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date:10- 2-2017 Time:12:18:30

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1750.000	1260.400	4.950	1265.350	1043.90	5.05	.40	1265.75	.00	3.34	61.60	6.000	22.000	4.00	0 .0
119.344	.0020					.0010	.12	4.95	.49	4.10	.020	.00	4.00	TRAP
1869.344	1260.639	4.792	1265.431	1043.90	5.29	.43	1265.87	.00	3.34	60.34	6.000	22.000	4.00	0 .0
129.515	.0020					.0011	.15	4.79	.52	4.10	.020	.00	4.00	TRAP
1998.859	1260.897	4.638	1265.536	1043.90	5.55	.48	1266.01	.00	3.34	59.11	6.000	22.000	4.00	0 .0
116.341	.0020					.0013	.15	4.64	.55	4.10	.020	.00	4.00	TRAP
2115.200	1261.130	4.518	1265.648	1043.90	5.77	.52	1266.16	.00	3.34	58.15	6.000	22.000	4.00	0 .0
TRANS STR	.0020							4.52	.58		.035	.00	4.00	TRAP
2165.900	1261.230	1.924	1263.154	1043.90	19.38	5.83	1268.98	.00	3.51	28.67	4.500	28.670	.00	1 .7
26.951	.0037					.0206	.56	1.92	2.49	3.34	.014	.00	.00	BOX
2192.851	1261.330	1.841	1263.171	1043.90	20.25	6.37	1269.54	.00	3.51	28.67	4.500	28.670	.00	1 .7
27.515	.0037					.0238	.65	1.84	2.66	3.34	.014	.00	.00	BOX
2220.366	1261.433	1.755	1263.188	1043.90	21.24	7.01	1270.20	.00	3.51	28.67	4.500	28.670	.00	1 .7
26.034	.0037					.0275	.72	1.76	2.86	3.34	.014	.00	.00	BOX
2246.400	1261.530	1.673	1263.203	1043.90	22.28	7.71	1270.91	.00	3.51	28.67	4.500	28.670	.00	1 .7
JUNCT STR	.0086					.0315	.26	1.67	3.07		.014	.00	.00	BOX
2254.570	1261.600	1.589	1263.189	1025.60	23.05	8.25	1271.44	.00	3.47	28.67	4.500	28.670	.00	1 .7
TRANS STR	.0089					.0215	2.01	1.59	3.26		.014	.00	.00	BOX

Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date:10- 2-2017 Time:12:18:30

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / SF Ave	Vel Head / HF	Energy Grd.El. / SE Dpth	Super Elev / Froude N	Critical Depth / Norm Dp	Flow Top Width / "N"	Height/Dia.-FT / X-Fall	Base Wt or I.D. / ZR	ZL	No Wth Prs/Pip / Type Ch
2347.830	1262.430	5.272	1267.703	1025.60	19.86	6.12	1273.82	.00	6.00	9.46		5		0 .0
53.166	.0089				.0097	.51	5.27	1.50	5.477	.014				IR-COV
2400.996	1262.901	5.238	1268.140	1025.60	19.98	6.20	1274.34	.00	6.00	9.52		5		0 .0
257.004	.0089				.0103	2.65	5.24	1.52	5.477	.014				IR-COV
2658.000	1265.180	4.994	1270.174	1025.60	20.96	6.82	1276.99	.00	6.00	10.00		5		0 .0
JUNCT STR	.0089				.0136	.37	4.99	1.67		.014				IR-COV
---------- WARNING - Junction Analysis - Irregular Channel----------														
2685.000	1265.420	4.041	1269.461	938.60	23.82	8.81	1278.27	.00	6.00	10.00		5		0 .0
TRANS STR	.0085				.0140	.18	4.04	2.11		.014				IR-COV
2698.000	1265.530	6.730	1272.260	938.60	20.80	6.72	1278.98	.00	7.41	5.85	8.000	.000	.00	1 .0
4.660	.0107				.0118	.05	6.73	1.32	7.29	.014	.00	.00		PIPE
2702.660	1265.580	6.723	1272.303	938.60	20.81	6.73	1279.03	.00	7.41	5.86	8.000	.000	.00	1 .0
415.990	.0102				.0100	4.16	6.72	1.32	6.70	.013	.00	.00		PIPE
3118.650	1269.830	6.856	1276.686	938.60	20.47	6.51	1283.19	.81	7.41	5.60	8.000	.000	.00	1 .0
10.130	.0099				.0099	.10	7.67	1.26	6.84	.013	.00	.00		PIPE
3128.780	1269.930	6.857	1276.787	938.60	20.47	6.50	1283.29	.00	7.41	5.60	8.000	.000	.00	1 .0
TRANS STR	.0107				.0114	.05	6.86	1.26		.014	.00	.00		PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
3133.440	1269.980	6.844	1276.824	938.60	20.50	6.53	1283.35	.00	7.41	5.63	8.000	.000	.00	1 .0
95.270	.0103					.0098	.93	6.84	1.27	6.67	.013	.00	.00	PIPE
3228.710	1270.960	6.927	1277.887	938.60	20.30	6.40	1284.28	.78	7.41	5.45	8.000	.000	.00	1 .0
16.360	.0098					.0097	.16	7.70	1.23	6.89	.013	.00	.00	PIPE
3245.070	1271.120	6.929	1278.049	938.60	20.29	6.39	1284.44	.00	7.41	5.45	8.000	.000	.00	1 .0
10.926	.0102					.0097	.11	6.93	1.23	6.68	.013	.00	.00	PIPE
3255.996	1271.232	6.940	1278.172	938.60	20.26	6.38	1284.55	.00	7.41	5.42	8.000	.000	.00	1 .0
139.374	.0102					.0094	1.31	6.94	1.22	6.68	.013	.00	.00	PIPE
3395.370	1272.660	7.408	1280.068	938.60	19.32	5.80	1285.86	.00	7.41	4.19	8.000	.000	.00	1 .0
JUNCT STR	.0100					.0080	.15	7.41	1.00		.014	.00	.00	PIPE
3414.400	1272.850	12.288	1285.138	621.10	12.36	2.37	1287.51	.00	6.34	.00	8.000	.000	.00	1 .0
283.270	.0102					.0046	1.31	12.29	.00	4.81	.013	.00	.00	PIPE
3697.670	1275.750	10.702	1286.452	621.10	12.36	2.37	1288.82	.00	6.34	.00	8.000	.000	.00	1 .0
TRANS STR	.2253					.0082	.04	10.70	.00		.014	.00	.00	PIPE
3702.330	1276.800	8.401	1285.201	621.10	16.14	4.04	1289.25	.00	6.34	.00	7.000	.000	.00	1 .0
161.501	.0129					.0095	1.53	8.40	.00	4.98	.013	.00	.00	PIPE
3863.831	1278.883	7.843	1286.727	621.10	16.14	4.04	1290.77	.00	6.34	.00	7.000	.000	.00	1 .0
HYDRAULIC JUMP														

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
3863.831	1278.883	4.902	1283.785	621.10	21.58	7.23	1291.01	.00	6.34	6.41	7.000	.000	.00	1 .0
333.839	.0129					.0139	4.64	4.90	1.79	4.98	.013	.00	.00	PIPE
4197.670	1283.190	4.791	1287.981	621.10	22.13	7.60	1295.58	.00	6.34	6.51	7.000	.000	.00	1 .0
TRANS STR	.1202					.0157	.07	4.79	1.88		.014	.00	.00	PIPE
4202.330	1283.750	5.656	1289.406	621.10	20.26	6.38	1295.78	.00	6.17	4.37	6.500	.000	.00	1 .0
297.254	.0129					.0127	3.77	5.66	1.35	5.62	.013	.00	.00	PIPE
4499.584	1287.585	5.741	1293.327	621.10	20.02	6.23	1299.55	.00	6.17	4.17	6.500	.000	.00	1 .0
265.406	.0129					.0124	3.28	5.74	1.29	5.62	.013	.00	.00	PIPE
4764.990	1291.010	6.165	1297.175	621.10	19.09	5.66	1302.83	.00	6.17	2.87	6.500	.000	.00	1 .0
JUNCT STR	.0168					.0123	.18	6.17	1.00		.014	.00	.00	PIPE
4779.900	1291.260	9.408	1300.668	501.40	15.11	3.55	1304.21	.00	5.83	.00	6.500	.000	.00	1 .0
14.923	.0250					.0091	.14	9.41	.00	3.65	.013	.00	.00	PIPE
4794.823	1291.633	9.170	1300.803	501.40	15.11	3.55	1304.35	.00	5.83	.00	6.500	.000	.00	1 .0
HYDRAULIC JUMP														
4794.823	1291.633	3.695	1295.328	501.40	25.75	10.30	1305.62	.00	5.83	6.44	6.500	.000	.00	1 .0
278.450	.0250					.0230	6.42	3.69	2.61	3.65	.013	.00	.00	PIPE
5073.272	1298.592	3.792	1302.383	501.40	24.95	9.67	1312.05	.00	5.83	6.41	6.500	.000	.00	1 .0
174.397	.0250					.0208	3.63	3.79	2.48	3.65	.013	.00	.00	PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
5247.670	1302.950	3.945	1306.895	501.40	23.79	8.79	1315.68	.00	5.83	6.35	6.500	.000	.00	1 .0
4.660	.0236					.0227	.11	3.95	2.30	3.89	.014	.00	.00	PIPE
5252.330	1303.060	3.946	1307.006	501.40	23.78	8.78	1315.79	.00	5.83	6.35	6.500	.000	.00	1 .0
180.961	.0216					.0186	3.36	3.95	2.30	3.82	.013	.00	.00	PIPE
5433.292	1306.976	4.086	1311.062	501.40	22.83	8.09	1319.16	.00	5.83	6.28	6.500	.000	.00	1 .0
112.492	.0216					.0166	1.87	4.09	2.15	3.82	.013	.00	.00	PIPE
5545.784	1309.411	4.258	1313.668	501.40	21.77	7.36	1321.03	.00	5.83	6.18	6.500	.000	.00	1 .0
70.640	.0216					.0148	1.04	4.26	1.99	3.82	.013	.00	.00	PIPE
5616.424	1310.940	4.441	1315.381	501.40	20.75	6.69	1322.07	.00	5.83	6.05	6.500	.000	.00	1 .0
48.395	.0216					.0132	.64	4.44	1.83	3.82	.013	.00	.00	PIPE
5664.819	1311.987	4.639	1316.626	501.40	19.79	6.08	1322.71	.00	5.83	5.88	6.500	.000	.00	1 .0
34.252	.0216					.0118	.40	4.64	1.68	3.82	.013	.00	.00	PIPE
5699.071	1312.728	4.854	1317.582	501.40	18.87	5.53	1323.11	.00	5.83	5.65	6.500	.000	.00	1 .0
24.109	.0216					.0106	.25	4.85	1.53	3.82	.013	.00	.00	PIPE
5723.181	1313.250	5.089	1318.339	501.40	17.99	5.03	1323.36	.00	5.83	5.36	6.500	.000	.00	1 .0
15.980	.0216					.0095	.15	5.09	1.39	3.82	.013	.00	.00	PIPE
5739.161	1313.596	5.352	1318.948	501.40	17.15	4.57	1323.52	.00	5.83	4.96	6.500	.000	.00	1 .0
8.509	.0216					.0087	.07	5.35	1.24	3.82	.013	.00	.00	PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
5747.670	1313.780	5.657	1319.438	501.40	16.35	4.15	1323.59	.00	5.83	4.37	6.500	.000	.00	1 .0
4.660	.0129					.0095	.04	5.66	1.09	4.86	.014	.00	.00	PIPE
5752.330	1313.840	5.829	1319.669	501.40	15.98	3.97	1323.64	.00	5.83	3.95	6.500	.000	.00	1 .0
39.436	.0050					.0081	.32	5.83	1.00	6.50	.013	.00	.00	PIPE
5791.766	1314.037	6.311	1320.348	501.40	15.24	3.61	1323.95	.00	5.83	2.19	6.500	.000	.00	1 .0
37.407	.0050					.0085	.32	6.31	.69	6.50	.013	.00	.00	PIPE
5829.173	1314.224	6.500	1320.724	501.40	15.11	3.55	1324.27	.00	5.83	.00	6.500	.000	.00	1 .0
241.227	.0050					.0090	2.17	6.50	.00	6.50	.013	.00	.00	PIPE
6070.400	1315.430	7.500	1322.930	501.40	15.11	3.55	1326.48	.00	5.83	.00	6.500	.000	.00	1 .0
70.690	.0050					.0091	.65	.00	.00	6.50	.013	.00	.00	PIPE
6141.090	1315.780	8.506	1324.286	501.40	15.11	3.55	1327.83	.00	5.83	.00	6.500	.000	.00	1 .0
4.660	.0064					.0106	.05	8.51	.00	6.50	.014	.00	.00	PIPE
6145.750	1315.810	8.525	1324.335	501.40	15.11	3.55	1327.88	.00	5.83	.00	6.500	.000	.00	1 .0
436.960	.0050					.0091	4.00	8.53	.00	6.50	.013	.00	.00	PIPE
6582.710	1317.990	10.342	1328.332	501.40	15.11	3.55	1331.88	.00	5.83	.00	6.500	.000	.00	1 .0
4.660	.0064					.0106	.05	10.34	.00	6.50	.014	.00	.00	PIPE
6587.370	1318.020	10.361	1328.381	501.40	15.11	3.55	1331.93	.00	5.83	.00	6.500	.000	.00	1 .0
70.690	.0050					.0091	.65	.00	.00	6.50	.013	.00	.00	PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
6658.060	1318.370	11.367	1329.737	501.40	15.11	3.55	1333.28	.00	5.83	.00	6.500	.000	.00	1 .0
35.970	.0050					.0091	.33	11.37	.00	6.50	.013	.00	.00	PIPE
6694.030	1318.550	11.516	1330.066	501.40	15.11	3.55	1333.61	.00	5.83	.00	6.500	.000	.00	1 .0
53.640	.0050					.0091	.49	.00	.00	6.50	.013	.00	.00	PIPE
6747.670	1318.820	11.976	1330.796	501.40	15.11	3.55	1334.34	.00	5.83	.00	6.500	.000	.00	1 .0
TRANS STR	.0193					.0106	.05	.00	.00		.014	.00	.00	PIPE
6752.330	1318.910	11.935	1330.845	501.40	15.11	3.55	1334.39	.00	5.83	.00	6.500	.000	.00	1 .0
186.520	.0327					.0091	1.71	.00	.00	3.36	.013	.00	.00	PIPE
6938.850	1325.010	7.987	1332.997	501.40	15.11	3.55	1336.54	.00	5.83	.00	6.500	.000	.00	1 .0
4.660	.0236					.0106	.05	7.99	.00	3.89	.014	.00	.00	PIPE
6943.510	1325.120	7.927	1333.047	501.40	15.11	3.55	1336.59	.00	5.83	.00	6.500	.000	.00	1 .0
177.120	.0139					.0091	1.62	7.93	.00	4.44	.013	.00	.00	PIPE
7120.630	1327.580	7.087	1334.667	501.40	15.11	3.55	1338.21	.00	5.83	.00	6.500	.000	.00	1 .0
10.000	.0200					.0091	.09	7.09	.00	3.92	.013	.00	.00	PIPE
7130.630	1327.780	6.978	1334.758	501.40	15.11	3.55	1338.30	.00	5.83	.00	6.500	.000	.00	1 .0
45.880	.0201					.0091	.42	.00	.00	3.91	.013	.00	.00	PIPE
7176.510	1328.700	7.049	1335.749	501.40	15.11	3.55	1339.29	.00	5.83	.00	6.500	.000	.00	1 .0
40.000	.0200					.0091	.37	7.05	.00	3.92	.013	.00	.00	PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
WALL ENTRANCE														
7216.510	1329.500	6.615	1336.115	501.40	15.11	3.55	1339.66	.00	5.83	.00	6.500	.000	.00	0 .0
TRANS STR	.2500					.0046	.10	6.62	.00		.013	.00	.00	PIPE
7238.510	1335.000	5.605	1340.605	501.40	1.49	.03	1340.64	.00	1.78	88.05	3.000	32.000	5.00	0 .0
9.948	.0180					.0003	.00	5.60	.13	1.86	.040	.00	5.00	TRAP
7248.458	1335.179	5.425	1340.604	501.40	1.56	.04	1340.64	.00	1.78	86.25	3.000	32.000	5.00	0 .0
.052	.0180					.0003	.00	5.43	.14	1.86	.040	.00	5.00	TRAP
7248.510	1335.180	5.425	1340.605	501.40	1.56	.04	1340.64	.00	1.78	86.25	3.000	32.000	5.00	0 .0
9.591	.0180					.0002	.00	5.42	.14	1.58	.030	.00	5.00	TRAP
7258.101	1335.353	5.250	1340.603	501.40	1.64	.04	1340.64	.00	1.78	84.50	3.000	32.000	5.00	0 .0
9.320	.0180					.0002	.00	5.25	.15	1.58	.030	.00	5.00	TRAP
7267.420	1335.521	5.080	1340.600	501.40	1.72	.05	1340.65	.00	1.78	82.80	3.000	32.000	5.00	0 .0
9.054	.0180					.0002	.00	5.08	.16	1.58	.030	.00	5.00	TRAP
7276.474	1335.684	4.914	1340.598	501.40	1.80	.05	1340.65	.00	1.78	81.14	3.000	32.000	5.00	0 .0
8.792	.0180					.0003	.00	4.91	.17	1.58	.030	.00	5.00	TRAP
7285.266	1335.843	4.753	1340.596	501.40	1.89	.06	1340.65	.00	1.78	79.53	3.000	32.000	5.00	0 .0
8.535	.0180					.0003	.00	4.75	.18	1.58	.030	.00	5.00	TRAP

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
7293.801	1335.996	4.596	1340.593	501.40	1.98	.06	1340.65	.00	1.78	77.96	3.000	32.000	5.00	0 .0
.208	.0180					.0003	.00	4.60	.19	1.58	.030	.00	5.00	TRAP
7294.010	1336.000	4.593	1340.593	501.40	1.99	.06	1340.65	.00	1.78	77.93	3.000	32.000	5.00	0 .0
.732	.2000					.0004	.00	4.59	.19	.79	.030	.00	5.00	TRAP
7294.742	1336.146	4.440	1340.587	501.40	2.08	.07	1340.65	.00	1.78	76.40	3.000	32.000	5.00	0 .0
.708	.2000					.0004	.00	4.44	.21	.79	.030	.00	5.00	TRAP
7295.450	1336.288	4.292	1340.580	501.40	2.18	.07	1340.65	.00	1.78	74.92	3.000	32.000	5.00	0 .0
.684	.2000					.0005	.00	4.29	.22	.79	.030	.00	5.00	TRAP
7296.134	1336.425	4.149	1340.573	501.40	2.29	.08	1340.65	.00	1.78	73.49	3.000	32.000	5.00	0 .0
.661	.2000					.0005	.00	4.15	.23	.79	.030	.00	5.00	TRAP
7296.794	1336.557	4.009	1340.566	501.40	2.40	.09	1340.66	.00	1.78	72.09	3.000	32.000	5.00	0 .0
.637	.2000					.0006	.00	4.01	.25	.79	.030	.00	5.00	TRAP
7297.431	1336.684	3.873	1340.557	501.40	2.52	.10	1340.66	.00	1.78	70.73	3.000	32.000	5.00	0 .0
.613	.2000					.0007	.00	3.87	.26	.79	.030	.00	5.00	TRAP
7298.044	1336.807	3.741	1340.548	501.40	2.64	.11	1340.66	.00	1.78	69.41	3.000	32.000	5.00	0 .0
.590	.2000					.0008	.00	3.74	.28	.79	.030	.00	5.00	TRAP
7298.634	1336.925	3.612	1340.537	501.40	2.77	.12	1340.66	.00	1.78	68.12	3.000	32.000	5.00	0 .0
.566	.2000					.0009	.00	3.61	.30	.79	.030	.00	5.00	TRAP

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
7299.201	1337.038	3.488	1340.526	501.40	2.91	.13	1340.66	.00	1.78	66.88	3.000	32.000	5.00	0 .0
.542	.2000					.0011	.00	3.49	.32	.79	.030	.00	5.00	TRAP
7299.743	1337.147	3.366	1340.513	501.40	3.05	.14	1340.66	.00	1.78	65.66	3.000	32.000	5.00	0 .0
.519	.2000					.0012	.00	3.37	.34	.79	.030	.00	5.00	TRAP
7300.262	1337.250	3.249	1340.499	501.40	3.20	.16	1340.66	.00	1.78	64.49	3.000	32.000	5.00	0 .0
.376	.2000					.0014	.00	3.25	.36	.79	.030	.00	5.00	TRAP
7300.638	1337.326	3.162	1340.488	501.40	3.32	.17	1340.66	.00	1.78	63.62	3.000	32.000	5.00	0 .0
HYDRAULIC JUMP														
7300.638	1337.326	.853	1338.179	501.40	16.20	4.07	1342.25	.00	1.78	40.53	3.000	32.000	5.00	0 .0
5.577	.2000					.1437	.80	.85	3.27	.79	.030	.00	5.00	TRAP
7306.215	1338.441	.890	1339.331	501.40	15.45	3.71	1343.04	.00	1.78	40.90	3.000	32.000	5.00	0 .0
3.940	.2000					.1242	.49	.89	3.06	.79	.030	.00	5.00	TRAP
7310.155	1339.229	.929	1340.158	501.40	14.73	3.37	1343.53	.00	1.78	41.29	3.000	32.000	5.00	0 .0
2.876	.2000					.1074	.31	.93	2.86	.79	.030	.00	5.00	TRAP
7313.031	1339.804	.969	1340.773	501.40	14.05	3.06	1343.84	.00	1.78	41.69	3.000	32.000	5.00	0 .0
2.211	.2000					.0928	.21	.97	2.68	.79	.030	.00	5.00	TRAP
7315.242	1340.246	1.010	1341.257	501.40	13.39	2.79	1344.04	.00	1.78	42.10	3.000	32.000	5.00	0 .0
1.754	.2000					.0803	.14	1.01	2.50	.79	.030	.00	5.00	TRAP

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
7316.997	1340.597	1.053	1341.651	501.40	12.77	2.53	1344.18	.00	1.78	42.53	3.000	32.000	5.00	0 .0
1.420	.2000					.0694	.10	1.05	2.34	.79	.030	.00	5.00	TRAP
7318.417	1340.881	1.098	1341.980	501.40	12.18	2.30	1344.28	.00	1.78	42.98	3.000	32.000	5.00	0 .0
1.164	.2000					.0601	.07	1.10	2.19	.79	.030	.00	5.00	TRAP
7319.581	1341.114	1.145	1342.259	501.40	11.61	2.09	1344.35	.00	1.78	43.45	3.000	32.000	5.00	0 .0
.960	.2000					.0520	.05	1.14	2.05	.79	.030	.00	5.00	TRAP
7320.541	1341.306	1.193	1342.499	501.40	11.07	1.90	1344.40	.00	1.78	43.93	3.000	32.000	5.00	0 .0
.793	.2000					.0451	.04	1.19	1.92	.79	.030	.00	5.00	TRAP
7321.334	1341.465	1.243	1342.708	501.40	10.55	1.73	1344.44	.00	1.78	44.43	3.000	32.000	5.00	0 .0
.655	.2000					.0390	.03	1.24	1.80	.79	.030	.00	5.00	TRAP
7321.989	1341.596	1.295	1342.891	501.40	10.06	1.57	1344.46	.00	1.78	44.95	3.000	32.000	5.00	0 .0
.537	.2000					.0338	.02	1.29	1.68	.79	.030	.00	5.00	TRAP
7322.525	1341.703	1.349	1343.052	501.40	9.60	1.43	1344.48	.00	1.78	45.49	3.000	32.000	5.00	0 .0
.435	.2000					.0293	.01	1.35	1.58	.79	.030	.00	5.00	TRAP
7322.960	1341.790	1.404	1343.195	501.40	9.15	1.30	1344.49	.00	1.78	46.04	3.000	32.000	5.00	0 .0
.346	.2000					.0255	.01	1.40	1.48	.79	.030	.00	5.00	TRAP
7323.307	1341.859	1.462	1343.322	501.40	8.72	1.18	1344.50	.00	1.78	46.62	3.000	32.000	5.00	0 .0
.268	.2000					.0221	.01	1.46	1.38	.79	.030	.00	5.00	TRAP

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
7323.574	1341.913	1.522	1343.435	501.40	8.32	1.07	1344.51	.00	1.78	47.22	3.000	32.000	5.00	0 .0
.198	.2000					.0192	.00	1.52	1.30	.79	.030	.00	5.00	TRAP
7323.772	1341.952	1.584	1343.536	501.40	7.93	.98	1344.51	.00	1.78	47.84	3.000	32.000	5.00	0 .0
.135	.2000					.0167	.00	1.58	1.22	.79	.030	.00	5.00	TRAP
7323.907	1341.979	1.648	1343.627	501.40	7.56	.89	1344.52	.00	1.78	48.48	3.000	32.000	5.00	0 .0
.078	.2000					.0145	.00	1.65	1.14	.79	.030	.00	5.00	TRAP
7323.984	1341													

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T1 3RD STREET SD- LATERAL A                                                    0
T2 CITY OF LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1014.4801262.120  1                          1263.190
R    1016.0901262.170  1       .014                            .000    .000 0
JX   1020.5101262.300  1  2    .013    9.000         1263.270        -70.0          .000
R    1041.2601262.940  1       .013                            .000    .000 0
R    1086.2001264.500  1       .013                            .000    .000 0
SH   1086.2001264.500  1                          1264.500
CD   1  4   1    .000   3.500     .000  .000  .000   .00
CD   2  4   1    .000   1.500     .000  .000  .000   .00
Q            10.000   .0
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3RD STREET SD- LATERAL A
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1014.480	1262.120	1.182	1263.302	19.00	6.65	.69	1263.99	.00	1.33	3.31	3.500	.000	.00	1 .0
.389	.0311					.0067	.00	1.18	1.26	.80	.014	.00	.00	PIPE
1014.869	1262.132	1.199	1263.331	19.00	6.52	.66	1263.99	.00	1.33	3.32	3.500	.000	.00	1 .0
.697	.0311					.0061	.00	1.20	1.23	.80	.014	.00	.00	PIPE
1015.566	1262.154	1.241	1263.395	19.00	6.22	.60	1264.00	.00	1.33	3.35	3.500	.000	.00	1 .0
.395	.0311					.0053	.00	1.24	1.15	.80	.014	.00	.00	PIPE
1015.961	1262.166	1.286	1263.452	19.00	5.93	.55	1264.00	.00	1.33	3.37	3.500	.000	.00	1 .0
.129	.0311					.0047	.00	1.29	1.07	.80	.014	.00	.00	PIPE
1016.090	1262.170	1.333	1263.503	19.00	5.65	.50	1264.00	.00	1.33	3.40	3.500	.000	.00	1 .0
JUNCT STR	.0294							1.33	1.00		.013	.00	.00	PIPE
1020.510	1262.300	.573	1262.873	10.00	9.75	1.48	1264.35	.00	.96	2.59	3.500	.000	.00	1 .0
20.750	.0308					.0285	.59	.57	2.73	.57	.013	.00	.00	PIPE
1041.260	1262.940	.580	1263.520	10.00	9.56	1.42	1264.94	.00	.96	2.60	3.500	.000	.00	1 .0
11.788	.0347					.0261	.31	.58	2.66	.55	.013	.00	.00	PIPE
1053.049	1263.349	.598	1263.947	10.00	9.15	1.30	1265.25	.00	.96	2.63	3.500	.000	.00	1 .0
8.326	.0347					.0229	.19	.60	2.51	.55	.013	.00	.00	PIPE
1061.374	1263.638	.618	1264.256	10.00	8.73	1.18	1265.44	.00	.96	2.67	3.500	.000	.00	1 .0
5.902	.0347					.0200	.12	.62	2.35	.55	.013	.00	.00	PIPE

3RD STREET SD- LATERAL A
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1067.277	1263.843	.639	1264.482	10.00	8.32	1.08	1265.56	.00	.96	2.70	3.500	.000	.00	1 .0
4.427	.0347					.0175	.08	.64	2.20	.55	.013	.00	.00	PIPE
1071.703	1263.997	.660	1264.657	10.00	7.93	.98	1265.63	.00	.96	2.74	3.500	.000	.00	1 .0
3.425	.0347					.0153	.05	.66	2.06	.55	.013	.00	.00	PIPE
1075.128	1264.116	.683	1264.798	10.00	7.56	.89	1265.69	.00	.96	2.77	3.500	.000	.00	1 .0
2.695	.0347					.0133	.04	.68	1.93	.55	.013	.00	.00	PIPE
1077.823	1264.209	.706	1264.915	10.00	7.21	.81	1265.72	.00	.96	2.81	3.500	.000	.00	1 .0
2.149	.0347					.0117	.03	.71	1.81	.55	.013	.00	.00	PIPE
1079.972	1264.284	.730	1265.014	10.00	6.88	.73	1265.75	.00	.96	2.84	3.500	.000	.00	1 .0
1.711	.0347					.0102	.02	.73	1.69	.55	.013	.00	.00	PIPE
1081.684	1264.343	.755	1265.098	10.00	6.56	.67	1265.77	.00	.96	2.88	3.500	.000	.00	1 .0
1.356	.0347					.0089	.01	.75	1.59	.55	.013	.00	.00	PIPE
1083.040	1264.390	.780	1265.171	10.00	6.25	.61	1265.78	.00	.96	2.91	3.500	.000	.00	1 .0
1.061	.0347					.0078	.01	.78	1.49	.55	.013	.00	.00	PIPE
1084.101	1264.427	.807	1265.234	10.00	5.96	.55	1265.79	.00	.96	2.95	3.500	.000	.00	1 .0
.805	.0347					.0068	.01	.81	1.39	.55	.013	.00	.00	PIPE
1084.906	1264.455	.835	1265.290	10.00	5.68	.50	1265.79	.00	.96	2.98	3.500	.000	.00	1 .0
.591	.0347					.0060	.00	.83	1.30	.55	.013	.00	.00	PIPE

3RD STREET SD- LATERAL A
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1085.497	1264.476	.863	1265.339	10.00	5.42	.46	1265.79	.00	.96	3.02	3.500	.000	.00	1 .0
.398	.0347					.0052	.00	.86	1.22	.55	.013	.00	.00	PIPE
1085.895	1264.489	.893	1265.382	10.00	5.17	.41	1265.80	.00	.96	3.05	3.500	.000	.00	1 .0
.232	.0347					.0046	.00	.89	1.14	.55	.013	.00	.00	PIPE
1086.127	1264.497	.924	1265.421	10.00	4.93	.38	1265.80	.00	.96	3.09	3.500	.000	.00	1 .0
.073	.0347					.0040	.00	.92	1.07	.55	.013	.00	.00	PIPE
1086.200	1264.500	.957	1265.457	10.00	4.69	.34	1265.80	.00	.96	3.12	3.500	.000	.00	1 .0

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T1 3RD STREET SD-LATERAL B                                                    0
T2 LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1011.3601262.410  2                          1263.190
R    1013.9401262.460  2       .014                          .000    .000 0
R    1022.3701262.610  2       .013                          .000    .000 0
WE   1022.3701262.610  3       .500
TS   1030.4801264.640  4       .040                          .000
R    1037.3601266.360  4       .040                          .000    .000 0
R    1077.3201268.440  4       .250                          .000    .000 0
SH   1077.3201268.440  4                          1268.440
CD   2  4   1    .000   3.500      .000  .000  .000   .00
CD   3  2   0    .000   5.640    4.000  .000  .000   .00
CD   4  1   0    .000   3.000   13.500 4.000 4.000   .00
Q            87.000   .0
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Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date: 7-25-2016 Time:11: 4:46

3RD STREET SD-LATERAL B
LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1011.360	1262.410	2.572	1264.982	87.00	11.48	2.05	1267.03	.00	2.90	3.09	3.500	.000	.00	1 .0
2.580	.0194					.0108	.03	2.57	1.29	2.10	.014	.00	.00	PIPE
1013.940	1262.460	2.608	1265.068	87.00	11.32	1.99	1267.06	.00	2.90	3.05	3.500	.000	.00	1 .0
1.312	.0178					.0091	.01	2.61	1.26	2.05	.013	.00	.00	PIPE
1015.252	1262.483	2.628	1265.111	87.00	11.23	1.96	1267.07	.00	2.90	3.03	3.500	.000	.00	1 .0
5.356	.0178					.0085	.05	2.63	1.24	2.05	.013	.00	.00	PIPE
1020.607	1262.579	2.756	1265.335	87.00	10.71	1.78	1267.11	.00	2.90	2.86	3.500	.000	.00	1 .0
1.763	.0178					.0077	.01	2.76	1.12	2.05	.013	.00	.00	PIPE
1022.370	1262.610	2.901	1265.511	87.00	10.20	1.62	1267.13	.00	2.90	2.64	3.500	.000	.00	1 .0
WALL ENTRANCE														
1022.370	1262.610	5.265	1267.875	87.00	4.13	.26	1268.14	.00	2.45	4.00	5.640	4.000	.00	0 .0
TRANS STR	.2503					.0039	.03	5.27	.32		.040	.00	.00	RECTANG
1030.480	1264.640	3.583	1268.223	87.00	.87	.01	1268.24	.00	.98	42.17	3.000	13.500	4.00	0 .0
.441	.2500					.0002	.00	3.58	.10	.51	.040	.00	4.00	TRAP
1030.921	1264.750	3.472	1268.222	87.00	.91	.01	1268.24	.00	.98	41.28	3.000	13.500	4.00	0 .0
.429	.2500					.0002	.00	3.47	.11	.51	.040	.00	4.00	TRAP
1031.349	1264.857	3.364	1268.221	87.00	.96	.01	1268.24	.00	.98	40.41	3.000	13.500	4.00	0 .0
.417	.2500					.0002	.00	3.36	.11	.51	.040	.00	4.00	TRAP

3RD STREET SD-LATERAL B
LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1031.766	1264.962	3.258	1268.220	87.00	1.01	.02	1268.24	.00	.98	39.57	3.000	13.500	4.00	0 .0
.405	.2500					.0003	.00	3.26	.12	.51	.040	.00	4.00	TRAP
1032.171	1265.063	3.155	1268.218	87.00	1.06	.02	1268.24	.00	.98	38.74	3.000	13.500	4.00	0 .0
.394	.2500					.0003	.00	3.16	.13	.51	.040	.00	4.00	TRAP
1032.565	1265.161	3.055	1268.217	87.00	1.11	.02	1268.24	.00	.98	37.94	3.000	13.500	4.00	0 .0
.383	.2500					.0004	.00	3.06	.14	.51	.040	.00	4.00	TRAP
1032.947	1265.257	2.958	1268.215	87.00	1.16	.02	1268.24	.00	.98	37.16	3.000	13.500	4.00	0 .0
.371	.2500					.0004	.00	2.96	.14	.51	.040	.00	4.00	TRAP
1033.319	1265.350	2.863	1268.213	87.00	1.22	.02	1268.24	.00	.98	36.41	3.000	13.500	4.00	0 .0
.361	.2500					.0005	.00	2.86	.15	.51	.040	.00	4.00	TRAP
1033.679	1265.440	2.771	1268.211	87.00	1.28	.03	1268.24	.00	.98	35.67	3.000	13.500	4.00	0 .0
.350	.2500					.0005	.00	2.77	.16	.51	.040	.00	4.00	TRAP
1034.029	1265.527	2.681	1268.208	87.00	1.34	.03	1268.24	.00	.98	34.95	3.000	13.500	4.00	0 .0
.339	.2500					.0006	.00	2.68	.17	.51	.040	.00	4.00	TRAP
1034.368	1265.612	2.594	1268.206	87.00	1.40	.03	1268.24	.00	.98	34.25	3.000	13.500	4.00	0 .0
.329	.2500					.0007	.00	2.59	.18	.51	.040	.00	4.00	TRAP
1034.697	1265.694	2.509	1268.203	87.00	1.47	.03	1268.24	.00	.98	33.57	3.000	13.500	4.00	0 .0
.318	.2500					.0008	.00	2.51	.20	.51	.040	.00	4.00	TRAP

3RD STREET SD-LATERAL B
LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1035.015	1265.774	2.426	1268.200	87.00	1.55	.04	1268.24	.00	.98	32.91	3.000	13.500	4.00	0 .0
.308	.2500					.0009	.00	2.43	.21	.51	.040	.00	4.00	TRAP
1035.323	1265.851	2.346	1268.197	87.00	1.62	.04	1268.24	.00	.98	32.27	3.000	13.500	4.00	0 .0
.298	.2500					.0011	.00	2.35	.22	.51	.040	.00	4.00	TRAP
1035.621	1265.925	2.268	1268.193	87.00	1.70	.04	1268.24	.00	.98	31.64	3.000	13.500	4.00	0 .0
.287	.2500					.0012	.00	2.27	.24	.51	.040	.00	4.00	TRAP
1035.908	1265.997	2.192	1268.189	87.00	1.78	.05	1268.24	.00	.98	31.03	3.000	13.500	4.00	0 .0
.277	.2500					.0014	.00	2.19	.25	.51	.040	.00	4.00	TRAP
1036.185	1266.067	2.118	1268.184	87.00	1.87	.05	1268.24	.00	.98	30.44	3.000	13.500	4.00	0 .0
.267	.2500					.0016	.00	2.12	.27	.51	.040	.00	4.00	TRAP
1036.453	1266.133	2.046	1268.179	87.00	1.96	.06	1268.24	.00	.98	29.87	3.000	13.500	4.00	0 .0
.257	.2500					.0018	.00	2.05	.28	.51	.040	.00	4.00	TRAP
1036.710	1266.198	1.976	1268.174	87.00	2.06	.07	1268.24	.00	.98	29.31	3.000	13.500	4.00	0 .0
.247	.2500					.0021	.00	1.98	.30	.51	.040	.00	4.00	TRAP
1036.957	1266.259	1.908	1268.168	87.00	2.16	.07	1268.24	.00	.98	28.77	3.000	13.500	4.00	0 .0
.237	.2500					.0024	.00	1.91	.32	.51	.040	.00	4.00	TRAP
1037.193	1266.318	1.842	1268.161	87.00	2.26	.08	1268.24	.00	.98	28.24	3.000	13.500	4.00	0 .0
.167	.2500					.0026	.00	1.84	.34	.51	.040	.00	4.00	TRAP

3RD STREET SD-LATERAL B
LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1037.360	1266.360	1.796	1268.156	87.00	2.34	.09	1268.24	.00	.98	27.87	3.000	13.500	4.00	0 .0
1.152	.0521					.1013	.12	1.80	.36	2.17	.250	.00	4.00	TRAP
1038.512	1266.420	1.860	1268.280	87.00	2.23	.08	1268.36	.00	.98	28.38	3.000	13.500	4.00	0 .0
1.624	.0521					.0886	.14	1.86	.34	2.17	.250	.00	4.00	TRAP
1040.137	1266.505	1.927	1268.431	87.00	2.13	.07	1268.50	.00	.98	28.91	3.000	13.500	4.00	0 .0
2.434	.0521					.0775	.19	1.93	.32	2.17	.250	.00	4.00	TRAP
1042.570	1266.631	1.995	1268.626	87.00	2.03	.06	1268.69	.00	.98	29.46	3.000	13.500	4.00	0 .0
4.091	.0521					.0678	.28	2.00	.30	2.17	.250	.00	4.00	TRAP
1046.661	1266.844	2.066	1268.910	87.00	1.94	.06	1268.97	.00	.98	30.02	3.000	13.500	4.00	0 .0
9.173	.0521					.0594	.54	2.07	.28	2.17	.250	.00	4.00	TRAP
1055.834	1267.322	2.138	1269.459	87.00	1.85	.05	1269.51	.00	.98	30.60	3.000	13.500	4.00	0 .0
20.431	.0521					.0536	1.10	2.14	.26	2.17	.250	.00	4.00	TRAP
1076.265	1268.385	2.173	1270.558	87.00	1.80	.05	1270.61	.00	.98	30.88	3.000	13.500	4.00	0 .0
1.055	.0521					.0519	.05	2.17	.25	2.17	.250	.00	4.00	TRAP
1077.320	1268.440	2.173	1270.613	87.00	1.80	.05	1270.66	.00	.98	30.88	3.000	13.500	4.00	0 .0

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T1 3RD STREET SD - LATERAL C                                                0
T2 CITY OF LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1008.6501266.930  1                          1269.470
R    1014.5601266.992  1      .014                              .000    .000 0
R    1024.5601267.097  1      .013                              .000    .000 0
R    1026.4301267.117  1      .013                              .000    .000 0
R    1049.4101267.340  1      .013                           -58.518    .000 0
R    1200.0001268.840  1      .013                              .000    .000 0
SH   1200.0001268.840  1                          1268.840
CD   1  4   1    .000   4.000     .000  .000  .000   .00
Q           87.000   .0
```

Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date: 7-21-2017 Time:12:10:12

3RD STREET SD - LATERAL C
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1008.650	1266.930	2.283	1269.213	87.00	11.74	2.14	1271.35	.00	2.83	3.96	4.000	.000	.00	1 .0
5.910	.0105					.0110	.07	2.28	1.51	2.32	.014	.00	.00	PIPE
1014.560	1266.992	2.281	1269.272	87.00	11.75	2.15	1271.42	.00	2.83	3.96	4.000	.000	.00	1 .0
10.000	.0105					.0095	.09	2.28	1.52	2.21	.013	.00	.00	PIPE
1024.560	1267.097	2.288	1269.385	87.00	11.71	2.13	1271.51	.00	2.83	3.96	4.000	.000	.00	1 .0
1.870	.0106					.0094	.02	2.29	1.51	2.20	.013	.00	.00	PIPE
1026.430	1267.117	2.290	1269.407	87.00	11.70	2.12	1271.53	.75	2.83	3.96	4.000	.000	.00	1 .0
22.980	.0097					.0094	.22	3.04	1.50	2.27	.013	.00	.00	PIPE
1049.410	1267.340	2.296	1269.636	87.00	11.66	2.11	1271.75	.00	2.83	3.96	4.000	.000	.00	1 .0
8.117	.0100					.0093	.08	2.30	1.50	2.25	.013	.00	.00	PIPE
1057.527	1267.421	2.300	1269.721	87.00	11.63	2.10	1271.82	.00	2.83	3.95	4.000	.000	.00	1 .0
80.571	.0100					.0087	.70	2.30	1.49	2.25	.013	.00	.00	PIPE
1138.098	1268.223	2.393	1270.616	87.00	11.09	1.91	1272.53	.00	2.83	3.92	4.000	.000	.00	1 .0
33.950	.0100					.0077	.26	2.39	1.38	2.25	.013	.00	.00	PIPE
1172.048	1268.562	2.491	1271.052	87.00	10.58	1.74	1272.79	.00	2.83	3.88	4.000	.000	.00	1 .0
17.258	.0100					.0069	.12	2.49	1.28	2.25	.013	.00	.00	PIPE
1189.305	1268.733	2.595	1271.328	87.00	10.08	1.58	1272.91	.00	2.83	3.82	4.000	.000	.00	1 .0
8.298	.0100					.0061	.05	2.60	1.18	2.25	.013	.00	.00	PIPE

3RD STREET SD - LATERAL C
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1197.603	1268.816	2.706	1271.522	87.00	9.61	1.44	1272.96	.00	2.83	3.74	4.000	.000	.00	1 .0
2.397	.0100					.0054	.01	2.71	1.09	2.25	.013	.00	.00	PIPE
1200.000	1268.840	2.827	1271.667	87.00	9.16	1.30	1272.97	.00	2.83	3.64	4.000	.000	.00	1 .0

```
T1 3rd STREET SD - LATERAL D                                                    0
T2 CITY OF LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1010.3801273.510  1                          1285.140
R    1018.2901273.550  1      .014                              .000    .000 0
R    1025.9201273.590  1      .013                              .000    .000 0
R    1073.1501273.820  1      .013                            60.135    .000 0
R    2073.1501278.820  1      .013                              .000    .000 0
SH   2073.1501278.820  1                          1278.820
CD   1  4   1    .000   6.500     .000  .000  .000   .00
Q           382.150   .0
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Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date: 7-21-2017 Time: 1:18:58

3rd STREET SD - LATERAL D
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1010.380	1273.510	11.630	1285.140	382.15	11.52	2.06	1287.20	.00	5.23	.00	6.500	.000	.00	1 .0
7.910	.0051					.0062	.05	11.63	.00	6.50	.014	.00	.00	PIPE
1018.290	1273.550	11.639	1285.189	382.15	11.52	2.06	1287.25	.00	5.23	.00	6.500	.000	.00	1 .0
7.630	.0052					.0053	.04	11.64	.00	5.37	.013	.00	.00	PIPE
1025.920	1273.590	11.639	1285.229	382.15	11.52	2.06	1287.29	.00	5.23	.00	6.500	.000	.00	1 .0
47.230	.0049					.0053	.25	.00	.00	5.63	.013	.00	.00	PIPE
1073.150	1273.820	11.997	1285.817	382.15	11.52	2.06	1287.88	.00	5.23	.00	6.500	.000	.00	1 .0
1000.000	.0050					.0053	5.31	12.00	.00	5.53	.013	.00	.00	PIPE
2073.150	1278.820	12.310	1291.130	382.15	11.52	2.06	1293.19	.00	5.23	.00	6.500	.000	.00	1 .0

```
T1 3RD STREET SD-LATERAL E                                                  0
T2 CITY OF LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1004.5001297.230  1                          1302.820
R    1009.0701297.280  1      .014                              .000    .000 0
R    1019.0701297.380  1      .013                              .000    .000 0
R    1318.4101300.370  1      .013                              .000    .000 0
SH   1318.4101300.370  1                          1300.370
CD   1  4   1    .000   2.000     .000  .000  .000   .00
Q           14.900   .0
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Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING Date: 7-21-2017 Time:11:48:47

3RD STREET SD-LATERAL E
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1004.500	1297.230	5.590	1302.820	14.90	4.74	.35	1303.17	.00	1.39	.00	2.000	.000	.00	1 .0
4.570	.0110					.0050	.02	5.59	.00	1.21	.014	.00	.00	PIPE
1009.070	1297.280	5.563	1302.843	14.90	4.74	.35	1303.19	.00	1.39	.00	2.000	.000	.00	1 .0
10.000	.0100					.0043	.04	5.56	.00	1.18	.013	.00	.00	PIPE
1019.070	1297.380	5.506	1302.886	14.90	4.74	.35	1303.24	.00	1.39	.00	2.000	.000	.00	1 .0
299.340	.0100					.0043	1.30	5.51	.00	1.19	.013	.00	.00	PIPE
1318.410	1300.370	3.815	1304.185	14.90	4.74	.35	1304.53	.00	1.39	.00	2.000	.000	.00	1 .0

```
T1 3RD STREET SD-LATERAL F                                                    0
T2 CITY OF LAKE ELSINORE
T3 100-YEAR ANALYSIS
SO   1001.8601263.270  1                          1262.840
R    1003.2001263.280  1       .014                              .000    .000 0
R    1032.1401263.570  1       .013                              .000    .000 0
WE   1032.1401263.570  2       .500
TS   1036.3401263.570  2       .040                              .000
SH   1036.3401263.570  2                          1263.570
CD   1  4   1    .000   1.500     .000  .000  .000   .00
CD   2  2   0    .000   3.960    3.000  .000  .000   .00
Q            9.000   .0
```

Program Package Serial Number: 1373

WATER SURFACE PROFILE LISTING

Date:11- 3-2016 Time: 3: 6:24

3RD STREET SD-LATERAL F
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT or "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1001.860	1263.270	1.086	1264.356	9.00	6.57	.67	1265.03	.00	1.16	1.34	1.500	.000	.00	1 .0
1.340	.0075					.0114	.02	1.09	1.15	1.36	.014	.00	.00	PIPE
1003.200	1263.280	1.071	1264.351	9.00	6.67	.69	1265.04	.00	1.16	1.36	1.500	.000	.00	1 .0
24.601	.0100					.0096	.24	1.07	1.18	1.07	.013	.00	.00	PIPE
1027.801	1263.526	1.107	1264.633	9.00	6.44	.64	1265.28	.00	1.16	1.32	1.500	.000	.00	1 .0
4.339	.0100					.0087	.04	1.11	1.10	1.07	.013	.00	.00	PIPE
1032.140	1263.570	1.160	1264.730	9.00	6.14	.58	1265.31	.00	1.16	1.26	1.500	.000	.00	1 .0
WALL	ENTRANCE													
1032.140	1263.570	2.091	1265.661	9.00	1.43	.03	1265.69	.00	.65	3.00	3.960	3.000	.00	0 .0
TRANS STR	.0000					.0018	.01	2.09	.17		.040	.00	.00	RECTANG
1036.340	1263.570	2.100	1265.670	9.00	1.43	.03	1265.70	.00	.65	3.00	3.960	3.000	.00	0 .0

Worksheet for CB110 - Cambern Line Weir Calc

Project Description

Solve For	Headwater Elevation

Input Data

Discharge		114.00	ft³/s
Crest Elevation		1303.93	ft
Tailwater Elevation		1304.20	ft
Weir Coefficient		2.80	US
Crest Length		18.00	ft
Number Of Contractions	0		

Results

Headwater Elevation	1305.68	ft
Headwater Height Above Crest	1.75	ft
Tailwater Height Above Crest	0.27	ft
Flow Area	31.52	ft²
Velocity	3.62	ft/s
Wetted Perimeter	21.50	ft
Top Width	18.00	ft

Type X Inlet - Collier Ave

Project Description

Solve For	Discharge

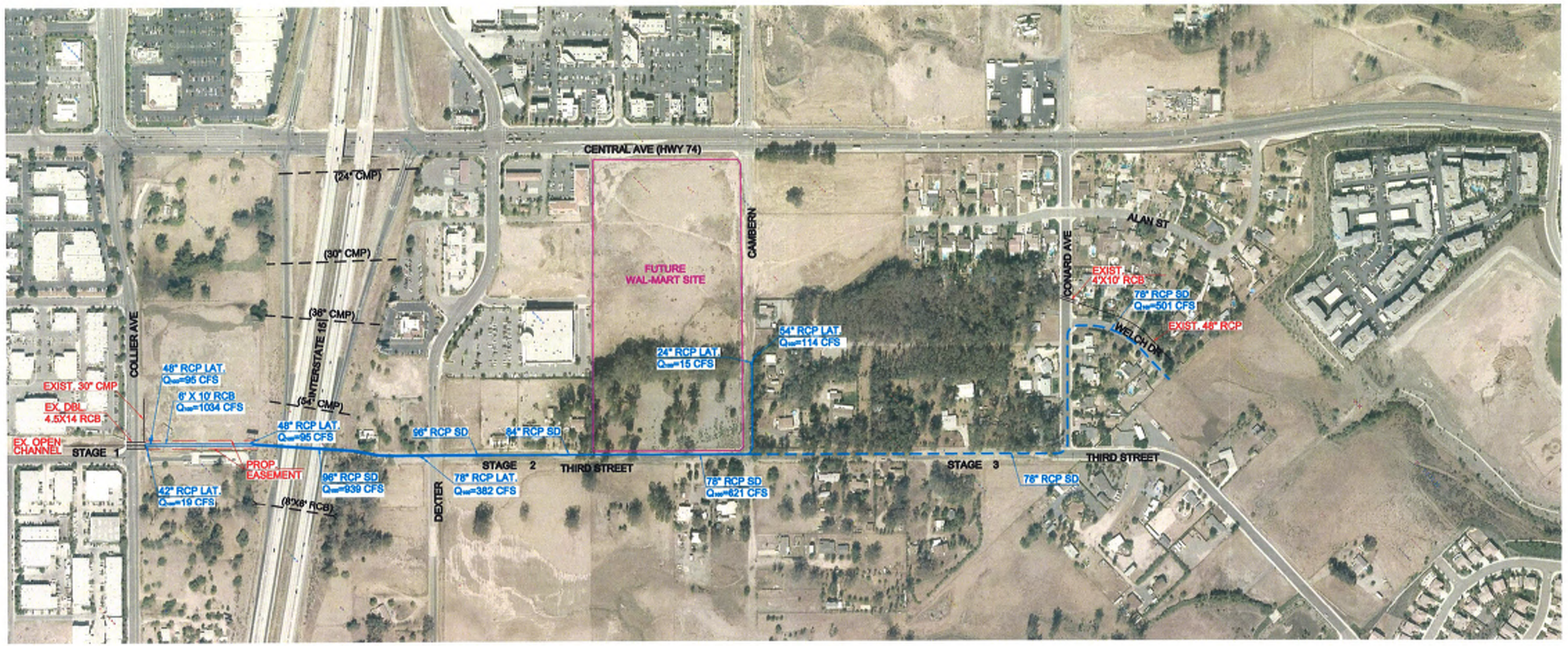
Input Data

Headwater Elevation		1267.57	ft
Crest Elevation		1266.82	ft
Tailwater Elevation		1263.57	ft
Weir Coefficient		2.80	US
Crest Length		6.00	ft
Number Of Contractions	0		

Results

Discharge	10.91	ft^3/s
Headwater Height Above Crest	0.75	ft
Tailwater Height Above Crest	-3.25	ft
Flow Area	4.50	ft^2
Velocity	2.42	ft/s
Wetted Perimeter	7.50	ft
Top Width	6.00	ft

APPENDIX J





ORIGINAL REDUCED

LEGEND

PROPOSED DRAINAGE EASEMENT	
6'X10' RCB - MBI DESIGN	
3RD ST STORM DRAIN - STAGE 2	
*3RD ST STORM DRAIN - STAGE 3	
CALTRANS STORM DRAIN FACILITIES	(SIZE AS SHOWN)

* EXACT ALIGNMENT AND TERMINUS POINT TO BE DETERMINED BY OTHERS AND AS PART OF CITY'S MASTER PLAN DEVELOPMENT.

Michael Baker INTERNATIONAL
41610 COUNTY CENTER DR., SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

EXISTING & PROPOSED SD FACILITIES

H:\DATA\148215\CAD\STORMTECH\EXHIBITS\148215-EXH-008-PROP-EXIST-SD FACILITIES.DWG ROCHTLLOZANO 7/21/17 2:19 pm

APPENDIX K

ALBERT A. WEBB ASSOCIATES

Memorandum of Understanding

2014-0320

To: Rita Thompson, Senior Engineering Technician, PM
Ken Rukavina, PE, Interim city Engineer, City of Lake Elsinore

From: Lin McCaffrey, Albert A. Webb Associates

CC: Jim L. Smith, PE, Interim Director of Public Works, City of Lake Elsinore

Joseph Caldwell, Dilesh Sheth, Albert A. Webb Associates

Date: July 20, 2015

Re: Lake Elsinore MDP, Project Design Guideline and H&H Study Criteria

It is imperative to establish the criteria for the Hydrology and Hydraulics (H&H) study and MDP design guideline before proceeding with the detailed studies and design. We have reviewed the existing MDPs within or near the city boundary prepared by Riverside County Flood Control District (RCFCD) to ensure the City of Lake Elsinore MDP will be compatible and consistent with the surrounding areas.

1. Hydrology

The hydrology for this MDP will be developed using two methods: the Rational Method and the Synthetic Unit Hydrograph Method. The Rational Method will be used to determine the peak discharges (cubic feet per second) generated from watersheds smaller than 300 to 500 acres in size. For watersheds larger than 300 to 500 acres, primarily the watersheds outside the city boundary and steep hilly areas, the Synthetic Unit Hydrograph Method will be used. Methodology and supportive data for both Rational and Synthetic hydrology, including estimation of loss rates/infiltration, may be found in the *Riverside County Flood Control and Water Conservation District Hydrology Manual*, dated April 1978 (District Hydrology Manual).

2. Land Use

In 2011, the City completed an update of the General Plan. For the watershed areas within the city boundary, land use designations from the updated General Plan will be used to develop the hydrology for this MDP.

For the watershed areas outside the city boundary, the 2003 Riverside County General Plan land use designations will be used.

In addition to the City and County General Plan land use, there are 17 Specific Plans within the city, and each has its own land use designations. Some of these Specific Plans are almost built-out, while others are still evolving and going through amendments.

Due to the dynamic and complex nature of the land use designations and their actual impacts to the hydrology studies, we propose to consolidate the land use into 7 categories with assigned impervious percentage recommended per the RCFCD Hydrology Manual. For Specific Plans, if there are 10 planning areas with varied density, an average total may be used for MDP level of the studies. This approach will simplify the process without compromising the integrity of the study.

City of Lake Elsinore MDP Land Use Summary

Land Use Group	Land Use per General Plan	RCFCD Hyd Manual Cover Type	Impervious Cover	Remarks
Open Space	OS-Open Space, F-Floodway, Conservation Bank, RMR-Rural Mountainous Residential, RR-Rural Residential	Natural (Fair) Chaparral Broadleaf	5%	Lakeland Village MDP used (Good) cover for the same land use group.
Park & Rec	Park, L-Lakeshore, R-Recreation, Golf Course	Urban Landscaping	15%	
VLDR	Very Low Density Residential, Estate Density Residential	1 Acre Lots	30%	
Institutional	PI-Public Institutional, Schools, LDR-Low Density Residential	1/2 Acre Lots	40%	Use >40% based on actual impervious cover
MDR	R1-Single Family Residential, R2-Medium Density Residential, LMD-Low Medium Density Residential, MD-Medium Density Residential, MHD-Medium High Density Residential	1/4 Acre Lots	50%	
HDR	High Density Residential, RMU-Residential Mixed Use, MC-Mobile Home community, EC-Existing Condo, EMH-Existing Mobile Home Complex	Condo, Apartments, Mobile Home Park	75%	
Commercial	Varies Commercial C1, C2, CM, CO, CP, CR, NC, TC, GC, Manufacturing M1, M2, M3, BP-Business Professional, LI-Light Industrial	Commercial, Downtown Business or Industrial	90%	

3. Rainfall Values

To be consistent with the recently completed Lakeland Village MDP prepared by RCFCD, the NOAA Atlas 14 rainfall data will be used in the hydrology calculations for this MDP. The rainfall frequencies examined are the 2-year (50% annual chance) and the 100-year (1% annual chance) recurrence intervals with 1, 3, 6 and 24 hour durations. The calculated slope of the intensity-duration curve is 0.6.

The following NOAA Atlas 14 Version 4 area weighted point rainfall values will be used to develop the hydrology:

NOAA Atlas 14 Point Rainfall Values

Storm Frequency and Duration	Area Weighted Point Rainfall (Inches)
2 Year – 1 Hour	0.48
2 Year – 3 Hour	0.86
2 Year – 6 Hour	1.24
2 Year – 24 Hour	2.34
100 Year – 1 Hour	1.34
100 Year – 3 Hour	2.17
100 Year – 6 Hour	3.06
100 Year – 24 Hour	6.29

4. MDP Facilities

Currently, the existing storm drain facilities within the city limits are maintained by various entities and agencies; including RCFCD, Caltrans, City of Lake Elsinore, City of Wildomar, County Transportation, HOAs and etc. To streamline the future design, maintenance, and funding, the City may consider establishing some guidelines and maintenance mechanisms (CDFs or Assessment Districts) and include the discussion in the MDP documents. Each maintenance entity will also dictate the design standards. For the purpose of MDP facility design and cost estimate, RCFCD standards and design guidelines will be used.

Underground Storm Drain System

All of the underground storm drain systems will be designed to convey the runoff from a 100-year storm, with RCP sized 36" and larger. Road culverts, laterals and collectors will not be identified as MDP facilities. The underground facilities proposed in this MDP will be located within existing or assumed future right-of-way, whenever possible. The typical MDP storm drain pipe or box design will have 3' of cover with the slopes parallel to the existing ground.

Open Channels

Well defined natural channels, canyons and ravines are the most economical way to transport and convey the storm runoff, and pose the least impacts to potentially sensitive areas. The MDP study will focus on preserving and maximizing the utilization of natural water courses.

When natural water courses become less defined, flattened and spread out, they may cause flooding of the roadway and properties, as well as add constrains to the future developments. Open channels may be used to continue transporting storm runoff to a safe outlet. The open channels not only serve as flow conveyors, they also provide an outlet for underground facilities. This MDP study will utilize

two types of open channels, lined and unlined. Lined channels will be used in high velocity flow situations and are typically rectangular or trapezoidal shaped with concrete paving on the sides and bottom. Unlined channel will be utilized in low velocity flow situations, are typically trapezoidal in shape and have no protection for the bottom or side slopes. The unlined channels can also provide infiltration or filtration opportunities for water quality management.

The channel right-of-way required for both lined and unlined facilities must accommodate the full channel width along with adequate maintenance access. Channels with top widths less than 20 feet require one maintenance access road, and where the top width exceeds 20 feet, two maintenance access roads are necessary per RCFCD design standards. All of the open channels will be designed to convey the runoff from a 100-year storm.

Detention Basin

Detention basins maybe utilized for this MDP. The purpose of the detention basin is to lower the peak flow rate through the use of temporary detention storage, thus reducing the size and cost of the downstream MDP facilities. It should be noted that the detention basin, if proposed, will be sized for the 1% annual chance ("100-year" storm) event. Flows exceeding the design capacity of the basin would pass over the emergency spillway or overflow structure, discharge into the downstream storm drain pipe or open channel. Detention Basin may also be used when existing downstream facilities have inadequate capacity.

Debris Basins

Debris basins maybe used in watersheds that are equal to or greater than 64 acres and are generally located upstream of the proposed facilities to capture debris before it enters the downstream conveyance system. The proposed debris basins will be sized based on the *Los Angeles District Method for Prediction of Debris Yield* (Method) developed by the U.S. Army Corps of Engineers Los Angeles District, dated February 2000. The Method is intended to be used for the estimation of debris yield in watersheds of 64 to 128,000 acres in areas with steep, mountainous terrain. The MDP study will further evaluate the benefits of reducing sedimentation and debris, reducing facility size (without using bulked flowrate) and ease of maintenance versus the cost of land acquisition and cost of construction of the debris basins.

REVIEWED AND APPROVED BY:

_____ _____

Ken Rukavina, P.E. Date
Interim City Engineer
City of Lake Elsinore

APPENDIX L

Reinforced Concrete Pipe (Jacking Pipe) D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 27+00 to 31+31
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Bedding Factor:	1.9	
Pipe Size:	96	inches
Pipe Wall Thickness:	9	inches
Cover, H:	33	ft
Soil Density(w):	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	
Cohesion of soil, c	193	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Live) =$$ 4 : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Earth Load

Where:

$$W_t = CtwB_t^{\,2} - 2cCt\,B_t$$

B_t = Width of Tunnel Bored

B_t = 10 Ft

$$C_t = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_t = 2.21535$$

$$W_t = 22463.6$$

$$D-Load = \left(\frac{Dead\ Load\ (Wt)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Dead) = 1848.34$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } D-Load = 1852.34$$

Proposed $D-Load$ = 1900

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 31+33 to 34+00
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	96	inches
Pipe Wall Thickness:	9	inches
Cover, H:	5	ft
Soil Density (W):	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Live) =$ **145** : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

$B_d =$ 11.5 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.41111$$

$$W_d = 7611.67$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Dead) =$ 660.735

Total D-Load

Total $D-Load = Dead\ Load + Live\ Load$

Total $D-Load =$ 805.735

Proposed $D-Load =$ 850

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 34+10 to 37+00
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	96	inches
Pipe Wall Thickness:	9	inches
Cover, H:	4	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{186}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 11.5 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.33256

W_d = 6157.38

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = 534.495$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = 720.495$$

$$\textbf{Proposed } \boldsymbol{D-Load} = 800$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 37+02 to 42+00
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	84	inches
Pipe Wall Thickness:	8	inches
Cover, H:	4	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Live) =$ **206** : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

$B_d =$ 10.3333 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.36825$$

$W_d =$ 5505

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Dead) =$ **546.13**

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

Total $D-Load =$ **752.13**

Proposed $D-Load =$ **800**

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 42+02 to 47+65
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	7	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Live) = 101$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.65492$$

$$W_d = 8716.19$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Dead) = 931.217$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } D-Load = 1032.22$$

Proposed $D-Load$ = 1050

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage II Sta 47+80 to 48+00
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	4.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Live) =$ **217** : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

$$W_d = Cd\ W\ B_d{}^2$$

Where:

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

$B_d =$ 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

$C_d =$ 0.43492

$W_d =$ 5788.26

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Dead) =$ **618.404**

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

Total $D-Load =$ **835.404**

Proposed $D-Load =$ 1050

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Miguel Gonzalez
Project	3rd St SD-Cambern Sta 10+05 to 13+74
Date	2/15/2018

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	3.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{426}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

$$W_d = Cd\ W\ B_d{}^2$$

Where:

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.34273

W_d = 4561.33

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{487.321}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = \boxed{913.321}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \textbf{1100}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Miguel Gonzalez
Project	3rd St SD-Cambern Sta 13+86 to 14+23
Date	2/15/2018

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	1.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D - Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D - Load\ (Live)} = \boxed{974}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.15081

W_d = 2007.09

$$D - Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D - Load\ (Dead)} = \boxed{214.433}$$

Total D-Load

$$\text{Total } D - Load = Dead\ Load + Live\ Load$$

$$\textbf{Total } \boldsymbol{D - Load} = \boxed{1188.43}$$

$$\textbf{Proposed } \boldsymbol{D - Load} = \mathbf{1300}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line A
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	42	inches
Pipe Wall Thickness:	4.5	inches
Cover, H:	1	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Live) =$ **1236** : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

$B_d =$ 6.25 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.15672$$

$$W_d = 857.05$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Dead) =$ **170.05**

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

Total $D-Load =$ **1406.05**

Proposed $D-Load =$ 1500

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line B
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	42	inches
Pipe Wall Thickness:	4.5	inches
Cover, H:	2.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Live) = \boxed{801}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 6.25 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.3799$$

$$W_d = 2077.59$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Dead) = 412.221$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } D-Load = 1213.22$$

$$\text{Proposed } D-Load = 1300$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line C
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	48	inches
Pipe Wall Thickness:	5	inches
Cover, H:	4	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{283}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 6.83333 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.543

W_d = 3549.69

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{616.266}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = \boxed{899.266}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \textbf{900}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line D
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	6	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{127}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.56868

W_d = 7568.39

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{808.589}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = \boxed{935.589}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = 950$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line E
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	24	inches
Pipe Wall Thickness:	3	inches
Cover, H:	5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Live) =$ **235** : from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

$B_d =$ 4.5 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.96502$$

$$W_d = 2735.82$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$D-Load\ (Dead) =$ **949.939**

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

Total $D-Load =$ 1184.94

Proposed $D-Load =$ 1250

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3rd St SD-Line F
Date	7/21/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	18	inches
Pipe Wall Thickness:	2.5	inches
Cover, H:	3	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{642}$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 3.91667 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.69451

W_d = 1491.55

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{690.534}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = \boxed{1332.53}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \textbf{1500}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 48+00 to 52+47.67
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	4.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Live) = 217$$: from RCFC&WCD Reinforced Concrete Pipe Manual Tables

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 0.43492$$

$$W_d = 5788.26$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$D-Load\ (Dead) = 618.404$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } D-Load = 835.404$$

$$\text{Proposed } D-Load = 850$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 52+52.33 to 57+47.67
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	7	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{\textbf{101}} \quad \textbf{: from RCFC\&WCD Reinforced Concrete Pipe Manual Tables}$$

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.65492

W_d = 8716.19

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{\textbf{931.217}}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\textbf{Total } \boldsymbol{D-Load} = \boxed{\textbf{1032.22}}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \textbf{1050}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 57+52.33 to 61+41.09
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	12.6	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L} \qquad D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{40}$$ **: from RCFC&WCD Reinforced Concrete Pipe Manual Tables**

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'} \qquad C_d = 1.0976$$

$$W_d = 14607.7$$

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = 1560.65$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\textbf{Total } \boldsymbol{D-Load} = 1600.65$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \mathbf{1600}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 61+45.75 to 65+82.71
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	12.4	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D - Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D - Load\ (Live)} = \boxed{40}$$ **: from RCFC&WCD Reinforced Concrete Pipe Manual Tables**

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 1.08291

W_d = 14412.1

$$D - Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D - Load\ (Dead)} = 1539.76$$

Total D-Load

$$\text{Total } D - Load = Dead\ Load + Live\ Load$$

Total $D - Load$ = 1579.76

Proposed $D - Load$ = 1600

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 65+87.37 to 67+47.67
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	8.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{\textbf{81}} \quad \textbf{: from RCFC\&WCD Reinforced Concrete Pipe Manual Tables}$$

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.78005

W_d = 10381.5

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \textbf{1109.14}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\textbf{Total } \boldsymbol{D-Load} = \textbf{1190.14}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \textbf{1200}$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 67+52.33 to 69+38.85
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	8.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{81}\ \text{: from RCFC\&WCD Reinforced Concrete Pipe Manual Tables}$$

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.78005

W_d = 10381.5

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = 1109.14$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\text{Total } \boldsymbol{D-Load} = 1190.14$$

$$\text{Proposed } \boldsymbol{D-Load} = 1200$$

Reinforced Concrete Pipe D-Load

Company Name	Michael Baker International
Designed by	Xochitl Lozano
Project	3Rd St SD - Stage III Sta 69+43.51 to 72+16.51
Date	10/2/2017

Design Criteria

Safety Factor:	1.25	
Load Factor:	1.8	
Pipe Size:	78	inches
Pipe Wall Thickness:	7.5	inches
Cover, H:	7.5	ft
Soil Density:	140	pcf
Soil type:	Sand and Gravel	
kμ':	0.13	

Live Load

$$W_{sc} = Cs\,\frac{PF}{L}$$

$$D-Load = \left(\frac{Live\ Load\ (Wsc)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Live)} = \boxed{101}$$ **: from RCFC&WCD Reinforced Concrete Pipe Manual Tables**

Dead Load

Where:

$$W_d = Cd\ W\ B_d{}^2$$

B_d = Trench Width = Pipe Dia + (2 x wall thick) + 24"

B_d = 9.75 Ft

$$C_d = \frac{1 - e^{\left(\frac{-2k\mu' H}{B_d}\right)}}{2k\mu'}$$

C_d = 0.69719

W_d = 9278.72

$$D-Load = \left(\frac{Dead\ Load\ (Wd)}{Load\ factor}\right) x \left(\frac{factor\ of\ safety}{Pipe\ inside\ diameter, Ft}\right)$$

$$\boldsymbol{D-Load\ (Dead)} = \boxed{991.316}$$

Total D-Load

$$\text{Total } D-Load = Dead\ Load + Live\ Load$$

$$\textbf{Total } \boldsymbol{D-Load} = \boxed{1092.32}$$

$$\textbf{Proposed } \boldsymbol{D-Load} = \mathbf{1100}$$

APPENDIX M

Appendix M-Reference Documents and CD

1) Existing Channel Reference Plan
2) Record Drawings and Documents
3) General Plan Data
4) GIS Data
5) Hydrology Maps
6) RCFC&WCD Reference Data

APPENDIX N

FILE: STGIII3RD21.WSW W S P G W - EDIT LISTING - Version 14.10 Date: 2-13-2018 Time: 9:47:46
WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING PAGE 1

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	X(8)	Y(8)	Y(10)
CD	1	3	1	.670	5.000	12.670	.000	.000	.00										
CD	2	1	0	.000	6.000	22.000	4.000	4.000	.00										
CD	3	3	1	.670	4.500	28.670	.000	.000	.00										
CD	4	3	0	.000	6.000	12.000	.000	.000	-.01										
CD	6	4	1		6.500														
CD	7	4	1		6.500														
CD	8	4	1		6.000														
CD	9	4	1		3.500														
CD	10	4	1		5.000														
CD	11	4	1		4.000														
CD	12	4	1		7.500														
CD	13	4	1		8.000														
CD	14	4	1		7.000														
CD	15	1	0	.000	3.000	32.000	5.000	5.000	.00										
CD	5	6	0	.000															

FILE: W S P G W - EDIT LISTING - Version 14.10 Date: 2-13-2018 Time: 9:47:46
WATER SURFACE PROFILE - CROSS SECTION POINT LISTING PAGE 2

CARD CODE	SECT NO	NO OF POINTS	X(1) , Y(1) X(8) , Y(8)	X(2) , Y(2) X(9) , Y(9)	X(3) , Y(3) X(10) ,Y(10)	X(4) , Y(4) X(11) ,Y(11)	X(5) , Y(5) X(N) , Y(N)	X(6) , Y(6) X(N+1),Y(N+1)	X(7) , Y(7) X(35) ,Y(35)
PTS	5	8	1.000 .000	9.000 .000	10.000 1.000	10.000 5.000	9.000 6.000	1.000 6.000	.000 5.000
PTS			.000 1.000						

W S P G W PAGE NO 1
WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

THIRD STREET STORM DRAIN-STAGE III

HEADING LINE NO 2 IS -

CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA

HEADING LINE NO 3 IS -

100-YEAR WSPG

W S P G W PAGE NO 2
WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1750.000	1260.400	2	1265.350

ELEMENT NO 2 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2115.200	1261.130	2	.020	.000	.000	.000	0

ELEMENT NO 3 IS A TRANSITION

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	2165.900	1261.230	3	.035	.000	.000

ELEMENT NO 4 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2246.400	1261.530	3	.014	.000	.000	.000	0

ELEMENT NO 5 IS A JUNCTION

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	2254.570	1261.600	3	9	0	.014	18.300	.000	1262.120	.000	83.600	.000

RADIUS	ANGLE
.000	.000

ELEMENT NO 6 IS A TRANSITION

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE
	2347.830	1262.430	5	.014	.000	.000

ELEMENT NO 7 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	2658.000	1265.180	5	.014	.000	.000	.000	0

```
ELEMENT NO   8 IS A JUNCTION          *          *     *     *                    *                    *          *
                U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                           2685.000 1265.420    5    11     0   .014   87.000      .000  1266.930      .000 -30.000      .000
                                                                                  RADIUS    ANGLE
                                                                                    .000     .000

ELEMENT NO   9 IS A TRANSITION        *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS   ANGLE
                           2698.000 1265.530   13               .014                     .000     .000
ELEMENT NO  10 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           2698.000 1265.530   13               .013                     .000     .000      .000     0
                                                                                                          PAGE NO   3
                                                W S P G W
                        WATER SURFACE PROFILE - ELEMENT CARD LISTING
ELEMENT NO  11 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           2702.660 1265.580   13               .014                     .000     .000     3.980     1
ELEMENT NO  12 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3118.650 1269.830   13               .013                     .000     .000      .000     0
ELEMENT NO  13 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3128.780 1269.930   13               .013                   90.001    6.449      .000     0
ELEMENT NO  14 IS A TRANSITION        *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS   ANGLE
                           3133.440 1269.980   13               .014                     .000     .000
ELEMENT NO  15 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3228.710 1270.960   13               .013                     .000     .000      .000     0
ELEMENT NO  16 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3245.070 1271.120   13               .013                   90.001  -10.415      .000     0
ELEMENT NO  17 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3395.370 1272.660   13               .013                     .000     .000      .000     0
ELEMENT NO  18 IS A JUNCTION          *          *     *     *              *                    *          *
                U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                           3414.400 1272.850   13     6     0   .014   317.500      .000  1273.510      .000  30.000      .000
                                                                                  RADIUS    ANGLE
                                                                                    .000     .000

ELEMENT NO  19 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           3697.670 1275.750   13               .013                     .000     .000      .000     0
ELEMENT NO  20 IS A TRANSITION        *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS   ANGLE
                           3702.330 1276.800   14               .014                     .000     .000
ELEMENT NO  21 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           4253.360 1283.910   14               .013                     .000     .000      .000     0
ELEMENT NO  22 IS A TRANSITION        *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS   ANGLE
                           4264.610 1284.560    6               .014                     .000     .000
                                                W S P G W                                                 PAGE NO   4
                        WATER SURFACE PROFILE - ELEMENT CARD LISTING
ELEMENT NO  23 IS A REACH             *          *     *
                U/S DATA   STATION    INVERT  SECT               N                    RADIUS    ANGLE     ANG PT  MAN H
                           4764.290 1291.010    6               .013                     .000     .000      .000     0
ELEMENT NO  24 IS A JUNCTION          *          *     *     *              *                    *          *
                U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                           4782.350 1291.320    6     7     0   .014     .010      .000  1291.150      .000 -30.000      .000
                                                                                  RADIUS    ANGLE
```

.000 .000

ELEMENT NO 25 IS A SYSTEM HEADWORKS

U/S DATA	STATION	INVERT	SECT	W S ELEV
	4782.350	1291.320	6	1291.320

WATER SURFACE PROFILE LISTING Date: 2-13-2018 Time: 9:47:50

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1750.000	1260.400	4.950	1265.350	1043.90	5.05	.40	1265.75	.00	3.34	61.60	6.000	22.000	4.00	0 .0
119.344	.0020					.0010	.12	4.95	.49	4.10	.020	.00	4.00	TRAP
1869.344	1260.639	4.792	1265.431	1043.90	5.29	.43	1265.87	.00	3.34	60.34	6.000	22.000	4.00	0 .0
129.515	.0020					.0011	.15	4.79	.52	4.10	.020	.00	4.00	TRAP
1998.859	1260.897	4.638	1265.536	1043.90	5.55	.48	1266.01	.00	3.34	59.11	6.000	22.000	4.00	0 .0
116.341	.0020					.0013	.15	4.64	.55	4.10	.020	.00	4.00	TRAP
2115.200	1261.130	4.518	1265.648	1043.90	5.77	.52	1266.16	.00	3.34	58.15	6.000	22.000	4.00	0 .0
TRANS STR	.0020							4.52	.58		.035	.00	4.00	TRAP
2165.900	1261.230	1.924	1263.154	1043.90	19.38	5.83	1268.98	.00	3.51	28.67	4.500	28.670	.00	1 .7
26.951	.0037					.0206	.56	1.92	2.49	3.34	.014	.00	.00	BOX
2192.851	1261.330	1.841	1263.171	1043.90	20.25	6.37	1269.54	.00	3.51	28.67	4.500	28.670	.00	1 .7
27.515	.0037					.0238	.65	1.84	2.66	3.34	.014	.00	.00	BOX
2220.366	1261.433	1.755	1263.188	1043.90	21.24	7.01	1270.20	.00	3.51	28.67	4.500	28.670	.00	1 .7
26.034	.0037					.0275	.72	1.76	2.86	3.34	.014	.00	.00	BOX
2246.400	1261.530	1.673	1263.203	1043.90	22.28	7.71	1270.91	.00	3.51	28.67	4.500	28.670	.00	1 .7
JUNCT STR	.0086					.0315	.26	1.67	3.07		.014	.00	.00	BOX
2254.570	1261.600	1.589	1263.189	1025.60	23.05	8.25	1271.44	.00	3.47	28.67	4.500	28.670	.00	1 .7
TRANS STR	.0089					.0215	2.01	1.59	3.26		.014	.00	.00	BOX

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
2347.830	1262.430	5.272	1267.703	1025.60	19.86	6.12	1273.82	.00	6.00	9.46		5		0 .0
53.169	.0089					.0097	.51	5.27	1.50	5.477	.014			IR-COV
2400.999	1262.901	5.238	1268.140	1025.60	19.98	6.20	1274.34	.00	6.00	9.52		5		0 .0
257.001	.0089					.0103	2.65	5.24	1.52	5.477	.014			IR-COV
2658.000	1265.180	4.994	1270.174	1025.60	20.96	6.82	1276.99	.00	6.00	10.00		5		0 .0
JUNCT STR	.0089					.0136	.37	4.99	1.67		.014			IR-COV
---------- WARNING - Junction Analysis - Irregular Channel----------														
2685.000	1265.420	4.041	1269.461	938.60	23.82	8.81	1278.27	.00	6.00	10.00		5		0 .0
TRANS STR	.0085					.0140	.18	4.04	2.11		.014			IR-COV
2698.000	1265.530	6.730	1272.260	938.60	20.80	6.72	1278.98	.00	7.41	5.85	8.000	.000	.00	1 .0
4.660	.0107					.0118	.05	6.73	1.32	7.29	.014	.00	.00	PIPE
2702.660	1265.580	6.723	1272.303	938.60	20.81	6.73	1279.03	.00	7.41	5.86	8.000	.000	.00	1 .0
415.990	.0102					.0100	4.16	6.72	1.32	6.70	.013	.00	.00	PIPE
3118.650	1269.830	6.856	1276.686	938.60	20.47	6.51	1283.19	.81	7.41	5.60	8.000	.000	.00	1 .0
10.130	.0099					.0099	.10	7.67	1.26	6.84	.013	.00	.00	PIPE
3128.780	1269.930	6.857	1276.787	938.60	20.47	6.50	1283.29	.00	7.41	5.60	8.000	.000	.00	1 .0
TRANS STR	.0107					.0114	.05	6.86	1.26		.014	.00	.00	PIPE

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
3133.440	1269.980	6.844	1276.824	938.60	20.50	6.53	1283.35	.00	7.41	5.63	8.000	.000	.00	1 .0
95.270	.0103					.0098	.93	6.84	1.27	6.67	.013	.00	.00	PIPE
3228.710	1270.960	6.927	1277.887	938.60	20.30	6.40	1284.28	.77	7.41	5.45	8.000	.000	.00	1 .0
16.360	.0098					.0097	.16	7.70	1.23	6.89	.013	.00	.00	PIPE
3245.070	1271.120	6.929	1278.049	938.60	20.29	6.39	1284.44	.00	7.41	5.45	8.000	.000	.00	1 .0
11.118	.0102					.0097	.11	6.93	1.23	6.68	.013	.00	.00	PIPE
3256.188	1271.234	6.941	1278.175	938.60	20.26	6.38	1284.55	.00	7.41	5.42	8.000	.000	.00	1 .0
139.182	.0102					.0094	1.31	6.94	1.22	6.68	.013	.00	.00	PIPE
3395.370	1272.660	7.408	1280.068	938.60	19.32	5.79	1285.86	.00	7.41	4.19	8.000	.000	.00	1 .0
JUNCT STR	.0100					.0080	.15	7.41	1.00		.014	.00	.00	PIPE
3414.400	1272.850	12.288	1285.138	621.10	12.36	2.37	1287.51	.00	6.34	.00	8.000	.000	.00	1 .0
283.270	.0102					.0046	1.31	12.29	.00	4.81	.013	.00	.00	PIPE
3697.670	1275.750	10.702	1286.452	621.10	12.36	2.37	1288.82	.00	6.34	.00	8.000	.000	.00	1 .0
TRANS STR	.2253					.0082	.04	10.70	.00		.014	.00	.00	PIPE
3702.330	1276.800	8.401	1285.201	621.10	16.14	4.04	1289.25	.00	6.34	.00	7.000	.000	.00	1 .0
166.194	.0129					.0095	1.57	8.40	.00	4.98	.013	.00	.00	PIPE
3868.524	1278.944	7.827	1286.771	621.10	16.14	4.04	1290.82	.00	6.34	.00	7.000	.000	.00	1 .0
HYDRAULIC JUMP														

THIRD STREET STORM DRAIN-STAGE III
CITY OF LAKE ELSINORE, COUNTY OF RIVERSIDE, CALIFORNIA
100-YEAR WSPG

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS) / Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/ Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
3868.524	1278.944	4.911	1283.856	621.10	21.53 / 7.20	1291.05	.00	6.34	6.41	7.000	.000	.00	1 .0
384.836	.0129				.0139	5.34	4.91	1.79	4.98	.013	.00	.00	PIPE
4253.360	1283.910	4.788	1288.698	621.10	22.14 / 7.61	1296.31	.00	6.34	6.51	7.000	.000	.00	1 .0
TRANS STR	.0578				.0158	.18	4.79	1.88		.014	.00	.00	PIPE
4264.610	1284.560	5.634	1290.194	621.10	20.33 / 6.42	1296.61	.00	6.16	4.42	6.500	.000	.00	1 .0
499.680	.0129				.0126	6.28	5.63	1.36	5.62	.013	.00	.00	PIPE
4764.290	1291.010	5.906	1296.916	621.10	19.61 / 5.97	1302.89	.00	6.16	3.75	6.500	.000	.00	1 .0
JUNCT STR	.0172				.0142	.26	5.91	1.19		.014	.00	.00	PIPE
4782.350	1291.320	6.165	1297.485	621.09	19.09 / 5.66	1303.14	.00	6.16	2.88	6.500	.000	.00	1 .0

CARD CODE	SECT NO	CHN TYPE	NO OF PIER/PIP	AVE PIER WIDTH	HEIGHT 1 DIAMETER	BASE WIDTH	ZL	ZR	INV DROP	Y(1)	Y(2)	Y(3)	Y(4)	Y(5)	Y(6)	Y(7)	Y(8)	Y(9)	Y(10)
CD	1	4	1		6.500														
CD	2	4	1		2.000														
CD	3	4	1		4.500														
CD	4	2	0	.000	8.430	12.580			.00										

WATER SURFACE PROFILE - TITLE CARD LISTING

HEADING LINE NO 1 IS -

3RD STREET SD- CAMBERN STREET LATERAL

HEADING LINE NO 2 IS -

CITY OF LAKE ELSINORE

HEADING LINE NO 3 IS -

100-YEAR ANALYSIS

WATER SURFACE PROFILE - ELEMENT CARD LISTING

ELEMENT NO 1 IS A SYSTEM OUTLET

U/S DATA	STATION	INVERT	SECT	W S ELEV
	997.680	1291.120	1	1297.485

ELEMENT NO 2 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1007.530	1291.220	1	.014	.000	.000	.000	0

ELEMENT NO 3 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1010.850	1291.250	1	.013	.000	.000	.000	0

ELEMENT NO 4 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1034.440	1291.490	1	.013	22.498	-60.078	.000	0

ELEMENT NO 5 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1374.390	1294.890	1	.013	.000	.000	.000	0

ELEMENT NO 6 IS A JUNCTION

U/S DATA	STATION	INVERT	SECT	LAT-1	LAT-2	N	Q3	Q4	INVERT-3	INVERT-4	PHI 3	PHI 4
	1386.170	1295.010	1	2	0	.014	14.900	.000	1297.230	.000	-30.000	.000

RADIUS	ANGLE
.000	.000

ELEMENT NO 7 IS A REACH

U/S DATA	STATION	INVERT	SECT	N	RADIUS	ANGLE	ANG PT	MAN H
	1423.570	1295.380	1	.013	44.995	47.624	.000	0

ELEMENT NO 8 IS A SYSTEM HEADWORKS

U/S DATA	STATION	INVERT	SECT	W S ELEV
	1423.570	1295.380	1	1295.380

WATER SURFACE PROFILE LISTING Date: 2-13-2018 Time:10:10:48

3RD STREET SD- CAMBERN STREET LATERAL
CITY OF LAKE ELSINORE
100-YEAR ANALYSIS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
997.680	1291.120	6.365	1297.485	621.09	18.81	5.50	1302.98	.00	6.16	1.85	6.500	.000	.00	1 .0
9.850	.0101					.0149	.15	6.36	.79	6.50	.014	.00	.00	PIPE
1007.530	1291.220	6.457	1297.677	621.09	18.73	5.45	1303.13	.00	6.16	1.05	6.500	.000	.00	1 .0
3.320	.0090					.0132	.04	6.46	.59	6.50	.013	.00	.00	PIPE
1010.850	1291.250	6.477	1297.727	621.09	18.72	5.44	1303.17	6.50	6.16	.77	6.500	.000	.00	1 .0
5.762	.0102					.0135	.08	6.50	.50	6.50	.013	.00	.00	PIPE
1016.612	1291.309	6.500	1297.809	621.09	18.72	5.44	1303.25	6.50	6.16	.00	6.500	.000	.00	1 .0
17.828	.0102					.0138	.25	6.50	.00	6.50	.013	.00	.00	PIPE
1034.440	1291.490	7.342	1298.832	621.09	18.72	5.44	1304.27	.00	6.16	.00	6.500	.000	.00	1 .0
339.950	.0100					.0140	4.77	7.34	.00	6.50	.013	.00	.00	PIPE
1374.390	1294.890	8.712	1303.602	621.09	18.72	5.44	1309.04	.00	6.16	.00	6.500	.000	.00	1 .0
JUNCT STR	.0102					.0159	.19	.00	.00		.014	.00	.00	PIPE
1386.170	1295.010	9.238	1304.248	606.19	18.27	5.18	1309.43	.00	6.14	.00	6.500	.000	.00	1 .0
37.400	.0099					.0134	.50	.00	.00	6.50	.013	.00	.00	PIPE
1423.570	1295.380	10.122	1305.502	606.19	18.27	5.18	1310.68	.00	6.14	.00	6.500	.000	.00	1 .0

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

GENERAL NOTES

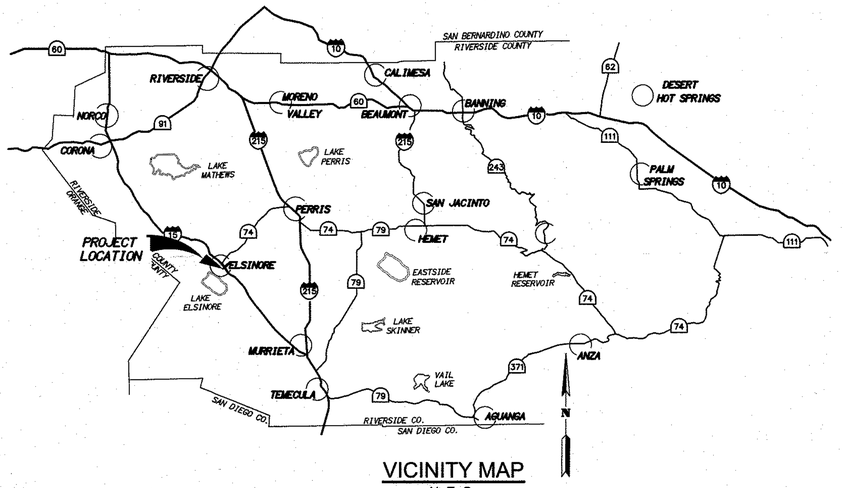
1. THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S M.O.U. STANDARD SPECIFICATIONS DATED JUNE 24, 2008, AND THE RCFC&WCD STANDARD MANUAL. FOR THE LATEST DRAWINGS OF THE STANDARD MANUAL, PLEASE REFER TO THE "PUBLICATIONS AND RECORDS" PAGE FOUND ON THE DISTRICT'S WEBSITE.
2. (IF) AN ENCROACHMENT PERMIT IS REQUIRED FROM THE RIVERSIDE COUNTY FLOOD CONTROL, CONTACT PERMIT ENGINEER AT 951/955-1266. AFTER THE PERMIT IS ISSUED THE DISTRICT MUST BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
3. CONSTRUCTION INSPECTION WILL BE PERFORMED BY RIVERSIDE COUNTY FLOOD CONTROL. CONTACT CONTRACT ADMINISTRATOR AT 951/955-1288. THE DISTRICT MUST BE NOTIFIED TWENTY DAYS (20) PRIOR TO CONSTRUCTION.
4. ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
5. STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE INTERSECTION STATIONS.
6. FORTY-EIGHT HOURS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT 1-800-227-2600.
7. ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON THE NATIONAL GEODETIC VERTICAL DATUM (NGVD 29). TO CONVERT TO THE NORTH AMERICAN VERTICAL DATUM (NAVD 88) ADD 2.24 FEET TO THE ELEVATIONS SHOWN.
8. ALL COORDINATES ARE SHOWN IN FEET AND DECIMALS THEREOF BASED ON THE NORTH AMERICAN DATUM (NAD 83), CALIFORNIA COORDINATE SYSTEM (CCS), ZONE 6 AND EPOCH 2007.00.
9. ALL CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
10. ELEVATIONS OF UTILITIES ARE APPROXIMATE UNLESS OTHERWISE NOTED.
11. UNLESS OTHERWISE SPECIFIED, MINIMUM STREET RECONSTRUCTION SHALL BE 4.5" TYPE "B" HOT MIX ASPHALT OVER 8.5" CLASS 2 AGGREGATE BASE (PER ARAGON GEOTECHNICAL REPORT DATED 09-18-2015) AND PER CITY OF LAKE ELSINORE STD. NO. 602B OR AS SPECIFIED BY THE ENGINEER.
12. OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED WITH 6" OF CLASS "B" CONCRETE.
13. PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO.4 (JS 229) UNLESS OTHERWISE NOTED.
14. PIPE AND RCB BEDDING SHALL CONFORM TO RCFC&WCD STD. DWG. NO. M815 EXCEPT FOR COVER<2 FEET. FOR COVER<2 FEET, CONCRETE SLURRY (2000 PSI) SHALL BE USED. THE ENTIRE TRENCH SHALL BE SLURRY EXTENDING 4 INCHES MINIMUM AND 12 INCHES MAXIMUM ABOVE THE TOP OF THE PIPE OR RCB.
15. APPENDIX B INDICATES SOIL BORING LOCATIONS BASED ON THE SOILS REPORT DATED 09-18-2015. LOCATIONS SHOWN ARE APPROXIMATE.
16. "V" IS THE DEPTH OF CATCH BASINS MEASURED FROM THE TOP OF CURB TO INVERT OF CONNECTOR PIPE.
17. CATCH BASINS SHALL BE LOCATED SO THAT LOCAL DEPRESSION SHALL BEGIN AT EXISTING CURB RETURN JOINT, UNLESS OTHERWISE SPECIFIED.
18. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED IN KIND AND AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.
19. STANDARD DRAWINGS CALLED FOR ON THE PLAN AND PROFILE SHALL CONFORM TO DISTRICT STANDARD DRAWINGS UNLESS NOTED OTHERWISE.

GENERAL NOTES (CONT)

20. THE CONTRACTOR IS REQUIRED TO CALL ALL UTILITY AGENCIES REGARDING TEMPORARY SHORING AND SUPPORT REQUIREMENTS FOR THE VARIOUS UTILITY LINES SHOWN ON THESE PLANS
21. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL SHOULD BE PROVIDED TO PREVENT PONDING WATER AND DAMAGE TO ADJACENT PROPERTIES.
22. APPROVAL OF THESE PLANS BY THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT DOES NOT RELIEVE THE DEVELOPER'S ENGINEER OF RESPONSIBILITY FOR THE ENGINEERING DESIGN. IF FIELD CHANGES ARE REQUIRED, IT WILL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER TO MAKE THE NECESSARY CORRECTIONS.
23. THE CONTRACTOR OR DEVELOPER SHALL SECURE ALL THE REQUIRED ENCROACHMENT AND/OR STATE AND FEDERAL REGULATORY PERMITS PRIOR TO THE COMMENCEMENT OF ANY WORK.
24. THE CONCRETE COATING ON THE INSIDE OF ALL REINFORCED CONCRETE PIPES MUST BE INCREASED TO PROVIDE A MINIMUM OF 1-1/2 INCHES OVER THE REINFORCING AND INCREASED TO A MINIMUM OF 3-1/2 INCHES OVER REINFORCING FOR BOX CULVERTS WHEN DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE F'C=5,000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND AND F'C=6,000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.
25. CONSTRUCTION JOINT FOR CALTRANS STANDARD REINFORCED CONCRETE BOX SHALL BE ACCORDING TO RCFC&WCD STD. DWG. NO. BX401.

RCB NOTE

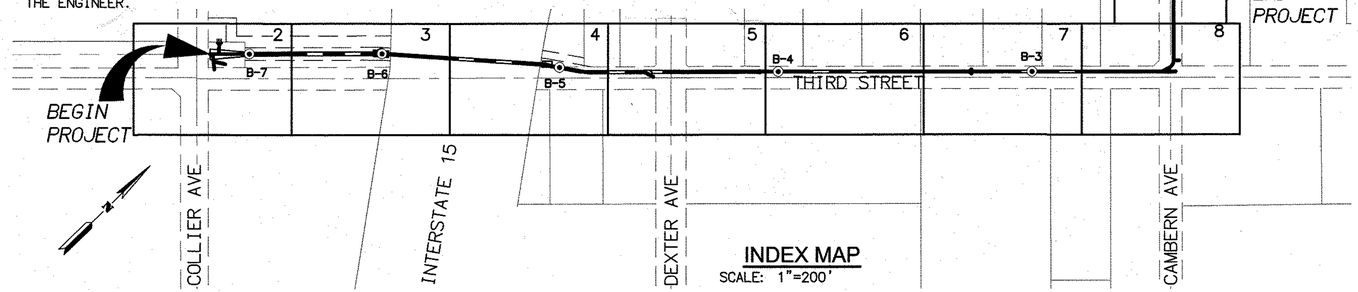
THE CONCRETE BOX STORM DRAIN SHALL BE PRE-CAST REINFORCED CONCRETE BOX PER CALTRANS STANDARD D83A AND D83B, CONFORMING TO AASHTO M273 (OR EQUIVALENT ASTM C850) WITH LESS THAN 2 FEET OF COVER SUBJECT TO HS20 LIVE LOADING, TABLE 1. ALTERNATIVELY, THE CAST-IN-PLACE METHOD OF CONSTRUCTION CONFORMING TO THE 2015 EDITION OF CALTRANS STANDARD D80 WITH FLAT INVERT MAY BE USED IF APPROVED BY THE ENGINEER.



VICINITY MAP
N.T.S.

LEGEND

- ⊙ BORING LOCATION PER GEOTECHNICAL REPORT DATED 9-18-2015.
- B-3 BORING I.D.



INDEX MAP
SCALE: 1"=200'

INDEX

	SHEET NO.
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PLAN & PROFILE	2-9
CONNECTOR PIPE PROFILES & DETAILS	10-11
STRUCTURAL DETAILS	12-13

CALTRANS NOTES TO CONTRACTOR:

1. IT IS THE PERMITTEE/CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE UNDERGROUND SERVICE ALERT IN ORDER TO CLEAR ANY POSSIBLE CONFLICTS PRIOR TO CONSTRUCTION.
2. WHERE DAMAGE IS CAUSED BY THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, REPAIR OR REPLACE DAMAGED FACILITIES PROMPTLY IN ACCORDANCE WITH 2015 STATE SPECIFICATIONS AND/OR AS DIRECTED BY THE STATE REPRESENTATIVE.
3. ALL WORK PERFORMED WITHIN THE STATE RIGHT OF WAY SHALL MEET THE REQUIREMENTS OF CALTRANS STANDARD SPECIFICATIONS, LATEST EDITION.

MONITORING REQUIREMENTS:

4. THE OFFICE OF GEOTECHNICAL DESIGN SOUTH (OGDS) OF CALTRANS RECOMMENDS INSTALLING A MINIMUM OF 3 ROWS OF SETTLEMENT MONUMENTS WITH ONE ROW LOCATED DIRECTLY ABOVE THE ALIGNMENT OF THE PIPELINE TO MONITOR ANY POTENTIAL SETTLEMENTS OF THE PAVEMENT. THE REMAINING ROWS SHOULD BE LOCATED ON EITHER SIDE OF THE PIPELINE. BASE READINGS SHOULD BE TAKEN FOR ALL SETTLEMENT POINTS PRIOR TO THE CONSTRUCTION WORK. DEPENDING ON THE SETTLEMENTS OBSERVED IN THE FIRST ROUND OF READINGS (TAKEN AFTER THE CONSTRUCTION HAS BEGUN), OGDS MAY RECOMMEND INSTALLING ADDITIONAL ROWS OF MONITORING POINTS TO DETERMINE THE AREA AFFECTED. AT LEAST 1 OF THE SETTLEMENT MONUMENTS ON EACH LINE SHOULD CONSIST OF A "GROUND MOVEMENT MONITORING POINT" SHOWN IN THE CALTRANS DESIGN BULLETIN 83-04. THE REMAINING POINTS MAY CONSIST OF MONUMENTS EMBEDDED IN THE PAVEMENT. THE SPACING BETWEEN 2 CONSECUTIVE SETTLEMENT POINTS IN A ROW SHOULD NOT EXCEED 10 FEET.
5. CONTRACTOR SHALL PROVIDE A PLAN FOR MONITORING GROUND SURFACE AND MUST INCLUDE THE LOCATION OF ALL SETTLEMENT POINTS.
6. THE ACCURACY OF SETTLEMENT MONITORING SHOULD BE 0.005 FEET PER CALTRANS DESIGN BULLETIN 83-04. THE THRESHOLDS IN THE SUBJECT BULLETIN SHOULD NOT BE EXCEEDED DURING OR UP TO A 6-MONTH LONG PERIOD FOLLOWING THE CONSTRUCTION.
7. FREQUENCY OF MONITORING: SURFACE SETTLEMENT MUST BE MEASURED DAILY OR HOURLY WHEN THE HEADING IS WITHIN 25 FEET OF THE SURFACE.
8. CONTINGENCY PLAN: PROVIDE A PLAN WITH ACTIONS TO BE TAKEN IN THE CASE OF EXCEEDANCE OF THE THRESHOLDS IN DESIGN BULLETIN 83-04. ACTION ITEMS SHOULD INCLUDE THE IMMEDIATE NOTIFICATION OF CALTRANS STAFF OF THE OBSERVATIONS, ANY CHANGES TO THE CONSTRUCTION METHODS AND REMEDIAL WORK.
9. POST CONSTRUCTION SETTLEMENT OBSERVATIONS: IN THE EVENT OF CONTINUED POST-CONSTRUCTION SETTLEMENT OBSERVATIONS, CALTRANS MAY EXTEND THE POST CONSTRUCTION MONITORING PERIOD AND REQUIRE THE CONTRACTOR TO MONITOR SETTLEMENTS AT 2-MONTH INTERVALS. THE POST CONSTRUCTION MONITORING PERIOD SHALL BE NO LONGER THAN 6 MONTHS.
10. ALL APPLICABLE REQUIREMENTS OF SECTIONS 500 AND 600 OF CALTRANS PERMIT MANUAL MUST BE FOLLOWED FOR THE WORK WITHIN CALTRANS RIGHT-OF-WAY AND THE ADJACENT AREAS THAT COULD IMPACT CALTRANS FACILITIES.

SHORING NOTE:

CONTRACTOR TO PROVIDE SHORING DESIGN PRIOR TO CONSTRUCTION.

R.C.F.C. & W.C.D. STANDARD DRAWINGS

MH 252	MANHOLE NO. 2
MH 254	MANHOLE NO. 4
TS 301	TRANSITION STRUCTURE NO. 1
CB108	INLET TYPE X
CB 110	CONCRETE DROP INLET
JS 226	JUNCTION STRUCTURE NO. 1
JS 227	JUNCTION STRUCTURE NO. 2
M816	CONCRETE BULKHEAD
M803	CONCRETE COLLAR

CALTRANS STANDARDS

D83A	PRECAST REINFORCED CONCRETE-BOX CULVERT
D83B	PRECAST REINFORCED CONCRETE-BOX CULVERT MISC. DETAILS
D81	CAST-IN-PLACE REINFORCED CONCRETE DOUBLE BOX CULVERT
D86B	PIPE CULVERT HEADWALLS, ENDWALLS AND WARPED WINGWALLS

A.P.W.A. STANDARD DRAWINGS

361-2	TRASH RACK (INCLINED)

CITY OF LAKE ELSINORE DREAM EXTREME™

THESE PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH THE APPROPRIATE CONDITIONS OF DEVELOPMENT AND/OR CITY AND STATE LAWS AND HAVE BEEN FOUND ACCEPTABLE

BRADLEY FAGRELL, RCE No. 43920 — DATE
CITY ENGINEER
CITY OF LAKE ELSINORE

CALTRANS PERMIT NO. 08-16-N-TN-0291

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
B.M. NO. EL-37-80
A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.
1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200, TEMECULA, CA 92591
PHONE: (951) 676-8042 MBAKERINTL.COM
JOHN D. TANNER III, RCE 60132 DATE:

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: PLANNING ENGINEER DATE:
APPROVED BY: CHIEF ENGINEER DATE:

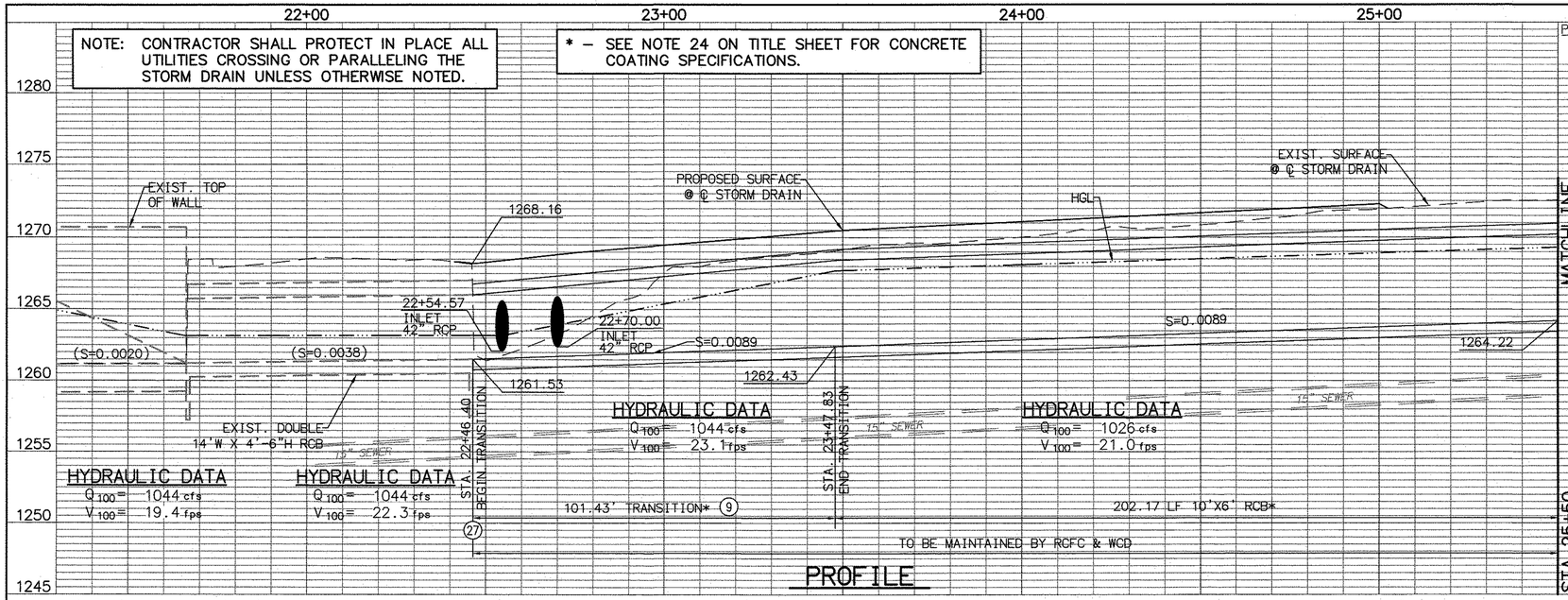
THIRD STREET STORM DRAIN STAGE 2
TITLE SHEET

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 1 OF 13

H:\PDATA\148215\CADD\STRMWATER\DLVSTORMDY\148215-SD-RCFCWCD-001.DWG JASON.STOUFFER 2/13/2018 12:33 PM

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.

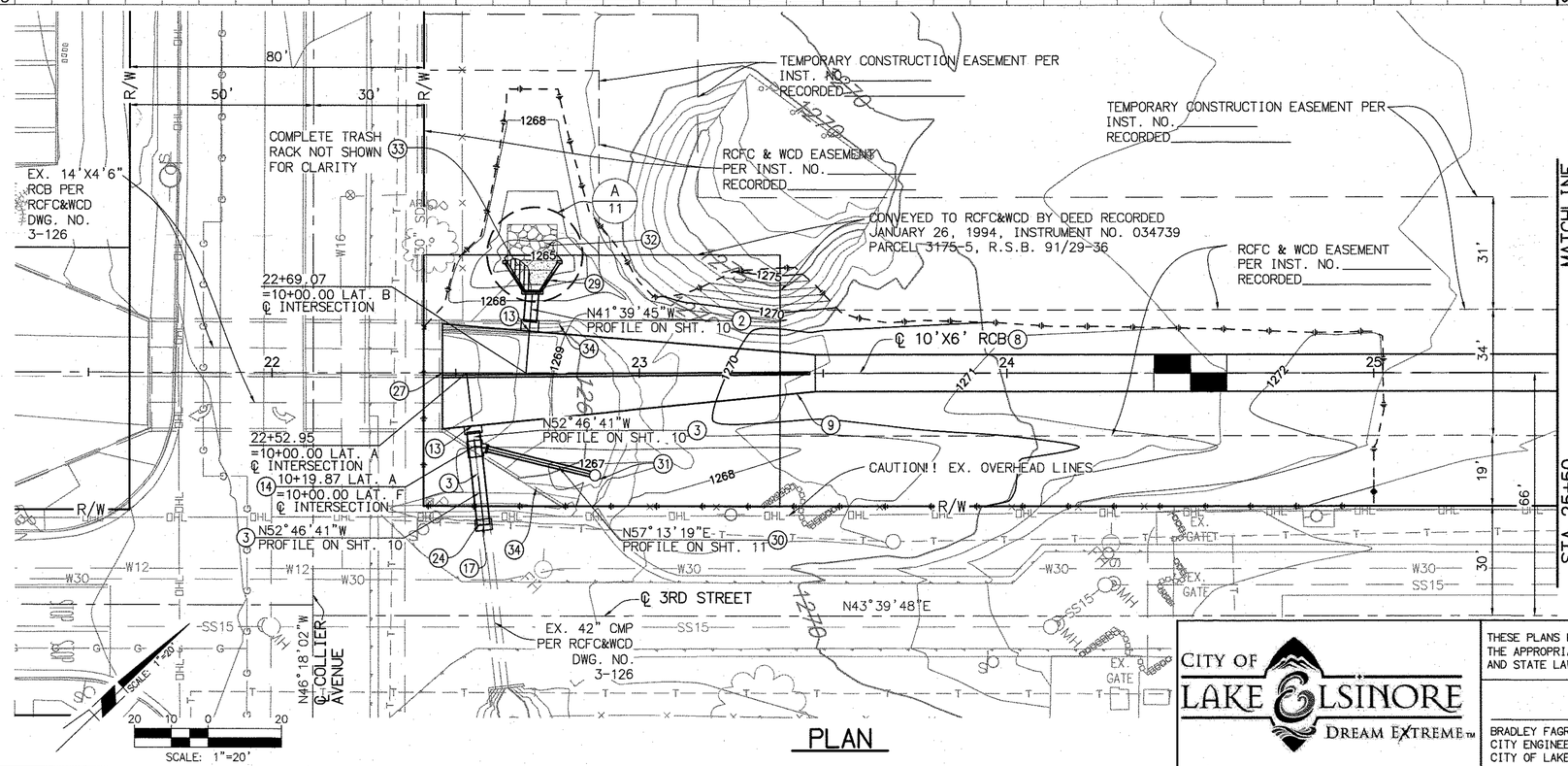


PROFILE

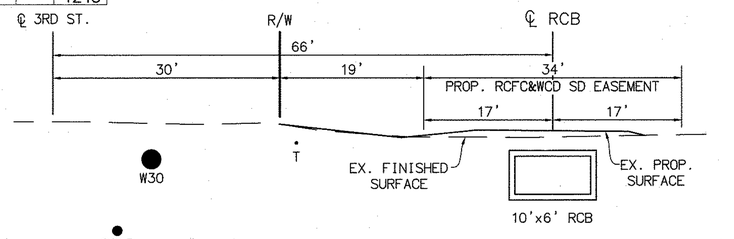
PROFILE SCALE
HORIZ. 1"=20'
VERT. 1"=5'

CONSTRUCTION NOTES

(2) INSTALL 42" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(3) INSTALL 42" RCP STORM DRAIN PIPE TO CONNECT TO DISTRICT STRUCTURE.
(8) CONSTRUCT 10' X 6' (SPAN X RISE) PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. D83A AND D83B.
(9) CONSTRUCT TRANSITION STRUCTURE PER DETAILS ON SHEET 12.
(13) CONSTRUCT JUNCTION STRUCTURE NO. 1 PER RCFC&WCD STD. DWG. NO. JS226.
(14) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER RCFC&WCD STD. DWG. NO. JS227.
(17) CONSTRUCT CONCRETE COLLAR PER RCFC&WCD STD. DWG. NO. M803.
(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.
(27) CONNECT TRANSITION STRUCTURE TO EXISTING DOUBLE RCB PER SHEET 12 AND 13.
(29) CONSTRUCT PIPE CULVERT WING WALL PER CALTRANS STD DWG D86B AND DETAIL ON SHEET 11.
(30) INSTALL 18" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(31) CONSTRUCT MODIFIED INLET TYPE X PER RCFC&WCD STD. DWG. NO. CB108 WITH OPTIONAL OPENINGS AND OPENING HEIGHT EQUAL TO 0.75'.
(32) INSTALL 1/4 TON RIP RAP, 2.7' THICK WITH 9" THICK FILTER BLANKET OF 3/4" ROCK OVER SAND. USE MIRAFI 1100-N FOR FILTER BLANKET (OR APPROVED EQUAL). SEE DETAIL ON SHEET 11.
(33) CONSTRUCT TRASH RACK (INCLINED) PER APWA STD 361-2.
(34) REMOVE EXISTING WINGWALL AND ASSOCIATED RIP RAP.



PLAN



SECTION AT STA 24+50

SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM

JUNCTION STRUCTURE No.1 TABLE (LAT. A)	
℄ INT. STA.	22+52.95
CALLOUT	VALUE
A	83°33'31"
B	42"
C	16.51'
ELEV R	1262.16
ELEV S	1262.12

JUNCTION STRUCTURE No.1 TABLE (LAT. B)	
℄ INT. STA.	22+69.07
CALLOUT	VALUE
A	85°19'32"
B	42"
C	14.40'
ELEV R	1262.46
ELEV S	1262.41

JUNCTION STRUCTURE NO. 2 TABLE (LAT. F)	
LAT. A ℄ STA. 10+19.87	
CALLOUT	VALUE
A	70°
B	18"
C	3.62'
D	42"
E	1.84'
F	1.90'
G	1.56'
L	2.41'
ELEV. R	1263.28
ELEV. S	1263.27

CITY OF LAKE ELSINORE DREAM EXTREME™

THESE PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH THE APPROPRIATE CONDITIONS OF DEVELOPMENT AND/OR CITY AND STATE LAWS AND HAVE BEEN FOUND ACCEPTABLE

BRADLEY FAGRELL, RCE No. 43920
CITY ENGINEER
CITY OF LAKE ELSINORE

DATE

CALTRANS PERMIT NO. 08-16-N-TN-0291

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REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

DESIGNED BY: C. MORLOK
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Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
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JOHN D. TANNER III, RCE 60132 DATE:

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE:

APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

STA 22+46.40 TO STA 25+50

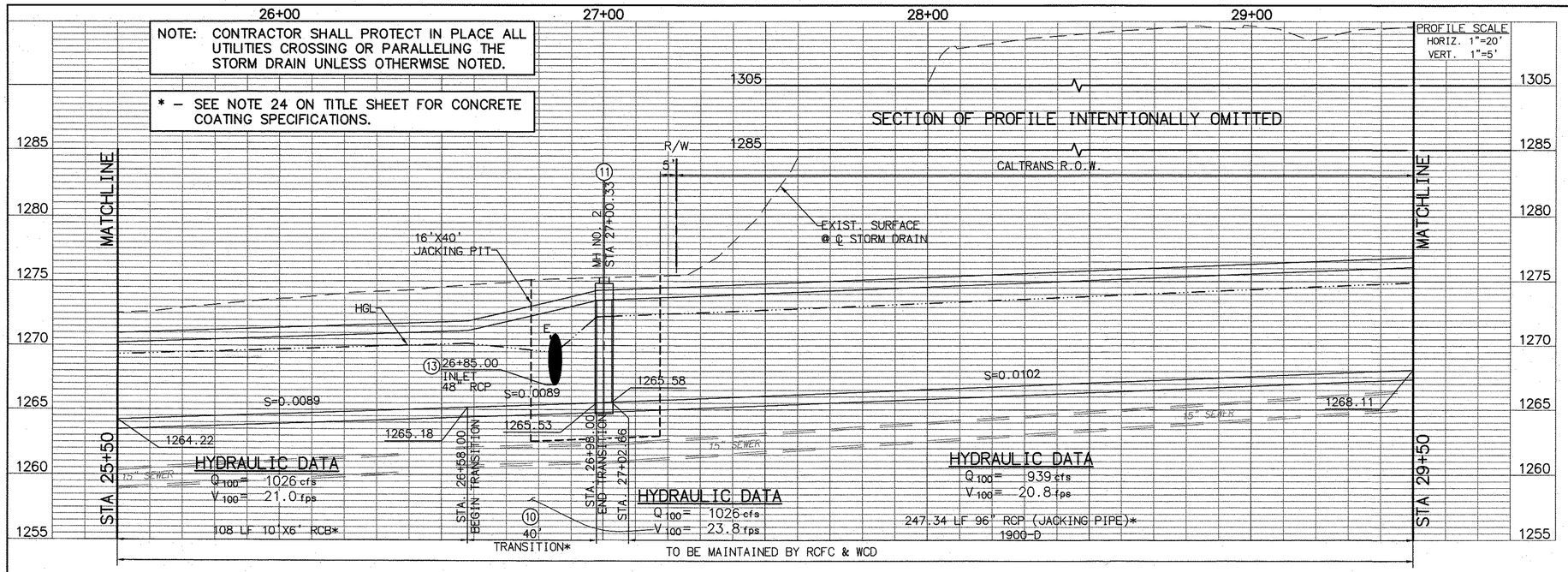
PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 2 OF 13

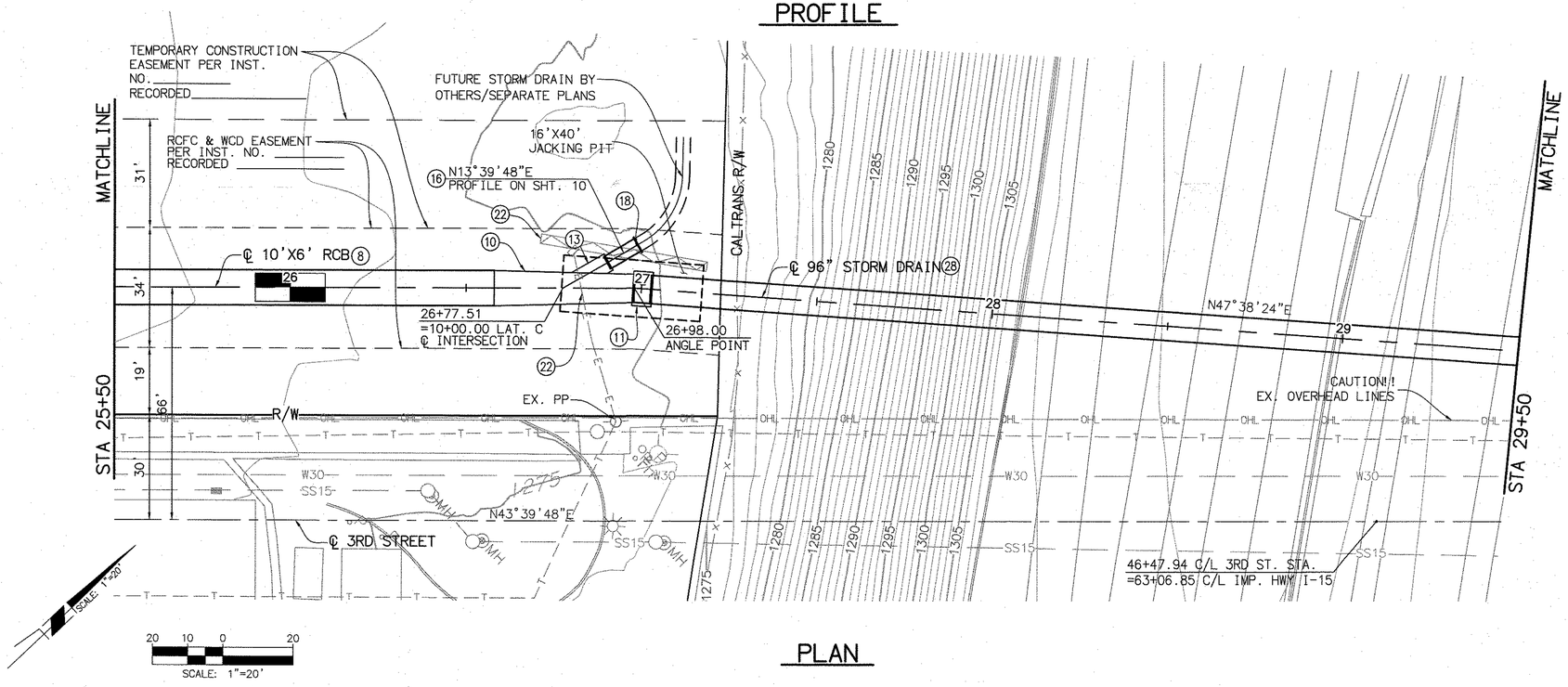
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NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.

PROFILE





PLAN

CONSTRUCTION NOTES

(8) CONSTRUCT 10' X 6' (SPAN X RISE) PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. D83A AND D83B.

(10) CONSTRUCT TRANSITION STRUCTURE NO. 1 PER RCFC&WCD STD. DWG. NO. TS301.

(11) CONSTRUCT MANHOLE NO. 2 PER RCFC&WCD STD. DWG. NO. MH252. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.

(13) CONSTRUCT JUNCTION STRUCTURE NO. 1 PER RCFC&WCD STD. DWG. NO. JS226.

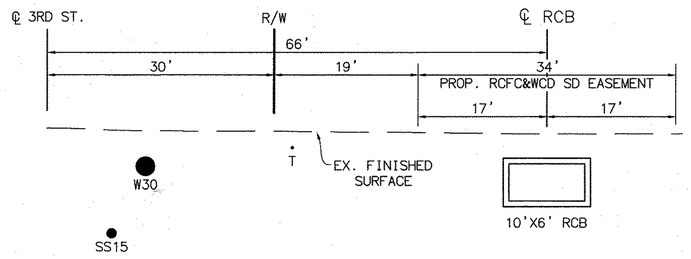
(16) INSTALL 48" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(18) CONSTRUCT CONCRETE BULKHEAD PER RCFC&WCD STD. DWG. NO. M816.

(22) EXISTING BILLBOARD AND ELECTRICAL CONDUIT TO BE RELOCATED OUT OF PROPOSED EASEMENT BY PROPERTY OWNER.

(28) INSTALL 96" RCP JACKING PIPE STORM DRAIN. D-LOAD PER PLAN.

JUNCTION STRUCTURE No.1 TABLE (LAT. C)	
℄ INT. STA.	26+77.51
CALLOUT	VALUE
A	30"
B	48"
C	14.98'
ELEV R	1266.93
ELEV S	1266.99



SECTION AT STA 26+00

SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM

CALTRANS PERMIT NO. 08-16-N-TN-0291

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK

B.M. NO. EL-37-80

A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.

1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

JOHN D. TANNER III, RCE 60132 DATE:

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: _____ DATE: _____

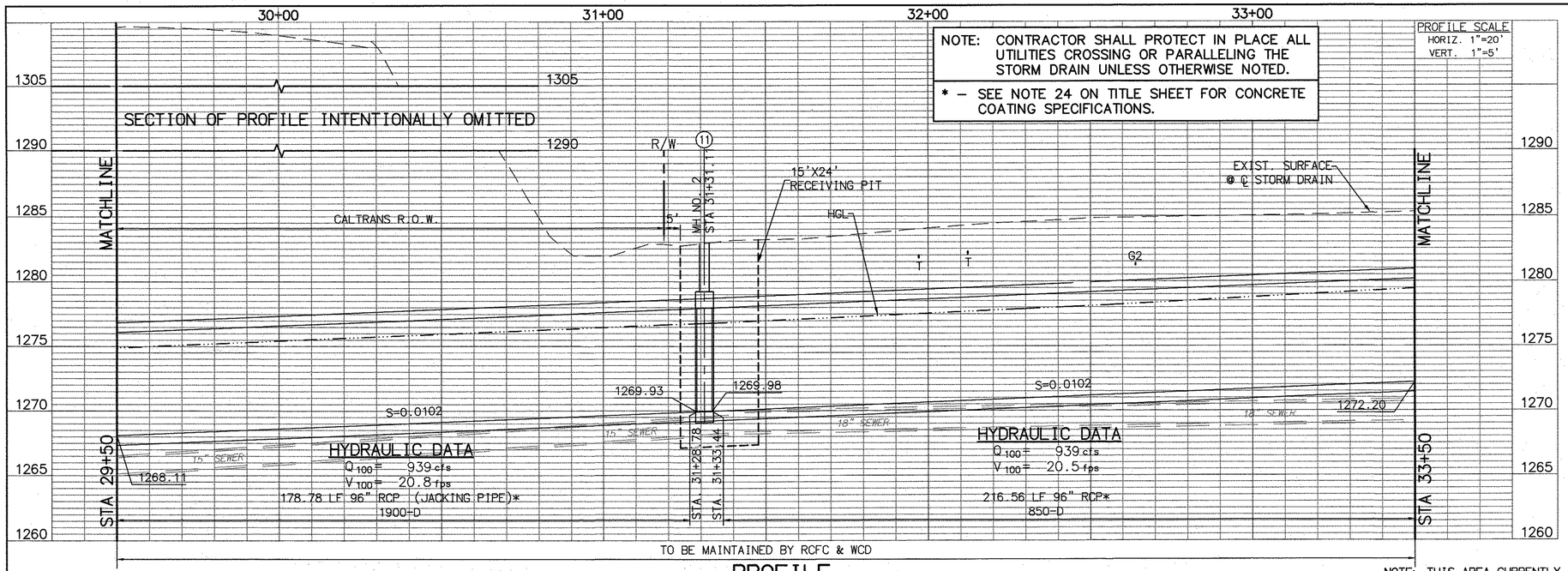
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THIRD STREET STORM DRAIN STAGE 2

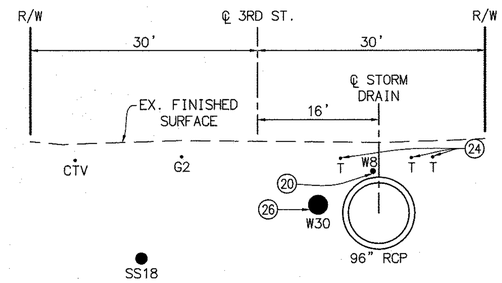
STA 25+50 TO STA 29+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 3 OF 13

H:\PDATA\148215\CADD\STRMWATER\DLV\STORMD\148215-SD-RCFCWCD-003.DWG JASON.STOUFFER 2/13/2018 12:35 PM



PROFILE



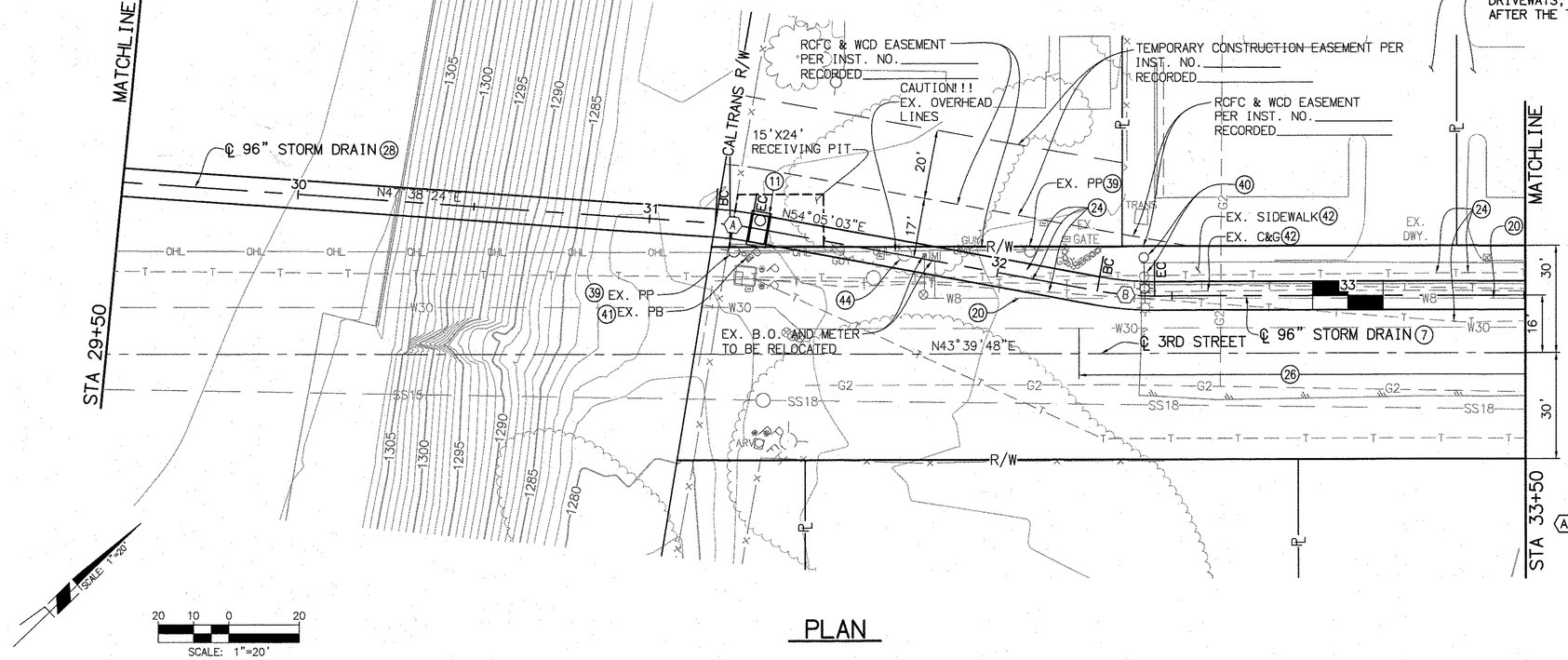
SECTION AT STA 33+00

SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM



PLAN

SCALE: 1"=20'

NOTE: THIS AREA CURRENTLY INCLUDES A RESTAURANT, PARKING LOT AND DRIVEWAYS, WHICH WERE CONSTRUCTED AFTER THE TOPO WAS FLOWN.

CONSTRUCTION NOTES

(7) INSTALL 96" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(11) CONSTRUCT MANHOLE NO. 2 PER RCFC&WCD STD. DWG. NO. MH252. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.

(20) INTERFERING 8" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.

(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.

(26) INTERFERING 30" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.

(28) INSTALL 96" RCP JACKING PIPE STORM DRAIN. D-LOAD PER PLAN.

(39) EXISTING POWER POLES TO BE PROTECTED IN PLACE. CONFLICTING GUY WIRES TO BE RELOCATED BY UTILITY OWNER (SCE).

(40) EXISTING STREET LIGHT TO BE RELOCATED BEHIND SIDEWALK (PER PLAN) BY CONTRACTOR.

(41) EXISTING ELECTRICAL PULL BOX TO BE PROTECTED IN PLACE.

(42) EXISTING STREET IMPROVEMENTS TO BE REMOVED AND REPLACED IN-KIND BY CONTRACTOR.

(44) REMOVE CONFLICTING TREE AND PROPERLY DISPOSE.

(A) ℄ CURVE DATA
Δ = 06°26'39"
R = 90.00'
T = 5.07'
L = 10.12'
BC = STA. 31+18.65
EC = STA. 31+28.78
PI = N 2196208.162
E 6231844.892

(B) ℄ CURVE DATA
Δ = 10°25'15"
R = 90.00'
T = 8.21'
L = 16.37'
BC = STA. 32+28.71
EC = STA. 32+45.07
PI = N 2196412.589
E 6231820.237

CALTRANS PERMIT NO. 08-16-N-TN-0291

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TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
B.M. NO. EL-37-80
A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.
1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM
JOHN D. TANNER III, RCE 60132
DATE:

REGISTERED PROFESSIONAL ENGINEER — JOHN D. TANNER III — No. 60132 — CIVIL — STATE OF CALIFORNIA

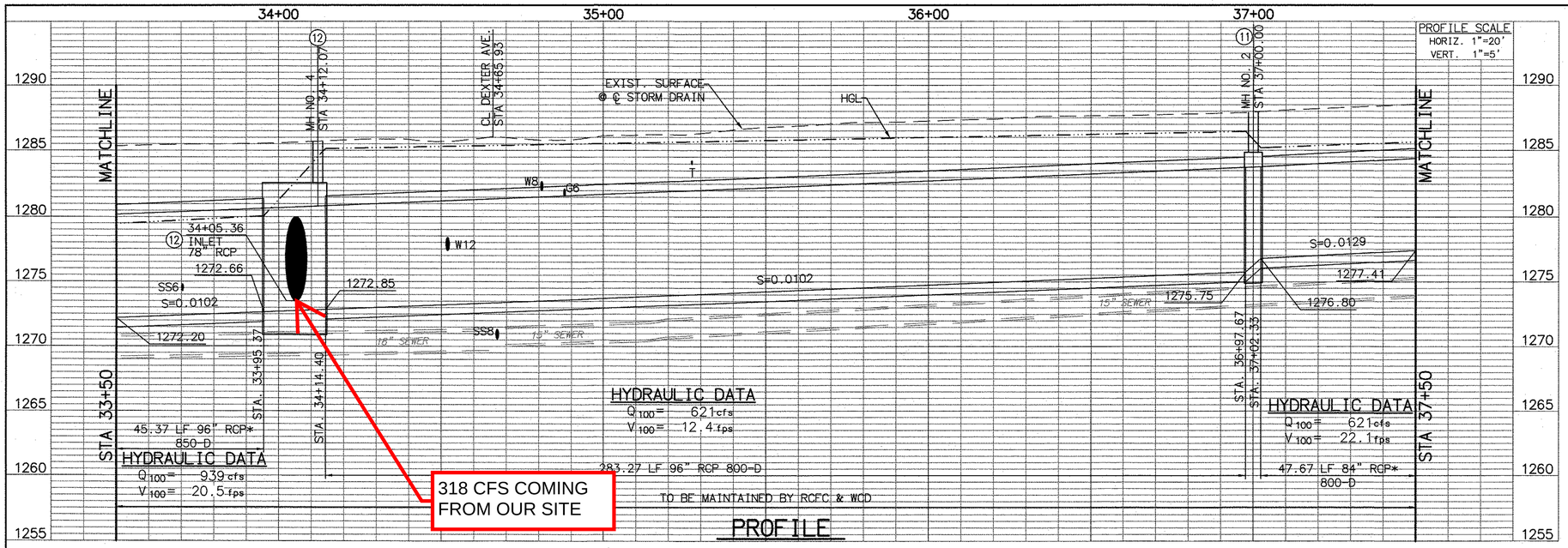
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

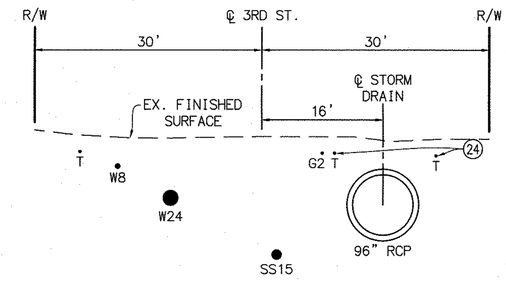
STA 29+50 TO STA 33+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 4 OF 13

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PROFILE



SECTION AT STA 35+50

SCALE 1"=10'

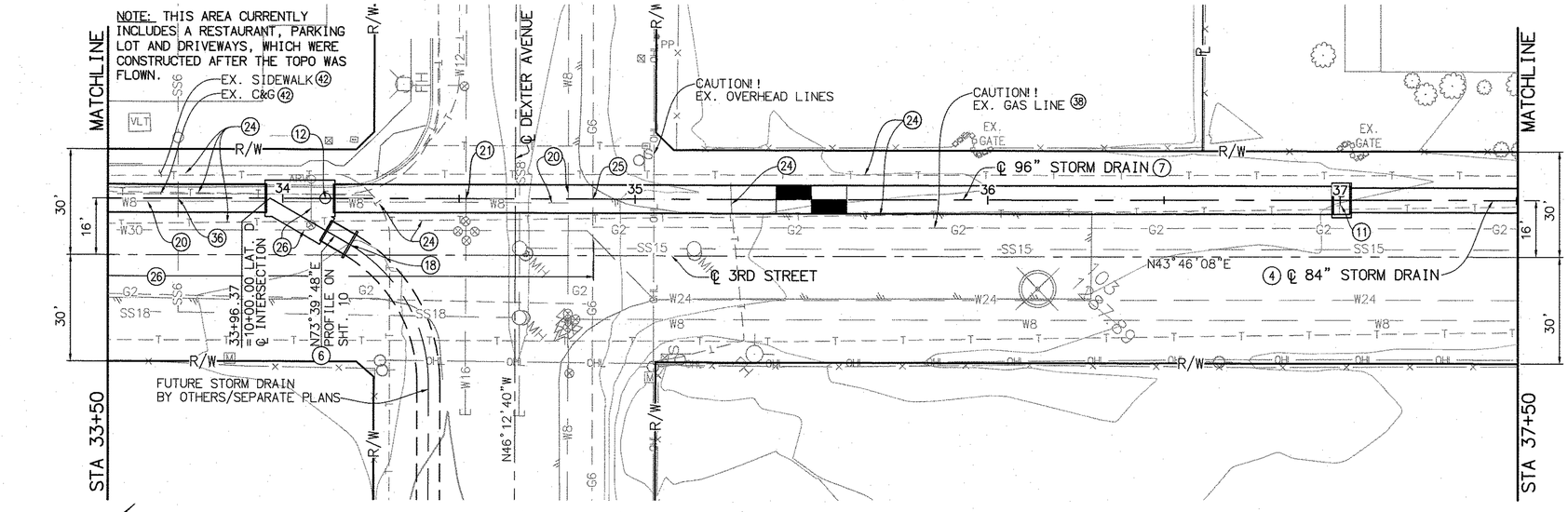
10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.



PLAN

SCALE: 1"=20'

20 10 0 20

SCALE: 1"=20'

CONSTRUCTION NOTES

(4) INSTALL 84" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(6) INSTALL 78" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(7) INSTALL 96" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(11) CONSTRUCT MANHOLE NO. 2 PER RCFC&WCD STD. DWG. NO. MH252. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.
(12) CONSTRUCT MANHOLE NO. 4 PER RCFC&WCD STD. DWG. NO. MH254. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.
(18) CONSTRUCT CONCRETE BULKHEAD PER RCFC&WCD STD. DWG. NO. M816.
(20) INTERFERING 8" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.
(21) INTERFERING 12" WATER TO BE RELOCATED PER EVMWD RELOCATION PLANS, SPECIFICATIONS AND STANDARDS.
(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.
(25) INTERFERING 6" GAS TO BE RELOCATED BY UTILITY OWNER (SO. CAL. GAS).
(26) INTERFERING 30" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.
(36) INTERFERING 6" SEWER TO BE RELOCATED PER EVMWD RELOCATION PLANS, SPECIFICATIONS AND STANDARDS.
(38) EXISTING 2" GAS TO BE PROTECTED IN PLACE. DO NOT EXPOSE.
(42) EXISTING STREET IMPROVEMENTS TO BE REMOVED AND REPLACED IN-KIND BY CONTRACTOR.

MANHOLE NO. 4 TABLE (LAT. D)	
STA.	34+12.07
CALLOUT	VALUE
A	30"
B	78"
C	18.71'
D1	96"
D2	96"
ELEV. R	1273.55
ELEV. S	1273.51

★PRELIMINARY★

SUBJECT TO REVISION

CALTRANS PERMIT NO. 08-16-N-TN-0291

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.



BENCH MARK
B.M. NO. EL-37-80
A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.
1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

JOHN D. TANNER III, RCE 60132 DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE:

APPROVED BY: DATE:

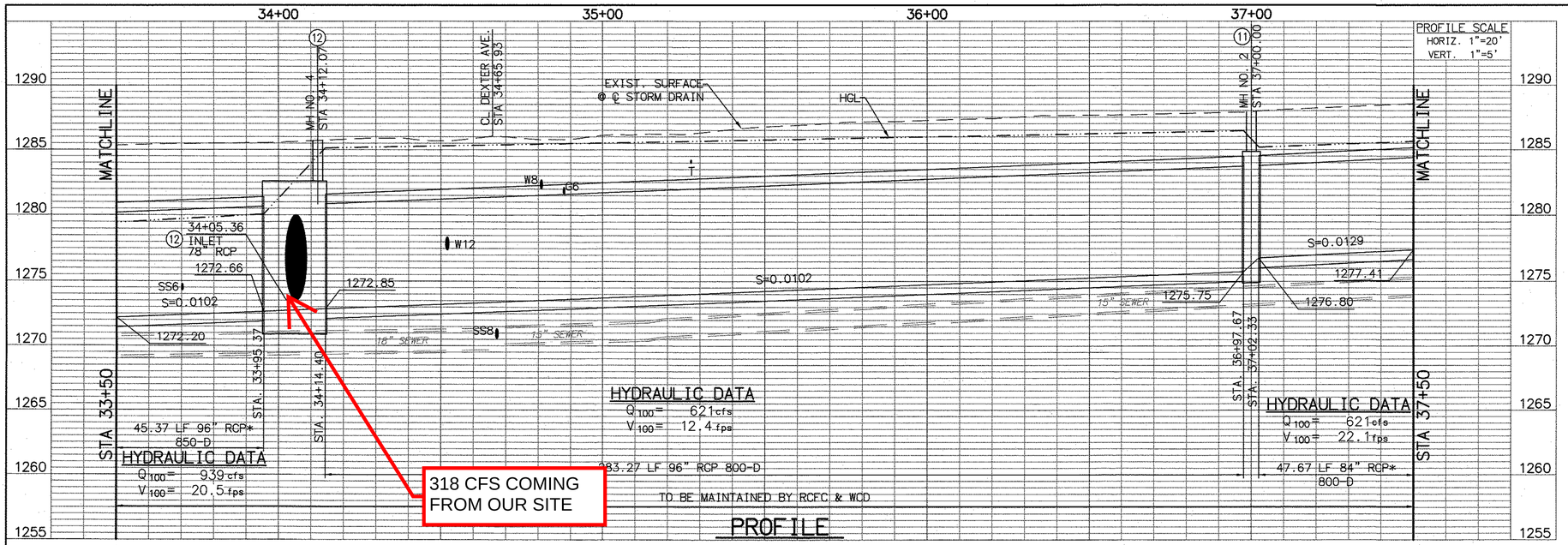
THIRD STREET STORM DRAIN STAGE 2

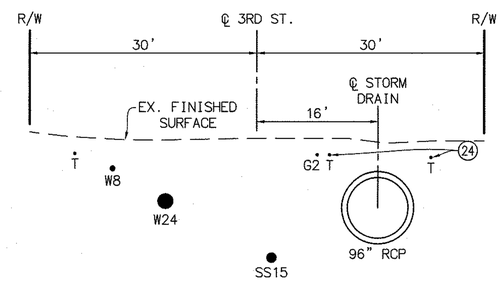
STA 33+50 TO STA 37+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 5 OF 13

FIFTH PLAN CHECK

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SECTION AT STA 35+50

SCALE 1"=10'

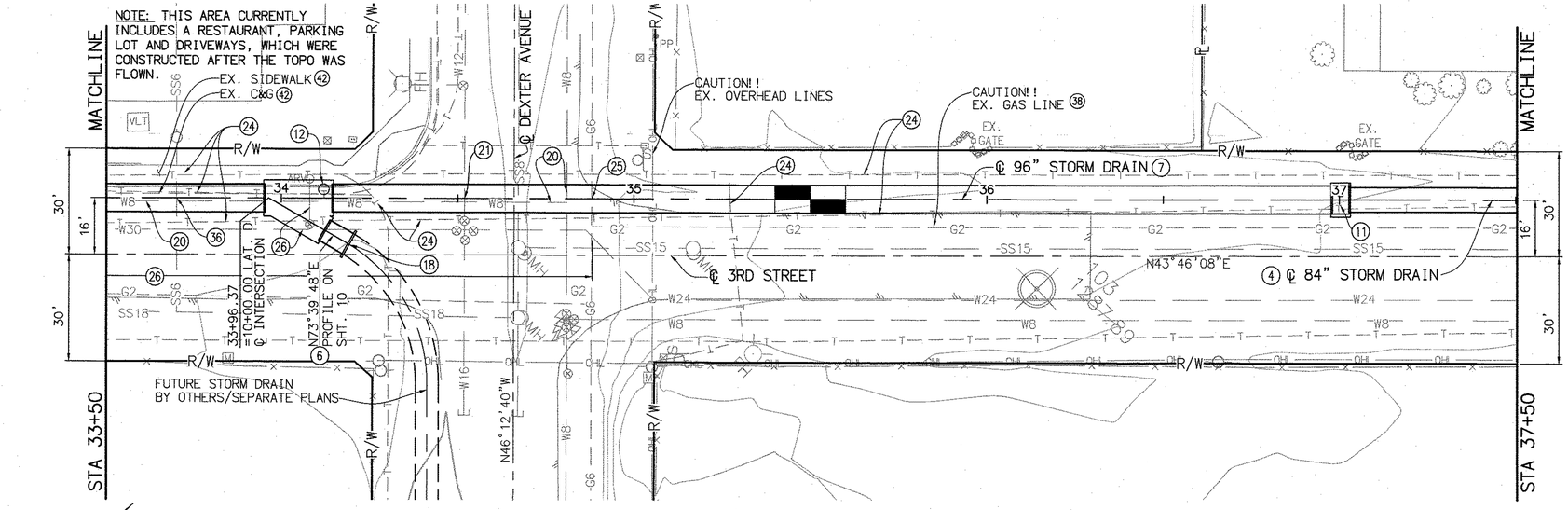
10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.



PLAN

CONSTRUCTION NOTES

4 INSTALL 84" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
6 INSTALL 78" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
7 INSTALL 96" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
11 CONSTRUCT MANHOLE NO. 2 PER RCFC&WCD STD. DWG. NO. MH252. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.
12 CONSTRUCT MANHOLE NO. 4 PER RCFC&WCD STD. DWG. NO. MH254. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.
18 CONSTRUCT CONCRETE BULKHEAD PER RCFC&WCD STD. DWG. NO. M816.
20 INTERFERING 8" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.
21 INTERFERING 12" WATER TO BE RELOCATED PER EVMWD RELOCATION PLANS, SPECIFICATIONS AND STANDARDS.
24 INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.
25 INTERFERING 6" GAS TO BE RELOCATED BY UTILITY OWNER (SO. CAL. GAS).
26 INTERFERING 30" WATER ABANDONED IN PLACE. CONFLICTING STRUCTURES AND PIPE TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO EVMWD RELOCATION PLANS.
36 INTERFERING 6" SEWER TO BE RELOCATED PER EVMWD RELOCATION PLANS, SPECIFICATIONS AND STANDARDS.
38 EXISTING 2" GAS TO BE PROTECTED IN PLACE. DO NOT EXPOSE.
42 EXISTING STREET IMPROVEMENTS TO BE REMOVED AND REPLACED IN-KIND BY CONTRACTOR.

MANHOLE NO. 4 TABLE (LAT. D)	
STA.	34+12.07
CALLOUT	VALUE
A	30"
B	78"
C	18.71'
D1	96"
D2	96"
ELEV. R	1273.55
ELEV. S	1273.51

CALTRANS PERMIT NO. 08-16-N-TN-0291

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TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
B.M. NO. EL-37-80
A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.
1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
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REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

JOHN D. TANNER III, RCE 60132 DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

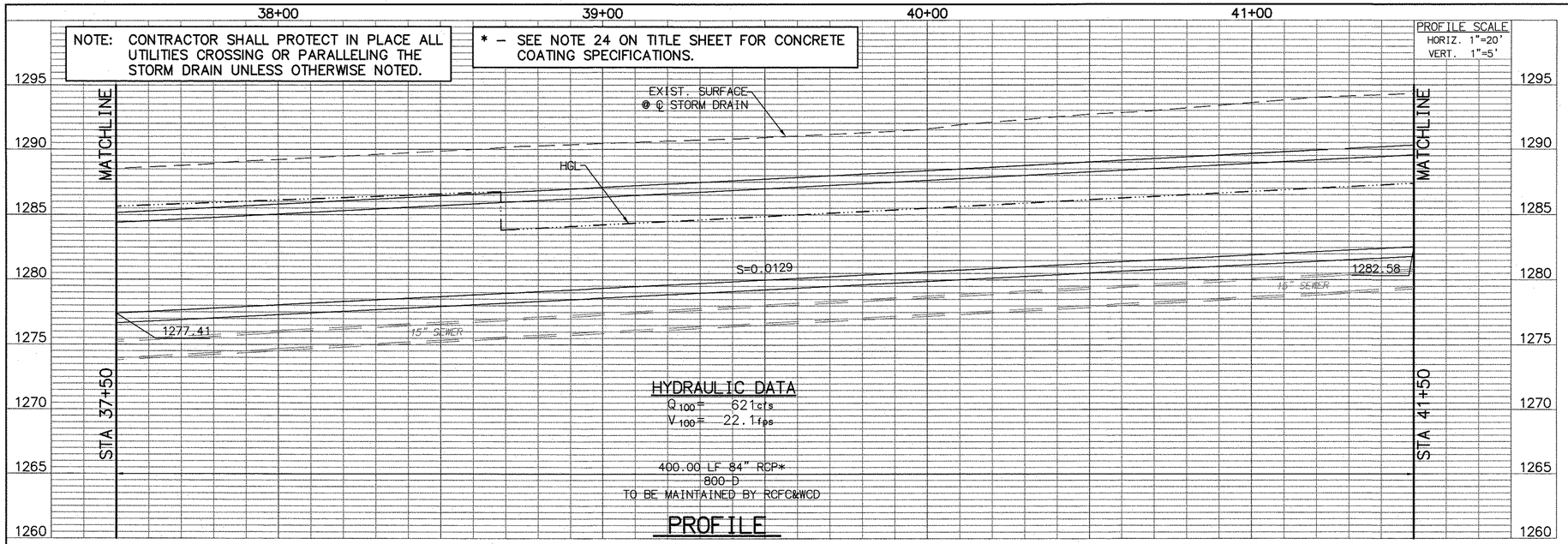
STA 33+50 TO STA 37+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 5 OF 13

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NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

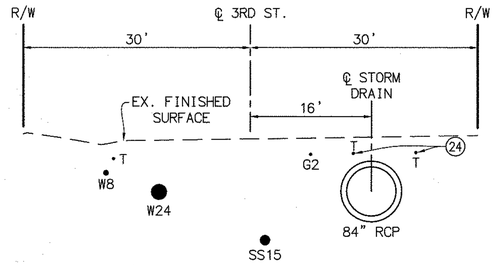
* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.



HYDRAULIC DATA
Q_{100} = 621cfs
V_{100} = 22.1fps

400.00 LF 84" RCP*
800-D
TO BE MAINTAINED BY RCFC&WCD

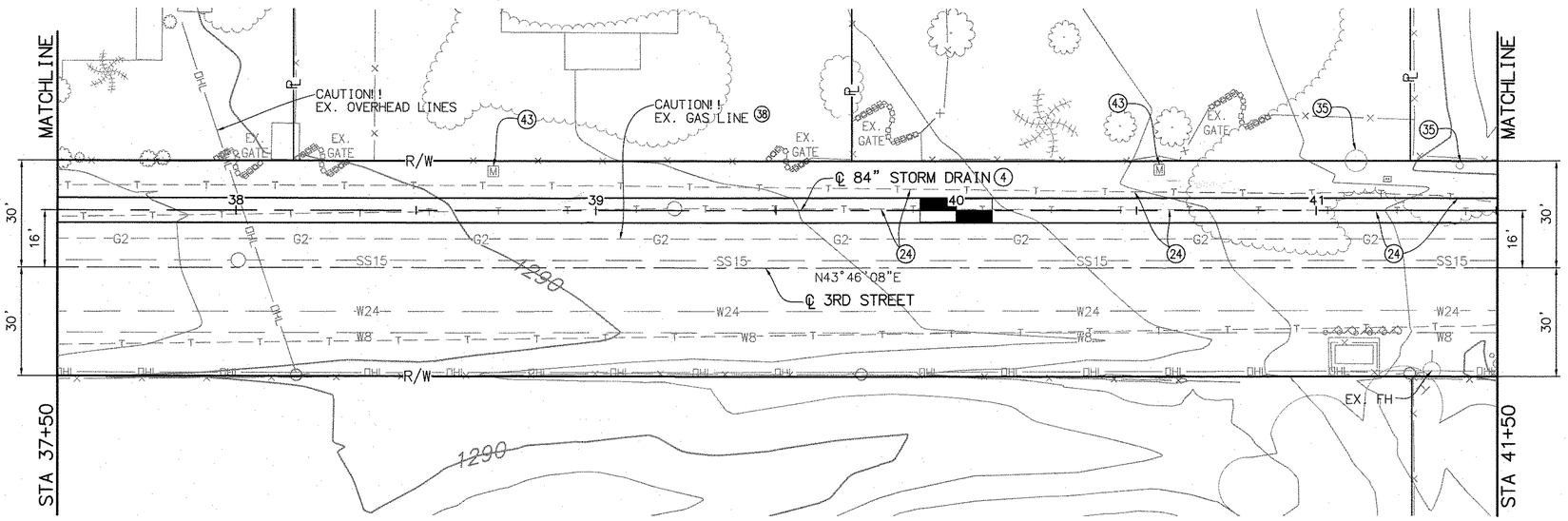
PROFILE



SECTION AT STA 40+00
SCALE 1"=10'
10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM



SCALE: 1"=20'
20 10 0 20
SCALE: 1"=20'

PLAN

CONSTRUCTION NOTES

(4) INSTALL 84" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.

(35) PROTECT IN PLACE EXISTING TREE. CONTRACTOR TO INFORM ENGINEER IF TREE POSES AN ISSUE FOR CONSTRUCTION.

(38) EXISTING 2" GAS TO BE PROTECTED IN PLACE. DO NOT EXPOSE.

(43) EXISTING WATER METER TO BE PROTECTED IN PLACE. CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS.

CALTRANS PERMIT NO. 08-16-N-TN-0291

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B.M. NO. EL-37-80

A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.

1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
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REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

JOHN D. TANNER III, RCE 60132 DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE:

APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

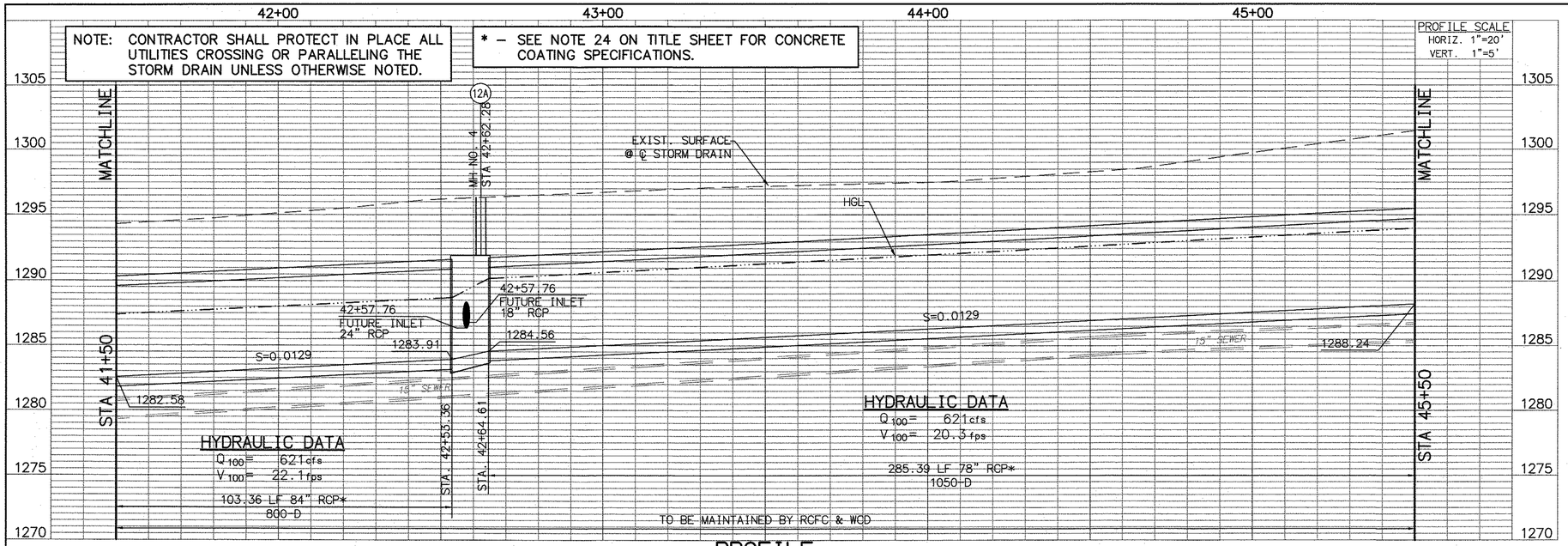
STA 37+50 TO STA 41+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 6 OF 13

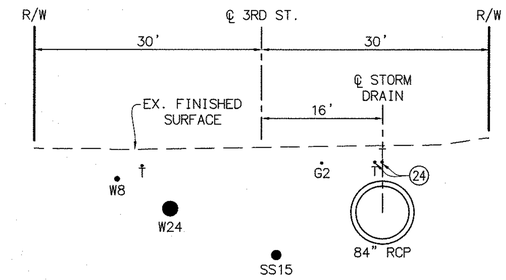
H:\PDATA\148215\CADD\STRMWATER\DLV\STORMD\148215-SD-RCFCWCD-006.DWG JASON.STOUFFER 2/13/2018 12:38 PM

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.



PROFILE



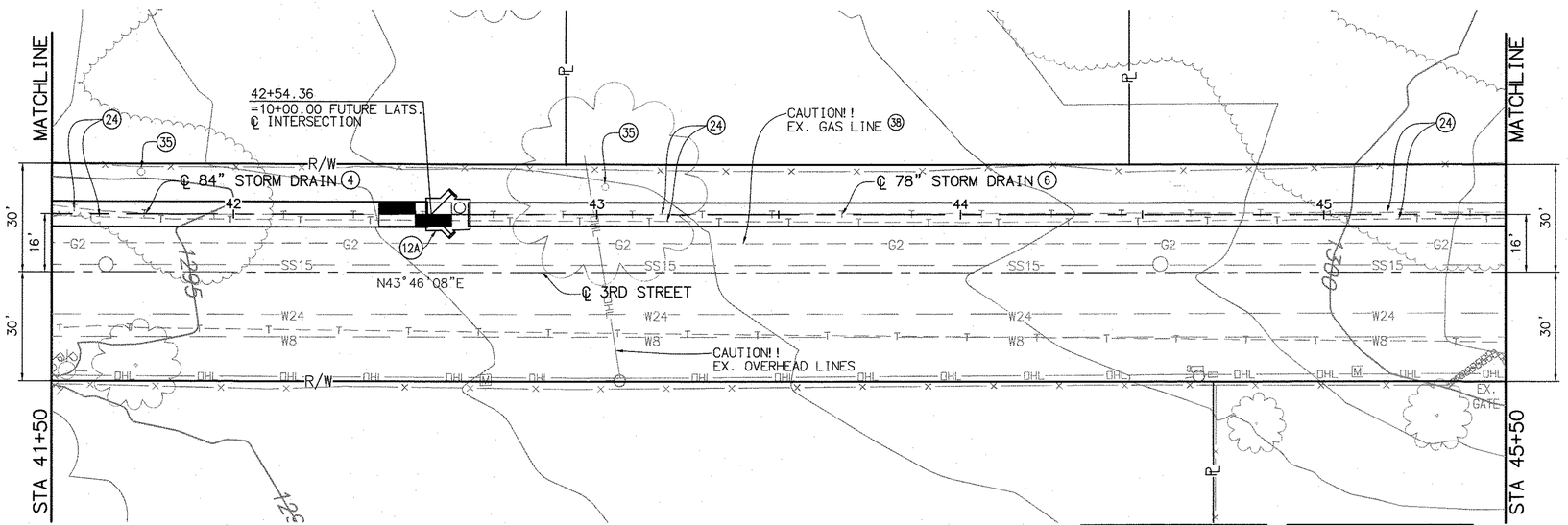
SECTION AT STA 42+50

SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM



PLAN

SCALE: 1"=20'

MANHOLE NO. 4 TABLE FUTURE LATERAL	
STA.	42+54.36
CALLOUT	VALUE
A	45°
B	18"
C	8.27'
D1	78"
D2	84"
ELEV. R	1286.86
ELEV. S	1286.84

MANHOLE NO. 4 TABLE FUTURE LATERAL	
STA.	42+54.36
CALLOUT	VALUE
A	45°
B	24"
C	8.57'
D1	78"
D2	84"
ELEV. R	1286.78
ELEV. S	1286.61

CONSTRUCTION NOTES

(4) INSTALL 84" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(6) INSTALL 78" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(12A) CONSTRUCT MANHOLE NO. 4 PER RCFC&WCD STD. DWG. NO. MH254 WITH STUBS FOR FUTURE STORM DRAIN CONNECTION: (1)-24" STUB (N) & (1)-18" STUB (S). INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.

(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.

(35) PROTECT IN PLACE EXISTING TREE. CONTRACTOR TO INFORM ENGINEER IF TREE POSES AN ISSUE FOR CONSTRUCTION.

(38) EXISTING 2" GAS TO BE PROTECTED IN PLACE. DO NOT EXPOSE.

CALTRANS PERMIT NO. 08-16-N-TN-0291

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.



TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
B.M. NO. EL-37-80
A 1 1/2" ALUM. CAP IN 6" CONC. COLLAR, FROM INTER. OF RIVERSIDE DR. AND LAKESHORE DR, SE 1.7 MI. TO THE INTER. OF MOHR ST. AND LAKESHORE DR; 40'± SW FROM ABOVE INTER; 16'± SW OF PP #46330; 1'± S OF SURVEY MARKER POST.
1264.85 EL.

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

JOHN D. TANNER III, RCE 60132 DATE:

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE:

APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

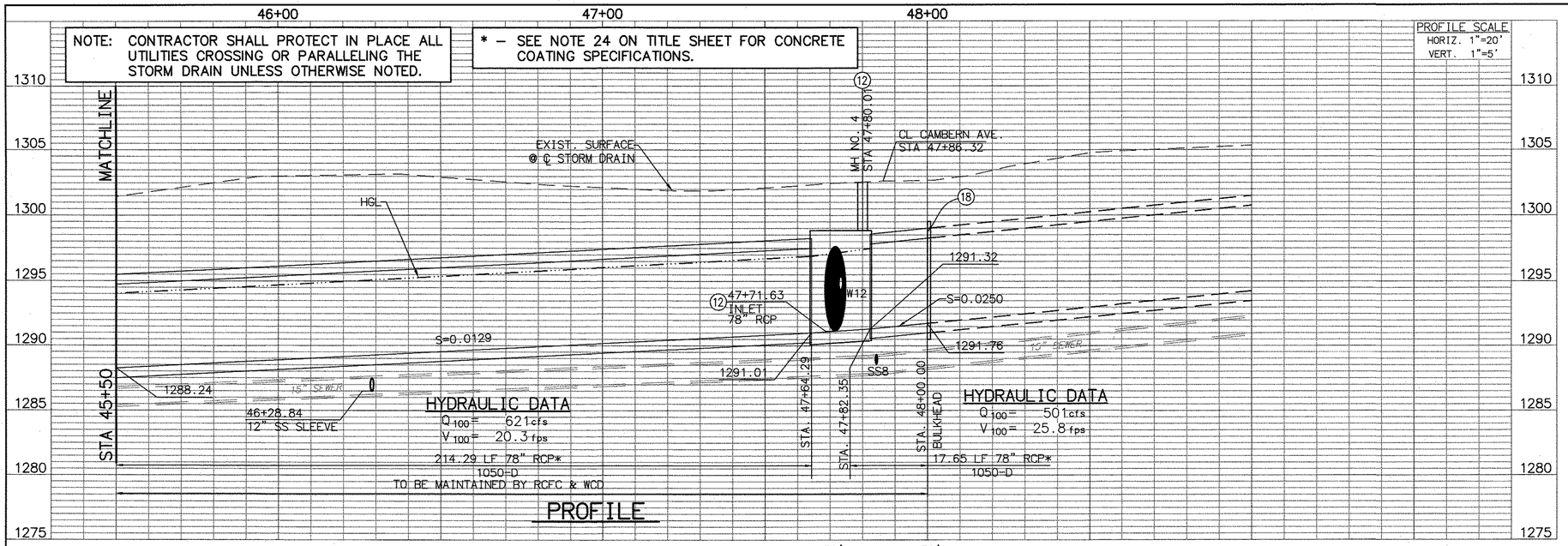
STA 41+50 TO STA 45+50

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 7 OF 13

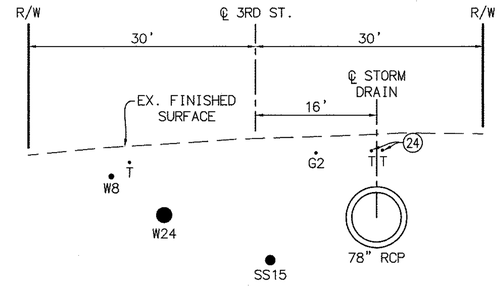
H:\PDATA\14821S\CADD\STRMWATER\DLV\STORMD\14821S-SD-RCFCWCD-007.DWG JASON.STOUFFER 2/13/2018 12:38 PM

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

* – SEE NOTE 24 ON TITLE SHEET FOR CONCRETE COATING SPECIFICATIONS.



PROFILE

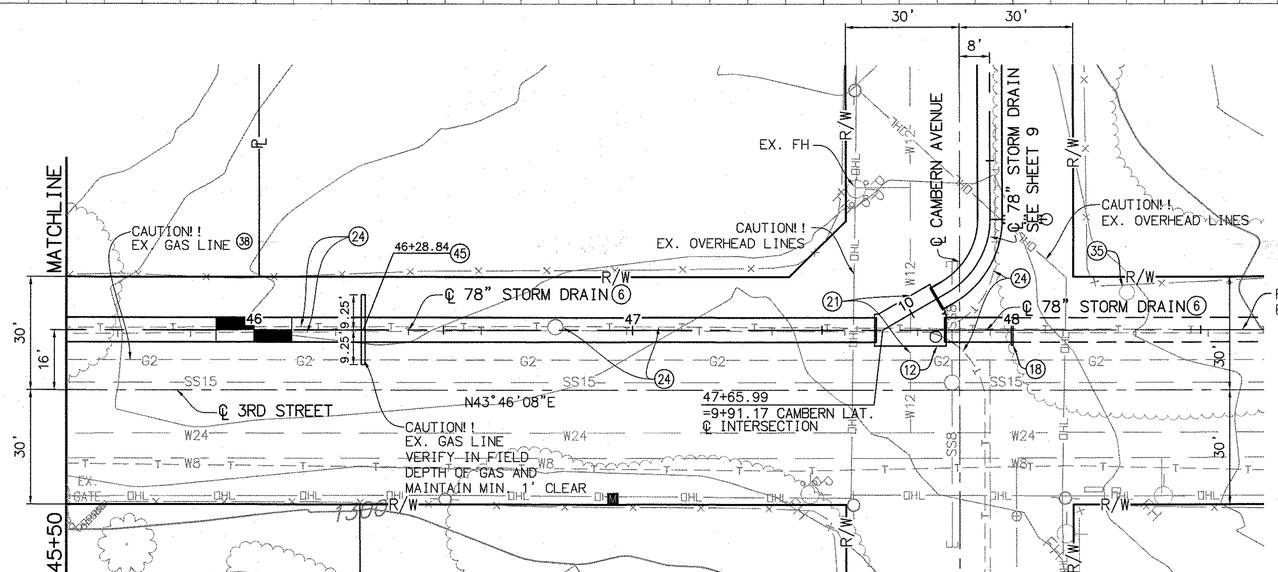


SECTION AT STA 46+00
SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM



SCALE 1"=20'

20 10 0 20

SCALE: 1"=20'

PLAN

CONSTRUCTION NOTES

(6) INSTALL 78" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.

(12) CONSTRUCT MANHOLE NO. 4 PER RCFC&WCD STD. DWG. NO. MH254. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.

(18) CONSTRUCT CONCRETE BULKHEAD PER RCFC&WCD STD. DWG. NO. M816.

(21) INTERFERING 12" WATER TO BE RELOCATED PER EVMWD RELOCATION PLANS, SPECIFICATIONS AND STANDARDS.

(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.

(35) PROTECT IN PLACE EXISTING TREE. CONTRACTOR TO INFORM ENGINEER IF TREE POSES AN ISSUE FOR CONSTRUCTION.

(38) EXISTING 2" GAS TO BE PROTECTED IN PLACE. DO NOT EXPOSE.

(45) INSTALL 12" STEEL SLEEVE

MANHOLE NO. 4 TABLE CAMBERN ST. LATERAL	
STA.	47+65.99
CALLOUT	VALUE
A	30"
B	78"
C	16.78'
D1	78"
D2	78"
ELEV. R	1291.22
ELEV. S	1291.12

CALTRANS PERMIT NO. 08-16-N-TN-0291

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1264.85 EL.

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

JOHN D. TANNER III, RCE 60132 DATE:

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: DATE:

APPROVED BY: DATE:

THIRD STREET STORM DRAIN STAGE 2

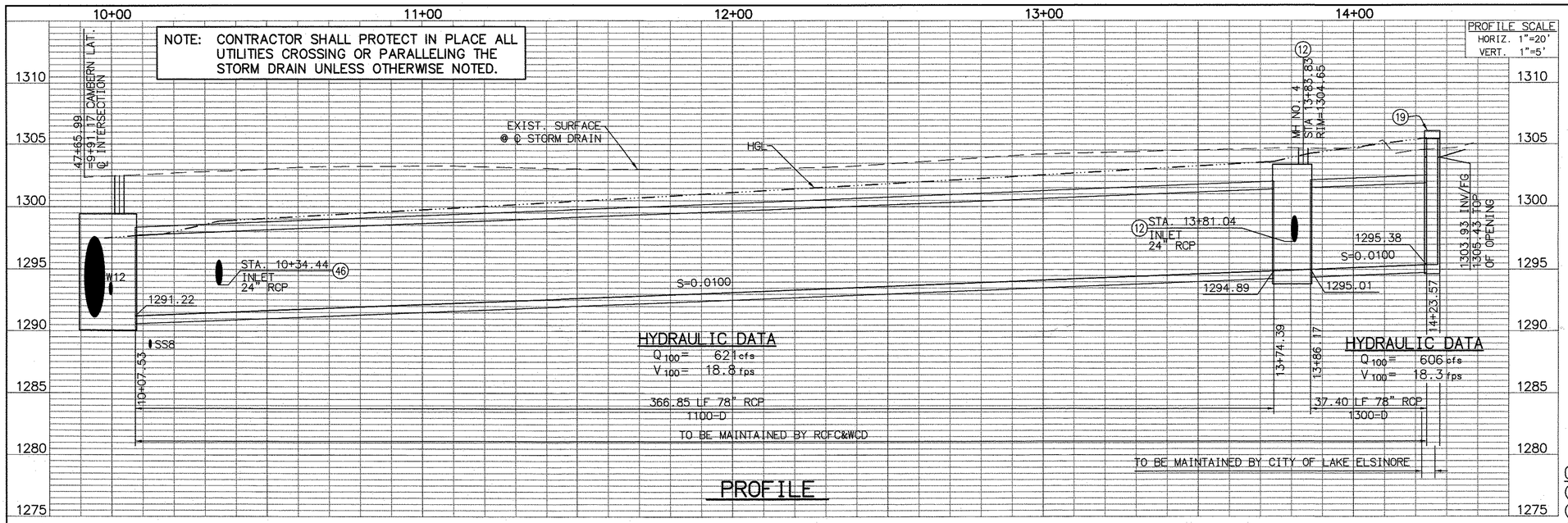
STA 45+50 TO STA 48+00

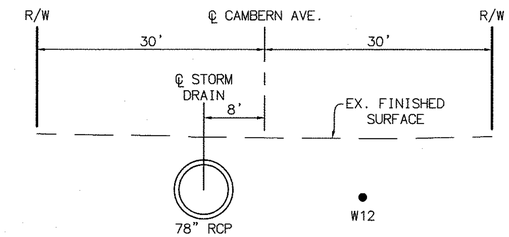
PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 8 OF 13

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NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.

PROFILE SCALE
HORIZ. 1"=20'
VERT. 1"=5'



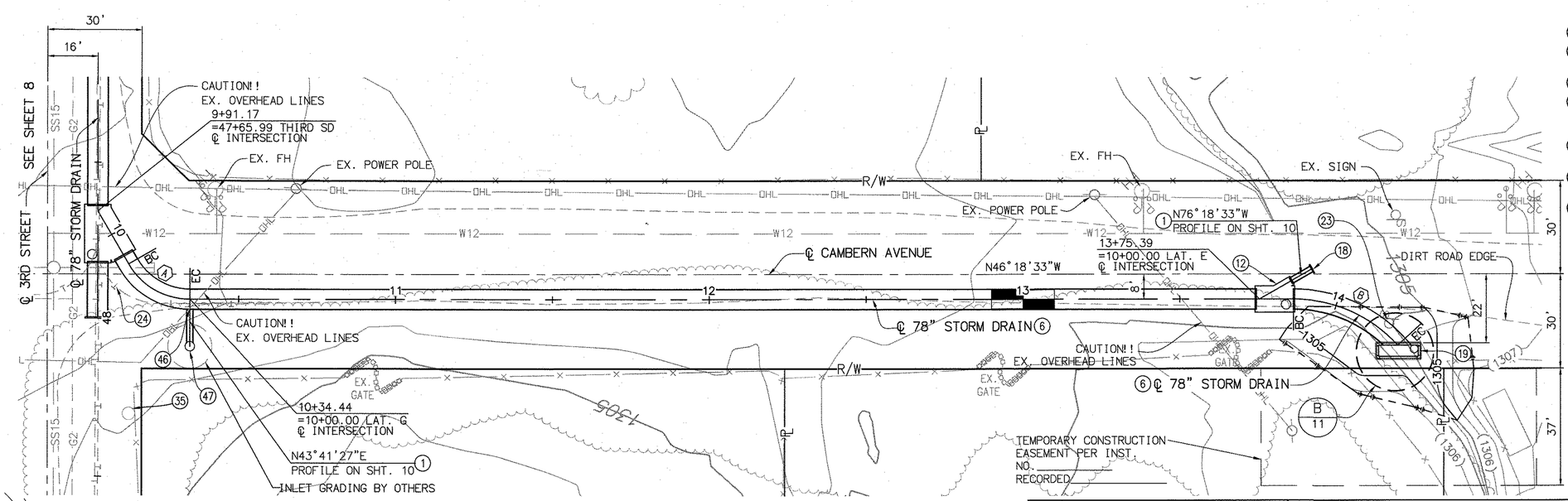


SECTION AT STA 13+00
SCALE 1"=10'

10' 0 10'

INFORMATIONAL NOTE

ALL X-SECTIONS TAKEN LOOKING DOWN STREAM



PLAN

CONSTRUCTION NOTES

(1) INSTALL 24" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(6) INSTALL 78" RCP STORM DRAIN PIPE, D-LOAD PER PLAN.
(12) CONSTRUCT MANHOLE NO. 4 PER RCFC&WCD STD. DWG. NO. MH254. INCLUDE A 6' X 6' X 6" THICK CONCRETE PAD WITH #4 @ 12" O.C. E.W. REINFORCEMENT AROUND ALL MANHOLES LOCATED IN UNPAVED AREAS.
(18) CONSTRUCT CONCRETE BULKHEAD PER RCFC&WCD STD. DWG. NO. M816.
(19) CONSTRUCT CONCRETE DROP INLET/OUTLET CONTROL PER RCFC&WCD STD. DWG. NO. CB110 AS MODIFIED PER DETAIL ON SHEET 11.
(23) EXISTING SIGN TO BE REMOVED AND RELOCATED BY CONTRACTOR.
(24) INTERFERING TELEPHONE LINE ABANDONED IN PLACE BY UTILITY OWNER (FRONTIER). CONFLICTING STRUCTURES AND CONDUITS TO BE REMOVED AND DISPOSED BY CONTRACTOR. REFER TO FRONTIER RELOCATION PLANS.
(35) PROTECT IN PLACE EXISTING TREE. CONTRACTOR TO INFORM ENGINEER IF TREE POSES AN ISSUE FOR CONSTRUCTION.
(46) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER RCFC&WCD STD. DWG. NO. JS229.
(47) CONSTRUCT INLET TYPE X PER RCFC&WCD STD. DWG. NO. CB108.

(A) ℄ CURVE DATA
Δ = 60°04'41"
R = 22.50'
T = 13.01'
L = 23.59'
BC = STA. 10+10.85
EC = STA. 10+34.44
PI = N 2197480.75
E 6232944.93

(B) ℄ CURVE DATA
Δ = 47°37'25"
R = 45.00'
T = 19.86'
L = 37.40'
BC = STA. 13+86.17
EC = STA. 14+23.57
PI = N 2197765.24
E 6232712.28

MANHOLE NO. 4 TABLE (LAT. E)

STA.	13+75.39
CALLOUT	VALUE
A	30'
B	24"
C	11.94'
D1	78"
D2	78"
ELEV. R	1297.31
ELEV. S	1297.26

CITY OF LAKE ELSINORE DREAM EXTREME™

THESE PLANS HAVE BEEN REVIEWED FOR COMPLIANCE WITH THE APPROPRIATE CONDITIONS OF DEVELOPMENT AND/OR CITY AND STATE LAWS AND HAVE BEEN FOUND ACCEPTABLE

BRADLEY FAGRELL, RCE No. 43920 DATE
CITY ENGINEER
CITY OF LAKE ELSINORE

CALTRANS PERMIT NO. 08-16-N-TN-0291

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1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 200
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

REGISTERED PROFESSIONAL ENGINEER JOHN D. TANNER III No. 60132 CIVIL STATE OF CALIFORNIA

JOHN D. TANNER III, RCE 60132 DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

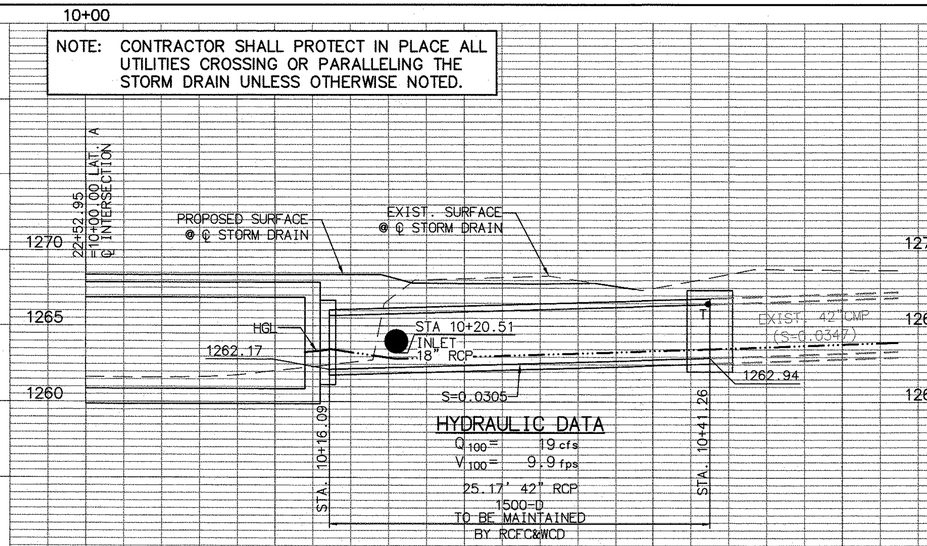
THIRD STREET STORM DRAIN STAGE 2

STA 9+91.17 TO STA 14+23.57

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 9 OF 13

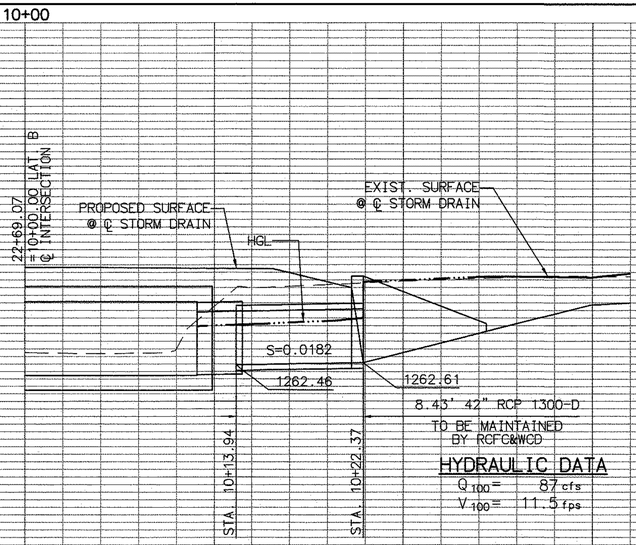
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NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



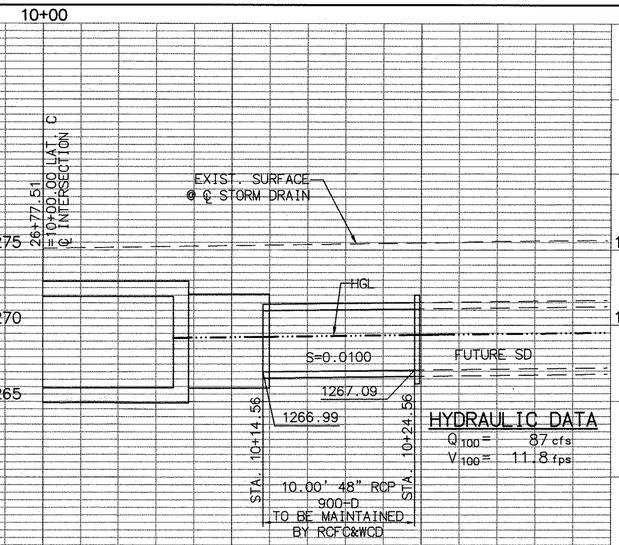
LAT. A

SEE PLAN AND PROFILE SHEET 2



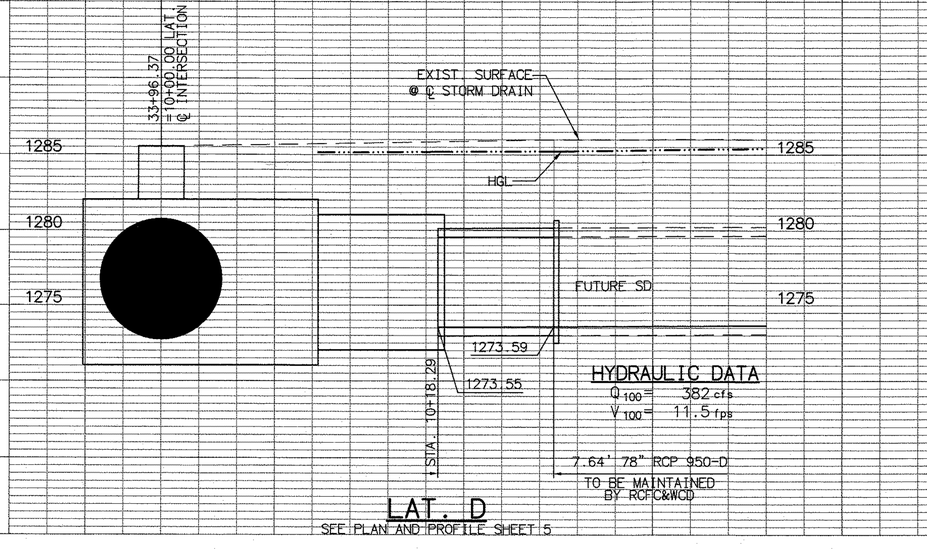
LAT. B

SEE PLAN AND PROFILE SHEET 2



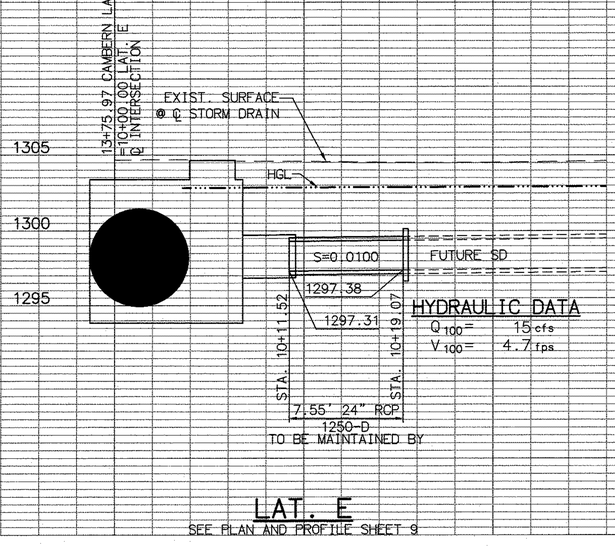
LAT. C

SEE PLAN AND PROFILE SHEET 3



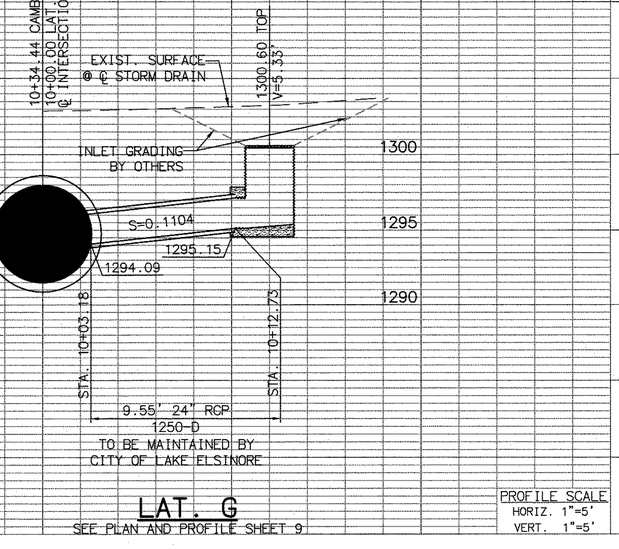
LAT. D

SEE PLAN AND PROFILE SHEET 5



LAT. E

SEE PLAN AND PROFILE SHEET 9



LAT. G

SEE PLAN AND PROFILE SHEET 9

PROFILE SCALE
HORIZ. 1"=5'
VERT. 1"=5'

CITY OF LAKE ELSINORE — DREAM EXTREME™

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BRADLEY FAGRELL, RCE No. 43920 — DATE
CITY ENGINEER
CITY OF LAKE ELSINORE

CALTRANS PERMIT NO. 08-16-N-TN-0291

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B.M. NO. EL-37-80
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1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

Michael Baker INTERNATIONAL
40810 COUNTY CENTER DR., SUITE 100
TEMECULA, CA 92591
PHONE: (951) 676-8042
MBAKERINTL.COM

REGISTERED PROFESSIONAL ENGINEER — JOHN D. TANNER III — No. 60132 — CIVIL — STATE OF CALIFORNIA

JOHN D. TANNER III, RCE 60132 — DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

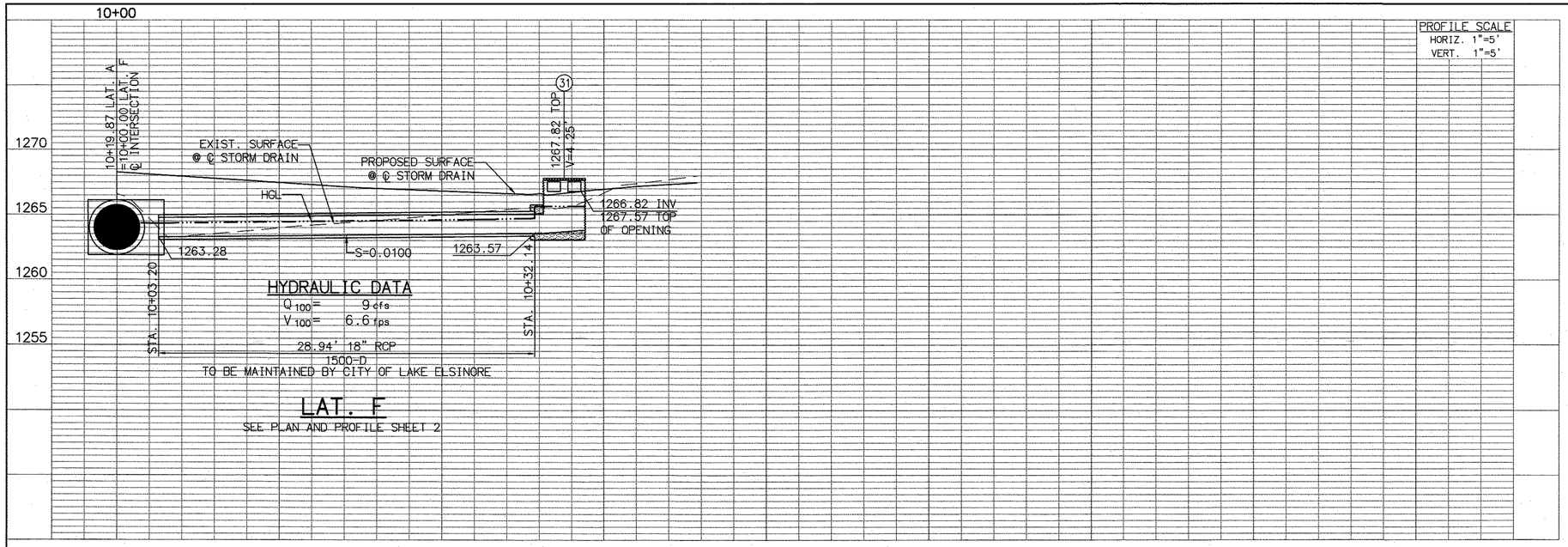
RECOMMENDED FOR APPROVAL BY: — APPROVED BY:
PLANNING ENGINEER — CHIEF ENGINEER
DATE: — DATE:

THIRD STREET STORM DRAIN STAGE 2

CONNECTOR PIPE PROFILES

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 10 OF 13

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CONSTRUCTION NOTES

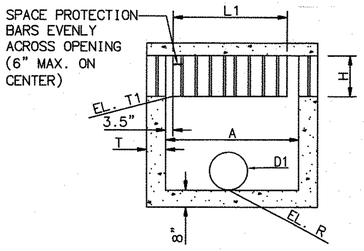
(19) CONSTRUCT CONCRETE DROP INLET/OUTLET CONTROL PER RCFC&WCD STD. DWG. NO. CB110 AS MODIFIED PER DETAIL ON SHEET 11.

(29) CONSTRUCT PIPE CULVERT WING WALL PER CALTRANS STD DWG D86B AND DETAIL ON SHEET 11.

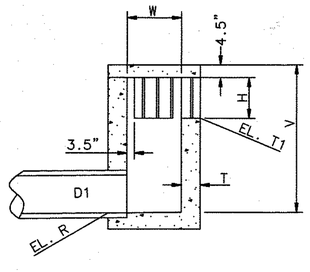
(31) CONSTRUCT MODIFIED INLET TYPE X PER RCFC&WCD STD. DWG. NO. CB108 WITH OPTIONAL OPENINGS AND OPENING HEIGHT EQUAL TO 0.75'.

(32) INSTALL 1/4 TON RIP RAP, 2.7' THICK WITH 9" THICK FILTER BLANKET OF 3/4" ROCK OVER SAND. USE MIRAFI 1100-N FOR FILTER BLANKET (OR APPROVED EQUAL). SEE DETAIL ON SHEET 11.

(33) CONSTRUCT TRASH RACK (INCLINED) PER APWA STD 361-2.

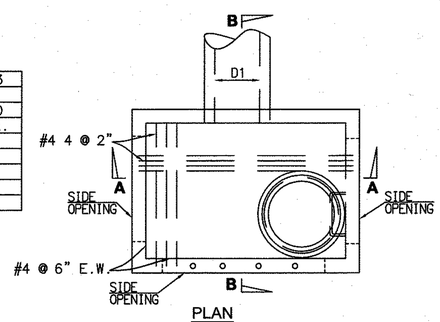


SECTION A-A
NORTH FACE



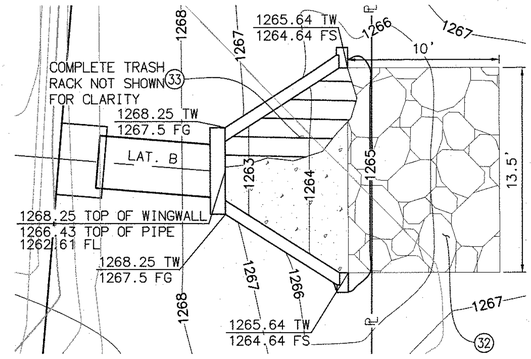
SECTION B-B

EL. T1	1303.93
L1	12'
EL. R	1298.00
D1	48" DIA.
A	12.58'
T	8"
H	1.5'
V	7.81'
W	3.58'



PLAN

(19) DETAIL: RCFC&WCD CB110 (MODIFIED) B/9
N.T.S.



(29) DETAIL: CALTRANS D86B WINGWALL A/2
SCALE: 1"=5'

WING WALL DATA TABLE					
TYPE	L	W	H	ELEV "a"	FLARE ANG.
CALTRANS D86B	9.0'	6.75'	5.7'	1265.64	33°

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1264.85 EL.

REF.	REVISIONS	APPR.	DATE

DESIGNED BY: C. MORLOK
DRAWN BY: C. MORLOK
DATE DRAWN: 11-2015
CHECKED BY: J. TANNER

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JOHN D. TANNER III, RCE 60132 — DATE:

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: — PLANNING ENGINEER — DATE:
APPROVED BY: — CHIEF ENGINEER — DATE:

THIRD STREET STORM DRAIN STAGE 2
DETAILS

PROJECT NO. 0-0-0000
DRAWING NO. 0-000
SHEET NO. 11 OF 13

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SOILS REPORT

GEOTECHNICAL AND INFILTRATION EVALUATION

PROPOSED COVE APARTMENT PROJECT
ASSESSOR'S PARCEL NUMBERS (APNS) 377-090-013, -037, -039 AND -040
DEXTER AVENUE AND 3RD STREET
LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA

PREPARED FOR

EMPIRE CONSTRUCTION MANAGEMENT
2280 WARDLOW CIRCLE, SUITE 250
CORONA, CALIFORNIA 92705

PREPARED BY

GEOTEK, INC.
1548 NORTH MAPLE STREET
CORONA, CALIFORNIA 92878

PROJECT NO. 2967-CR **JANUARY 18, 2022**

GEOTEK

GeoTek, Inc.
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January 18, 2022
Project No. 2967-CR

Empire Construction Management
2280 Wardlow Circle, Suite 250
Corona, California 92880

Attention: Mr. Brian King

Subject: **Geotechnical and Infiltration Evaluation**
Proposed Cove Apartment Project
Assessor's Parcel Numbers (APNs) 377-090-013, -037, -039 and -040
Dexter Avenue and 3rd Street
Lake Elsinore, Riverside County, California

Dear Mr. King:

GeoTek, Inc. (GeoTek) is pleased to provide the results of this Geotechnical and Infiltration Evaluation for the proposed project located in the City of Lake Elsinore, Riverside County, California. This report presents the results of GeoTek's evaluation, discussion of findings, and provides geotechnical recommendations for foundation design and construction.

Based upon review and evaluation, site development appears feasible from a geotechnical viewpoint provided that the recommendations included in this report are incorporated into the design and construction phases of the project.

The opportunity to be of service is sincerely appreciated. If you should have any questions, please do not hesitate to contact GeoTek.

Respectfully submitted,
GeoTek, Inc.





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Appendix B – Results of Laboratory Testing
Appendix C – Percolation Data & Porchet Calculations
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1. PURPOSE AND SCOPE OF SERVICES

The purpose of this study was to evaluate the geotechnical engineering and geologic conditions at the project site, as outlined in GeoTek's proposal P-1105421-CR, dated November 19, 2021. Services provided for this study included the following:

- Research and review of available geologic data and general information pertinent to the site,
- Perform a site reconnaissance,
- Site exploration consisting of the excavation, logging, and sampling of six (6) exploratory test borings extending to depths ranging from about 15 to 51.5 feet below grade,
- Excavation of three (3) additional borings to depths of about five (5) to ten feet below the existing ground surface, and performing an infiltration test in each boring,
- Laboratory testing of soil samples collected during the field investigation,
- Review and evaluation of site seismicity and geologic hazards, and
- Preparation of this geotechnical report which presents GeoTek's findings, conclusions, and recommendations for this site.

2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

2.1 SITE DESCRIPTION

The approximate 23.44-acre rectangular-shaped project site is located adjacent to the southeast corner of Dexter Avenue and 3rd Street, in the City of Lake Elsinore, Riverside County, California (see Figure 1). Access to the project is available from 3rd Street, Dexter Avenue, or 2nd Street, all paved improved streets located adjacent to the northern, western and southern boundaries of the site, respectively. The project is located in an area mostly described as mixed-use development and vacant land.

Topographically, the site slopes gently downward to the southwest at an approximate two (2) percent gradient. The elevation of the site ranges from approximately 1,293 to 1,325 feet. The site was vacant land at the time of the field exploration and was vegetated with a light covering of weeds and grasses with some scatterred trees.

2.2 PROJECT DESCRIPTION

GeoTek has not received a development/site plan as of the date of this report. Based upon discussions with project parties, GeoTek understands the subject property is to be developed into a multi-family residential development with associated underground utilities, interior drive lanes, landscaping and hardscaping improvements. Stormwater management facilities are proposed for the subject site. Slope heights, including for temporary remedial excavations, are not anticipated to exceed ten feet in height.

The proposed residential structures are anticipated to be of wood-frame construction, one to three-stories in height, and incorporate conventional shallow foundations and concrete slab-on-grade floors. Sewage disposal is anticipated to be by a public sewer system. For the purposes of this report, it is assumed maximum column and wall loads will be about 100 kips and 3.5 kips per foot, respectively. Once actual loads are known that information should be provided to GeoTek to determine if modifications to the recommendations presented in this report are warranted.

If site development differs from the assumptions made herein, the recommendations included in this report should be subject to further review and evaluation. Site development plans should be reviewed by GeoTek when they become available.

3. FIELD EXPLORATION AND LABORATORY TESTING

3.1 FIELD EXPLORATION

The field exploration for this report was conducted on January 3, 2022 and consisted of excavating six (6) geotechnical exploratory borings with a hollow-stem auger drill rig to depths ranging from about 15 to 51.5 feet below existing grades at the boring locations. The approximate locations of the GeoTek excavations are shown on the Boring Location Map (Figure 2). A geologist from GeoTek logged the excavations and collected soil samples for use in subsequent laboratory testing. The logs of the exploratory borings are included in Appendix A.

Relatively undisturbed soil samples were recovered at various intervals in the geotechnical borings with a California sampler. The California sampler is a 3-inch outside diameter, 2.5-inch inside diameter, split barrel sampler lined with brass rings. The sampler was 18 inches long. The sampler conformed to the requirements of ASTM D 3550. A 140-pound automatic trip hammer was utilized, dropping 30 inches for each blow. The relatively undisturbed samples, together with bulk samples of representative soil types, were returned to the laboratory for testing and evaluation. The California sampler test data are presented on the boring logs in Appendix A.

In Boring B-1, standard penetration tests (SPT) were performed with a 2.0-inch outside diameter, 1.5-inch inside diameter, split-barrel sampler. The sampler was 18 inches long. The inside diameter of the sampler shoe was 1.4 inches. The sampler was unlined. The sampler conformed to the requirements of ASTM D 1586. A 140-pound automatic trip hammer was utilized, dropping 30 inches for each blow. The sampler penetration test data are presented on the boring log for Boring B-1.

Percolation Testing

In addition to the geotechnical exploratory borings, three (3) percolation test borings (I-1 through I-3) were excavated in the northwestern and southwestern portion of the site to depths of about five (5) to ten (10) feet below the existing ground surface at the boring locations. Infiltration/percolation testing was conducted in these borings in general accordance with the requirements of the County of Riverside.

The percolation tests consisted of drilling an eight-inch diameter test hole to the desired depth and installing approximately two inches of gravel in the bottom of the hole. A three-inch diameter perforated PVC pipe, wrapped in a filter sock, was placed in the excavations and the annular space was filled with gravel to prevent caving within the boring. Water was then placed in the borings to presoak the holes and percolation testing was performed the following the pre-soak period. Following presoaking it was determined that "silty soil" criteria was met within both percolation borings. The percolation tests were then performed which consisted of adding water to each test hole and measuring the water drop over a 30-minute period. The water drop was recorded for six hours. Water was added to the test holes after each test interval of 30-minutes. The field percolation rates were then converted to an infiltration rate using the Porchet Method.

The results of the conversions indicate infiltration rate range from about 0.53 to 11.20 inches per hour. Copies of the percolation data sheets and the Porchet infiltration rate conversion calculations are presented in Appendix C. No factors of safety were applied to the rates

provided. Over the lifetime of the infiltration areas, the infiltration rates may be affected by sediment build up and biological activities, as well as local variations in near surface soil conditions. A suitable factor of safety should be applied to the field rate in designing the infiltration system.

It should be noted that the infiltration rates provided above were performed in relatively undisturbed on-site soils. Infiltration rates will vary and are mostly dependent on the underlying consistency of the site soils and relative density. Infiltration rates may be impacted by weight of equipment travelling over the soils, placement of engineered fill and other various factors. GeoTek assumes no responsibility or liability for the ultimate design or performance of the storm water facility.

3.2 LABORATORY TESTING

Laboratory testing was performed on selected relatively undisturbed ring and bulk samples collected during the field exploration. The purpose of the laboratory testing was to confirm the field classification of the materials encountered and to evaluate their physical properties for use in the engineering design and analysis. Results of the laboratory testing program along with a brief description and relevant information regarding testing procedures are included on the exploratory borings logs included in Appendix A and in Appendix B.

4. GEOLOGIC AND SOILS CONDITIONS

4.1 REGIONAL SETTING

The subject property is situated in the Peninsular Ranges geomorphic province. The Peninsular Ranges province is one of the largest geomorphic units in western North America. It extends approximately 975 miles south of the Transverse Ranges geomorphic province to the tip of Baja California. This province varies in width from about 30 to 100 miles. It is bounded on the west by the Pacific Ocean, on the south by the Gulf of California and on the east by the Colorado Desert Province.

The Peninsular Ranges are essentially a series of northwest-southeast oriented fault blocks. Several major fault zones are found in this province. The Elsinore Fault zone and the San Jacinto Fault zone trend northwest-southeast and are found near the middle of the province. The San Andreas Fault zone borders the northeasterly margin of the province.

More specific to the subject property, the site is located in an area geologically mapped to be underlain by younger fan materials and metasedimentary bedrock (Morton, D.M. and Weber, F.H., 2003). No active faults are shown in the immediate site vicinity on the maps reviewed for the area.

4.2 GENERAL SOIL CONDITIONS

A brief description of the earth materials encountered is presented in the following section. Based on the site reconnaissance and the exploratory excavations, the area investigated is locally underlain by younger fan materials. This is contradictory to the mapping performed by others for the site area (Morton, D.M. and Weber, F.H., 2003); however, the materials encountered in the borings were observed to be alluvial in nature.

4.2.1 Fill

Fill was not encountered in any of the exploratory borings at the time of drilling. Fill may be present within unexplored areas of the site, especially adjacent to existing streets.

4.2.2 Younger Fan Materials

Younger fan materials were encountered in all of the borings and extended to the maximum depth explored (Boring B-1 – 51.5 feet). As encountered in the borings, the alluvium consisted of interbedded layers of silty sands, sands, sandy clays and clayey sands (SM, SP, CL and SC soil types based upon the Unified Soil Classification System).

Based on the laboratory test results, the near surface soils have a "very low" expansion potential (ASTM D 4829). Based on the laboratory test results, the near surface soils have a soluble sulfate content of less than 0.1 percent (ASTM D 4327). The test results are provided in Appendix B.

4.3 SURFACE WATER AND GROUNDWATER

4.3.1 Surface Water

If encountered during earthwork operations, surface water on this site will most likely be the result of precipitation or possibly some minor surface run-off from the surrounding areas. Overall site area drainage varies due to the site topography and existing improvements. Provisions for surface drainage will need to be accounted for by the project civil engineer.

4.3.2 Groundwater

Seepage (perched groundwater) was encountered within exploratory Boring B-1 drilled at the site at a depth of approximately 40 below the existing ground surface at the boring location. Based on a review of groundwater depths noted on the State Department of Water Resources Water Data Library website, it is estimated the groundwater depth on this site is deeper than 50 feet below existing site grade. Based on the results of the field exploration, review of site area geomorphology and geology, groundwater is not anticipated to adversely affect the proposed improvements.

4.4 FAULTING AND SEISMICITY

4.4.1 Faulting

The geologic structure of the entire California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The site is in a seismically active region. However, the site is not situated within a State of California designated *"Alquist-Priolo"* Earthquake Fault Zone. The nearest known active fault is the Elsinore fault located about 14 miles to the southwest.

4.4.2 Seismic Design Parameters

The site is located at approximately 33.6894 degrees West Latitude and -117.3308 degrees North Longitude. Site spectral accelerations (S_a and S_1) for 0.2 and 1.0 second periods for a Class "D" site, was determined from the SEAOC/OSHPD web interface that utilizes the USGS web services and retrieves the seismic design data and presents that information in a report format. Using the ASCE 7-16 option on the SEAOC/OSHPD website results in the values for S_{M1} and S_{D1} reported as "null-See Section 11.4.8" (of ASCE 7-16). As noted in ASCE 7-16, Section 11.4.8, a site-specific ground motion procedure is recommended for Site Class D when the value S_1 exceeds 0.2. The value S_1 for the subject site exceeds 0.2.

For a site Class D, an exception to performing a site-specific ground motion analysis is allowed in ASCE 7-16 where S_1 exceeds 0.2 provided the value of the seismic response coefficient, Cs, is conservatively calculated by Eq 12.8-2 of ASCE 7-16 for values of $T \leq 1.5T_s$ and taken as equal to 1.5 times the value computed in accordance with either Eq. 12.8-3 for $T_L \geq T > 1.5T_s$ or Eq. 12.8-4 for $T > T_L$.

The results, based on the 2015 NEHRP and the 2019 CBC, are presented in the following table assuming that the exception as allowed in ASCE 7-16 is applicable. If the exception is deemed not appropriate, a site-specific ground motion analysis will be required.

Final selection of the appropriate seismic design coefficients should be made by the project structural engineer based upon the local practices and ordinances, expected building response and desired level of conservatism.

SITE SEISMIC PARAMETERS	
Mapped 0.2 sec Period Spectral Acceleration, S_S	2.018g
Mapped 1.0 sec Period Spectral Acceleration, S_1	0.725g
Site Coefficient for Site Class "D", F_a	1.0
Site Coefficient for Site Class "D", F_v	1.7
Maximum Considered Earthquake Spectral Response Acceleration for 0.2 Second, S_{MS}	2.018g
Maximum Considered Earthquake Spectral Response Acceleration for 1.0 Second, S_{M1}	1.232g
5% Damped Design Spectral Response Acceleration Parameter at 0.2 Second, S_{DS}	1.346g
5% Damped Design Spectral Response Acceleration Parameter at 1 second, S_{D1}	0.822g
Peak Ground Acceleration (PGA_M)	0.946g
Seismic Design Category	D

4.5 LIQUEFACTION

Liquefaction describes a phenomenon in which cyclic stresses, produced by earthquake-induced ground motion, create excess pore pressures in relatively cohesionless soils. These soils may thereby acquire a high degree of mobility, which can lead to lateral movement, sliding, consolidation and settlement of loose sediments, sand boils and other damaging deformations. This phenomenon occurs only below the water table, but, after liquefaction has developed, the effects can propagate upward into overlying non-saturated soil as excess pore water dissipates.

The factors known to influence liquefaction potential include soil type and grain size, relative density, groundwater level, confining pressures, and both intensity and duration of ground shaking. In general, materials that are susceptible to liquefaction are loose, saturated granular soils having low fines content under low confining pressures.

The project site is not located within an area mapped by the State of California for liquefaction potential. The County of Riverside has designated the site as having a "very high" potential for liquefaction.

Groundwater was not encountered within GeoTek's exploratory borings. However, seepage was observed in Boring B-1 at a depth of approximately 40 feet at the time of drilling. Based on a review of groundwater depths noted on the State Department of Water Resources

Water Data Library website, it is estimated the groundwater depth on this site is approximately 40 feet below existing site grade. For this report, a high groundwater depth of 40 feet was used in the site liquefaction analysis. The soil profile identified within B-1 was also used. A mean magnitude weighted (Mw) seismic event of 7.3 was incorporated into the analysis. A PGA_M value of 0.95g was obtained from the USGS website and incorporated the ASCE 7-16 provisions. Based on the recommendations provided in this report, engineered fill will be incorporated within the upper three feet of pad grade; this change has been incorporated into the liquefaction analysis. GeoTek evaluated the liquefaction potential of the on-site soils using the computer program LiquefyPro Version 5.

The results of the liquefaction analyses indicated that the soils within Boring B-1 are not susceptible to significant soil liquefaction during the design-level earthquake. Therefore, deep ground improvement and/or special foundation design is not warranted for this site due to potential site liquefaction. The results of the liquefaction analysis are presented within Appendix D.

4.6 OTHER SEISMIC HAZARDS

An assessment of the potential "dry sand" settlement (i.e., settlement above the water table) resulting from seismic shaking of the site was evaluated. For this analysis, a groundwater depth of 40 feet, a ground acceleration (PGAM) of 0.95g and a mean earthquake magnitude of 7.3. The ground acceleration and earthquake magnitude were obtained from the USGS websites. The computer software program LiquefyPro and the soil profiled from Boring B-1 were used in the analysis. Based on the recommendations provided in this report, engineered fill will be incorporated within the upper three feet of pad grade; this change has been incorporated into the settlement analysis. The results of this analysis indicate a potential ground surface settlement of about 0.48 inches is possible. A differential seismic settlement of about 0.25 over a 40 foot span is estimated. Based on these estimated magnitudes, ground modification or special foundation design is not deemed necessary. The results of the seismic dry settlement analysis are presented in Appendix D. However, the estimated seismic settlements should be considered in structural design.

Due to the general flat terrain, the potential for seismic induced landslides or lateral spreading is considered very low. The potential for secondary seismic hazards such as a seiche and tsunami is considered negligible due to site elevation and distance from an open body of water.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 GENERAL

Development of the site appears feasible from a geotechnical engineering viewpoint. The following recommendations should be incorporated into the design and construction phases of development.

5.2 EARTHWORK CONSIDERATIONS

5.2.1 General

Earthwork and grading should be performed in accordance with the applicable grading ordinances of the City of Lake Elsinore and/or the County of Riverside, the 2019 California Building Code (CBC) and recommendations contained in this report. The Grading Guidelines included in Appendix E outline general procedures and do not anticipate all site-specific situations. In the event of conflict, the recommendations presented in the text of this report should supersede those contained in Appendix E.

5.2.2 Site Clearing

Initial site preparation should commence with removal of debris, deleterious materials and vegetation within the limits of the planned improvements. These materials should be properly disposed of off-site. Voids resulting from removing any materials should be replaced with engineered fill materials with expansion characteristics similar to the onsite materials.

5.2.3 Site Preparation

Due to the non-uniform nature and loose condition of the upper younger fan deposits, it is recommended that the soils be removed beneath the planned building footprint of the proposed structures and any screen wall or retaining wall footings to a depth of at least three (3) feet below existing grades, or two (2) feet beneath the base of the proposed foundations, whichever is greater. Removal bottoms should be relatively uniform in soil type which is not adversely porous and having an in-place density of at least 85 percent of the soil's maximum dry density as determined by ASTM D 1557 test procedures. A representative of this firm should observe and approve the bottom of all remedial excavations. The lateral extent of this recommended over-excavation should extend at least 5 feet beyond the building or foundation limits.

A minimum of 24 inches of engineered fill should be provided below asphaltic concrete pavement and Portland cement concrete hardscape areas. The horizontal extent of removals should extend at least two feet beyond the edge.

Following site clearing operations, over-excavation and lowering of site grades, where necessary, it is recommended that the exposed subgrade soils beneath all surface improvements be proof rolled with a heavy rubber-tired piece of construction equipment approved by and in the presence of the geotechnical engineering representative. The proof rolling equipment should possess a minimum weight of 15 tons and proof rolling should include at least 4 passes, two in each perpendicular direction. All soil that ruts or excessively deflects during proof rolling should be removed as recommended by the GeoTek representative. Following proof rolling and removal of any unsuitable bearing soil, the exposed subgrade should be scarified to a depth of about 12 inches, be moisture conditioned to slightly above the soil's optimum moisture content and then be compacted to at least 90 percent of the soil's maximum dry density as determined by ASTM D 1557 test procedures.

5.2.4 Engineered Fill

The on-site soils are generally considered suitable for reuse as engineered fill provided they are free from vegetation, debris, oversized materials (6 inch diameter or greater) and other deleterious material. All areas should be brought to final subgrade elevations with fill materials that are placed and compacted in general accordance with minimum project standards. Engineered fill should be placed in 6- to 8-inch loose lifts, moisture conditioned to slightly above the optimum moisture content and compacted to a minimum relative compaction of 90 percent as determined by ASTM D-1557 test procedures.

If wet soils are encountered during remedial grading, methods for drying soils such as stockpiling or mixing with dry soils may be required to bring the soils to the required moisture content for placement as engineered fill. Placement of engineered fill should be observed and tested on a full-time basis by a GeoTek representative during grading activities.

5.2.5 Excavation Characteristics

Excavations in the on-site materials should be readily accomplished with heavy-duty earthmoving or excavating equipment in good operating condition. All excavations should be formed in accordance with current Cal-OSHA requirements.

5.2.6 Trench Excavations and Backfill

Temporary trench excavations within the on-site materials should be stable at a 1:1 inclination for short durations during construction and where cuts do not exceed 15 feet in height. Deeper temporary excavations should be reviewed by GeoTek prior to their planned

excavation to determine if supplemental recommendations or analysis are warranted. It is anticipated that temporary cuts to a maximum height of 4 feet can be excavated vertically.

Trench excavations should conform to Cal-OSHA regulations. The contractor should have a competent person, per OSHA requirements, on site during construction to observe conditions and to make the appropriate recommendations.

Utility trench backfill should be compacted to at least 90 percent relative compaction (as determined by ASTM D-1557 test procedures). Under-slab trenches should also be compacted to project specifications. Where applicable, based on jurisdictional requirements, the top 12 inches of backfill below subgrade for road pavements should be compacted to at least 95 percent relative compaction. On-site materials may not be suitable for use as bedding material but should be suitable as backfill provided particles larger than 6 inches are removed.

Compaction should be achieved with a mechanical compaction device. Ponding or jetting of trench backfill is not recommended. If backfill soils have dried out, they should be properly moisture conditioned prior to placement in trenches.

5.2.7 Shrinkage and Bulking

Several factors will impact earthwork balancing on the site, including shrinkage, subsidence, trench spoil from utilities and footing excavations, as well as the accuracy of topography.

Shrinkage and subsidence are primarily dependent upon the degree of compactive effort achieved during site grading and construction. For planning purposes, a shrinkage factor of about 10 to 15 percent may be considered for excavation and recompaction of the native soils. Site balance areas should be available in order to adjust project grades, depending on actual field conditions at the conclusion of earthwork. Subsidence of approximately up to 0.10 foot of the underlying soils may be anticipated resulting from site grading and preparation.

5.2.8 Grading Plan Review

Upon completion of the site grading plans, it is recommended that those plans be provided to GeoTek for review. Based on that review, some modifications to the recommendations provided in this report may be necessary.

5.3 DESIGN RECOMMENDATIONS

5.3.1 Foundation Design Criteria

Based on the expansion index testing performed for this report and visual examination of the site soils, site soils possess a "very low" (0-21) expansion index (ASTM D4829). Therefore, it is GeoTek's opinion that conventional foundations supported by engineered fill may be used for this site. Foundation design criteria for a conventional foundation system, in general conformance with the 2019 CBC, are presented herein. These are typical design criteria and are not intended to supersede the design by the structural engineer. A summary of GeoTek's preliminary foundation design recommendations for conventional foundations is presented in the table below:

Design Parameter	"Very Low" Expansion Index (0≤EI≤21)
Foundation Depth or Minimum Perimeter Beam Depth (inches below lowest adjacent grade)	12 - One- and -Two Stories 24 - Three Stories
Minimum Foundation Width (Inches)*	12 - One-Stories 15 - Two-Stories 18 - Three Stories
Minimum Slab Thickness (actual)	4 inches
Minimum Slab Reinforcing	6" x 6" / W1.4/W1.4 welded wire fabric, or No. 3 bars on 18-inch centers each way, placed in middle of slab
Minimum Footing Reinforcement	Two (2) No. 4 Reinforcing Bars, one top and one bottom**
Presaturation of Subgrade Soil (Percent of Optimum)	Minimum 100% to a depth of 12 inches prior to placement of concrete

*Code minimums per Table 1809.7 of the 2019 CBC.
**It should be noted that the criteria provided are based on soil support characteristics only. The structural engineer should design the slab and beam reinforcement based on actual loading conditions.

The following criteria for design of foundations are preliminary and should be re-evaluated based on the results additional laboratory testing of samples obtained at/near finish pad grade.

5.3.1.1 An allowable bearing capacity of 2,500 pounds per square foot (psf) may be used for design of continuous and perimeter footings 12 inches deep and 12 inches wide, and pad footings 24 inches square and 18 inches deep. This allowable soil bearing capacity may be increased by 500 psf for each additional foot of footing depth and 300 psf for each additional foot of footing width to a maximum value of 3,500 psf. An increase of one-third may be applied when considering short-term live loads (e.g., seismic and wind loads).

5.3.1.2 Structural foundations should be designed in accordance with the 2019 CBC, and to withstand a total static settlement of 1 inch and maximum differential static settlement of one-half of the total settlement over a horizontal distance of 40 feet.

5.3.1.3 The passive earth pressure may be computed as an equivalent fluid having a density of 350 psf per foot of depth, to a maximum earth pressure of 3,500 psf for footings founded on engineered fill or competent native soil. A coefficient of friction between soil and concrete of 0.35 may be used with dead load forces. Passive pressure and frictional resistance may be combined without reduction. The upper one foot of soil should be ignored in the passive pressure calculations unless the surface is covered with pavements.

5.3.1.4 A grade beam, a minimum of 12 inches wide and 18 inches deep, should be utilized across large entrances. The base of the grade beam should be at the same elevation as the bottom of the adjoining footings.

5.3.1.5 A moisture and vapor retarding system should be placed below slabs-on-grade where moisture migration through the slab is undesirable. Guidelines for these are provided in the 2019 California Green Building Standards Code (CALGreen) Section 4.505.2, the 2019 CBC Section 1907.1 and ACI 360R-10. The vapor retarder design and construction should also meet the requirements of ASTM E 1643. A portion of the design should be the implementation of a moisture vapor retardant membrane.

It should be realized that the effectiveness of the vapor retarding membrane can be adversely impacted as a result of construction related punctures (e.g., stake penetrations, tears, punctures from walking on the vapor retarder placed atop the underlying aggregate layer, etc.). These occurrences should be limited as much as possible during construction. Thicker membranes are generally more resistant to accidental puncture than thinner ones. Products specifically designed for use as moisture/vapor retarders may also be more puncture resistant. Although the CBC specifies a 6-mil vapor retarder membrane, it is GeoTek's opinion that a minimum 10 mil thick membrane with joints properly overlapped and sealed should be considered, unless otherwise specified by the slab design professional. The membrane should consist of Stego wrap or the equivalent.

Moisture and vapor retarding systems are intended to provide a certain level of resistance to vapor and moisture transmission through the concrete, but do not eliminate it. The acceptable level of moisture transmission through the slab is to a large extent based on the type of flooring used and environmental conditions.

Ultimately, the vapor retarding system should be comprised of suitable elements to limited migration of water and reduce transmission of water vapor through the slab to acceptable levels. The selected elements should have suitable properties (i.e., thickness, composition, strength, and permeability) to achieve the desired performance level.

Moisture retarders can reduce, but not eliminate, moisture vapor rise from the underlying soils up through the slab. Moisture retarder systems should be designed and constructed in accordance with applicable American Concrete Institute, Portland Cement Association, Post-Tensioning Concrete Institute, ASTM and California Building Code requirements and guidelines.

GeoTek recommends that a qualified person, such as the flooring contractor, structural engineer, architect, and/or other experts specializing in moisture control within the building be consulted to evaluate the general and specific moisture and vapor transmission paths and associated potential impact on the proposed construction. That person (or persons) should provide recommendations relative to the slab moisture and vapor retarder systems and for migration of potential adverse impact of moisture vapor transmission on various components of the structures, as deemed appropriate.

In addition, the recommendations in this report and GeoTek's services in general are not intended to address mold prevention; since GeoTek, along with geotechnical consultants in general, do not practice in the area of mold prevention. If specific recommendations addressing potential mold issues are desired, then a professional mold prevention consultant should be contacted.

5.3.1.6 It is recommended that control joints be placed in concrete slabs in two directions spaced approximately 24 to 36 times the thickness of the slab in inches. These joints are a widely accepted means to control cracks and should be reviewed by the project structural engineer.

5.3.2 Miscellaneous Foundation Recommendations

5.3.2.1 To reduce moisture penetration beneath the slab on grade areas, utility trench excavations should be backfilled with engineered fill, lean concrete or concrete slurry where they intercept the perimeter footing or thickened slab edge.

5.3.2.2 Soils from the footing excavations should not be placed in the slab-on-grade areas unless properly compacted and tested. The excavations should be free of loose/sloughed materials and be neatly trimmed at the time of concrete placement.

5.3.3 Foundation Setbacks

Minimum setbacks for all foundations should comply with the 2019 CBC or the City of Lake Elsinore and/or the County of Riverside requirements, whichever is more stringent. Improvements not conforming to these setbacks are subject to the increased likelihood of excessive lateral movements and/or differential settlements. If large enough, these movements can compromise the integrity of the improvements. The top outside edge of all footings should be set back a minimum of H/3 (where H is the slope height) from the face of any descending slope. The setback should be at least five feet and need not exceed 40 feet.

5.3.4 Soil Corrosivity

The soil resistivity at this site was tested in the laboratory on a sample collected during the field investigation. The results of the testing indicate that the on-site soils are considered "mildly corrosive" (10,720 ohm-cm) (Roberge, 2000) to buried ferrous metal in accordance with current standards used by corrosion engineers. Recommendations for protection of buried ferrous metal should be provided by a corrosion engineer. Additional corrosion testing should be performed at the time of site grading to assess the corrosion of potential of the as-graded soils.

5.3.5 Soil Sulfate Content

The sulfate content was determined in the laboratory on a sample collected during the field investigation. The results indicate that the water-soluble sulfate result is less than 0.1 percent by weight, which is considered "negligible" as per Table 4.2.1 of ACI 318. Based on the test results and Table 4.3.1 of ACI 318, no special recommendations for concrete are required for this project due to soil sulfate exposure.

5.4 RETAINING AND GARDEN WALL DESIGN AND CONSTRUCTION

5.4.1.1 General Design Criteria

Recommendations presented in this report apply to typical masonry or concrete vertical retaining walls to a maximum height of up to six (6) feet. Additional review and recommendations should be requested for higher walls. These are typical design criteria and are not intended to supersede the design by the structural engineer.

Retaining wall foundations should be embedded a minimum of 18 inches into engineered fill. Retaining wall foundations should be designed in accordance with Section 5.3 of this report. Structural needs may govern and should be evaluated by the project structural engineer.

All earth retention structure plans, as applicable, should be reviewed by this office prior to finalization.

Earthwork considerations, site clearing and remedial earthwork for all earth retention structures should meet the requirements of this report, unless specifically provided otherwise, or more stringent requirements or recommendations are made by the designer. The backfill material placement for all earth retention structures should meet the requirement of Section 5.2.4 in this report.

In general, cantilever earth retention structures, which are designed to yield at least 0.001H, where H is equal to the height of the earth retention structure, may be designed using the "active" condition. Rigid earth retention structures (including but not limited to rigid walls, and walls braced at top, such as typical basement walls) should be designed using the "at-rest" condition.

In addition to the design lateral forces due to retained earth, surcharges due to improvements, such as an adjacent building or traffic loading, should be considered in the design of the earth retention structures. Loads applied within a 1:1 (horizontal:vertical) projection from the surcharge on the stem of the earth retention structure should be considered in the design.

Final selection of the appropriate design parameters should be made by the designer of the earth retention structures.

5.4.1.2 Cantilevered Walls

The recommendations presented below are for cantilevered retaining walls up to six (6) feet high. Active earth pressure may be used for retaining wall design, provided the top of the wall is not restrained from minor deflections. An equivalent fluid pressure approach may be used to compute the horizontal pressure against the wall. Appropriate fluid unit weights are given below for specific slope gradients of the retained material. These do not include other superimposed loading conditions such as traffic, structures, seismic events, or adverse geologic conditions.

ACTIVE EARTH PRESSURES	
Surface Slope of Retained Materials (horizontal:vertical)	Equivalent Fluid Pressure (pcf) Select Backfill* and Native Soils
Level	39
2:1	64

*The design pressures assume the backfill material has an expansion index less than or equal to 20. Backfill zone includes area between back of the wall to a plane (1:1 horizontal : vertical) up from bottom of the wall foundation (on the backside of the wall) to the ground surface.

For walls with a retained height greater than 6 feet, an incremental seismic pressure should be included into the wall design. Where needed, it is recommended that an equivalent fluid pressure of 27 pcf be included into the wall design to account for seismic loading conditions. This pressure may be applied as a triangular distribution.

5.4.1.3 Retaining Wall Backfill and Drainage

The wall backfill should also include a minimum one (1) foot wide section of ¾- to 1-inch clean crushed rock (or an approved equivalent). The rock should be placed immediately adjacent to the back of the wall and extend up from a back drain to within approximately 24 inches of the finish grade. The upper 24 inches should consist of compacted on-site materials. The rock should be separated from the earth with filter fabric. The presence of other materials might necessitate revision to the parameters provided and modification of the wall designs. The backfill materials should be placed in lifts no greater than eight (8) inches in thickness and compacted to a minimum of 90% relative compaction as determined by ASTM D 1557 test procedures. Proper surface drainage needs to be provided and maintained.

As an alternative to the drain, rock and fabric, a pre-manufactured wall drainage product (example: Mira Drain 6000 or approved equivalent) may be used behind the retaining wall. The wall drainage product should extend from the base of the wall to within two (2) feet of the ground surface. The subdrain should be placed in direct contact with the wall drainage product.

Retaining walls should be provided with an adequate pipe and gravel back drain system to help prevent buildup of hydrostatic pressures. Backdrains should consist of a four (4)-inch diameter perforated collector pipe (Schedule 40, SDR 35, or approved equivalent) embedded in a minimum of one (1) cubic foot per linear foot of ¾- to 1-inch clean crushed rock or an approved equivalent, wrapped in filter fabric (Mirafi 140N or an approved equivalent). The

drain system should be connected to a suitable outlet. Waterproofing of site walls should be performed where moisture migration through the walls is undesirable.

5.4.1.4 Restrained Retaining Walls

Retaining walls that will be restrained at the top that support level backfill or that have reentrant or male corners, should be designed for an equivalent at-rest fluid pressure of 65 pcf, plus any applicable surcharge loading. For areas of male or reentrant corners, the restrained wall design should extend a minimum distance of twice the height of the wall laterally from the corner, or a distance otherwise determined by the project structural engineer.

5.4.1.5 Other Design Considerations

- Wall design should consider the additional surcharge loads from superjacent slopes and/or footings, where appropriate.
- No backfill should be placed against concrete until minimum design strengths are evident by compression tests of cylinders.
- The retaining wall footing excavations, backcuts, and backfill materials should be approved by the project geotechnical engineer or their authorized representative.
- Positive separations should be provided in garden walls at horizontal distances not exceeding 20 feet.

5.5 CONCRETE CONSTRUCTION

5.5.1 General

Concrete construction should follow the 2019 CBC and ACI guidelines regarding design, mix placement and curing of the concrete. If desired, GeoTek could provide quality control testing of the concrete during construction.

5.5.2 Concrete Mix Design

As discussed in Section 5.3.5, no special recommendations for concrete are required for this project due to soil sulfate exposure. Additional testing should be performed during grading so that specific recommendations can be formulated based on the as-graded conditions.

5.5.3 Concrete Flatwork

Exterior concrete flatwork is often one of the most visible aspects of site development. They are typically given the least level of quality control, being considered "non-structural" components. Cracking of these features is common due to various factors. While cracking

usually does not affect the structural performance of the concrete, it is unsightly. It is recommended that the same standards of care be applied to these features as to the structure itself.

Flatwork should consist of a minimum four-inch (actual) thick concrete and the use of temperature and shrinkage control reinforcement is suggested. The project structural engineer should provide final design recommendations.

5.5.4 Concrete Performance

Concrete cracks should be expected. These cracks can vary from sizes that are hairline to more than 1/8 inch in width. Most cracks in concrete while unsightly do not significantly impact long-term performance. While it is possible to take measures (proper concrete mix, placement, curing, control joints, etc.) to reduce the extent and size of cracks that occur, some cracking will occur despite the best efforts to minimize it. Concrete undergoes chemical processes that are dependent on a wide range of variables, which are difficult, at best, to control. Concrete, while seemingly a stable material, is subject to internal expansion and contraction due to external changes over time.

One of the simplest means to control cracking is to provide weakened control joints for cracking to occur along. These do not prevent cracks from developing; they simply provide a relief point for the stresses that develop. These joints are a widely accepted means to control cracks but are not always effective. Control joints are more effective the more closely spaced they are. GeoTek suggests that control joints be placed in two orthogonal directions and located a distance apart approximately equal to 24 to 36 times the slab thickness.

5.6 PLAN REVIEW AND CONSTRUCTION OBSERVATIONS

It is recommended that site grading, specifications, and foundation plans be reviewed by this office prior to construction to check for conformance with the recommendations of this report. It is also recommended that GeoTek representatives be present during site grading and foundation construction to observe and document for proper implementation of the geotechnical recommendations. The owner/developer should have GeoTek perform at least the following duties:

- Observe site clearing and grubbing operations for proper removal of all unsuitable materials.
- Observe and test bottom of removals prior to fill placement.
- Evaluate the suitability of on-site and import materials for fill placement and collect soil samples for laboratory testing where necessary.

- Observe the fill for uniformity during placement, including utility trench excavation backfill. Also, test the fill for density, relative compaction and moisture content.
- Observe and probe foundation excavations to confirm suitability of bearing materials with respect to density.

If requested, a construction observation and compaction report can be provided by GeoTek which can comply with the requirements of the governmental agencies having jurisdiction over the project. It is recommended that these agencies be notified prior to commencement of construction so that necessary grading permits can be obtained.

6. INTENT

It is the intent of this report to aid in the design and construction of the proposed development. Implementation of the advice presented in this report is intended to reduce risk associated with construction projects. The professional opinions and geotechnical advice contained in this report are not intended to imply total performance of the project or guarantee that unusual or variable conditions will not be discovered during or after construction.

The scope of GeoTek's evaluation is limited to the area explored that is shown on the Boring Location Map (Figure 2). This evaluation does not and should in no way be construed to encompass any areas beyond the specific area of the proposed construction as indicated to GeoTek by the client. Further, no evaluation of any existing site improvements is included. The scope is based on GeoTek's understanding of the project and the client's needs, GeoTek's proposal (Proposal No. P-1105421-CR) dated November 19, 2021 and geotechnical engineering standards normally used on similar projects in this region.

7. LIMITATIONS

GeoTek's findings are based on site conditions observed and the stated sources. Thus, GeoTek's comments are professional opinions that are limited to the extent of the available data.

GeoTek has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering at this time and location and science

professions currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report.

Since GeoTek's recommendations are based on the site conditions observed and encountered at the stated times and laboratory testing. Thus, GeoTek's conclusions and recommendations are professional opinions that are limited to the extent of the available data. Observations during construction are important to allow for any change in recommendations found to be warranted. These opinions have been derived in accordance with current standards of practice and no warranty of any kind is expressed or implied. Standards of care/practice are subject to change with time.

8. SELECTED REFERENCES

American Concrete Institute (ACI), 2006, Publication 302.2R-06, Guide for Concrete Slabs That Receive Moisture Sensitive Flooring Materials.

_____, 2010, Publications 360R-10, Guide to Design of Slabs-On-Ground.

Bowles, J. E., 1977, "Foundation Analysis and Design", Second Edition.

Bryant, W.A., and Hart, E.W., 2007, Fault Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps, California Geological Survey: Special Publication 42.

California Code of Regulations, Title 24 Part 2, 2019 "California Building Code," 2 volumes.

California Department of Transportation, 2018, "Highway Design Manual", 6th Edition.

Department of the Navy, 1982, "Foundations and Earth Structures", Design Manual 7.2.

GeoTek, Inc., In-house proprietary information.

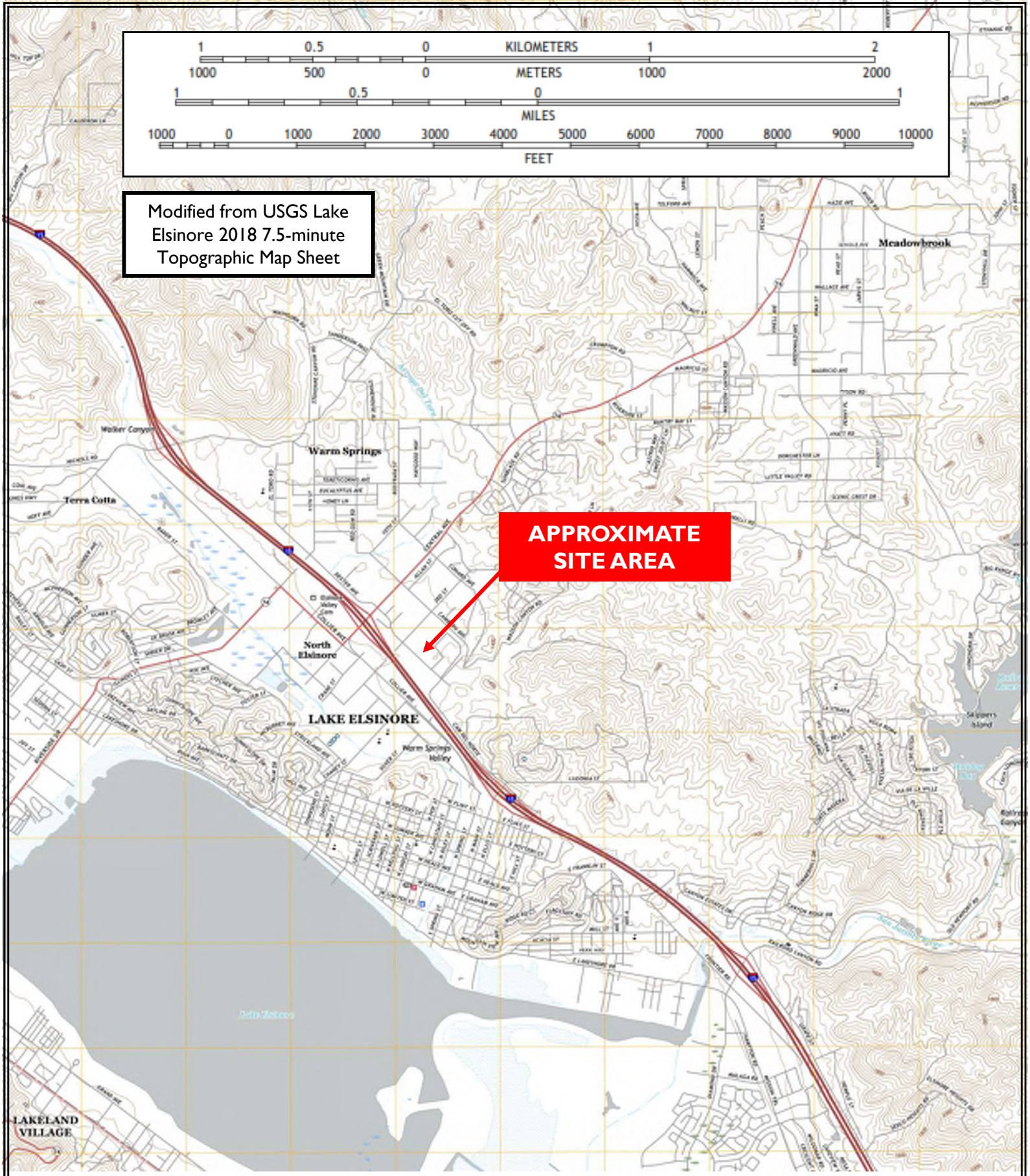
Morton, D.M. and Weber, F.H., 2003, "Preliminary Geologic Map of the Elsinore 7.5 Quadrangle, Riverside County, California," U.S. Geological Survey, Open File Report OF-2003-281, scale 1:24,000

Peck R. B., Hanson W. H. & Thornburn T. H., 1974, "Foundation Engineering", Second edition.

Roberge, P. R., 2000, "Handbook of Corrosion Engineering".

SEA/OSHPD web service, "Seismic Design Maps" (https://seismicmaps.org)

Terzaghi, K. and Peck, R. B., 1967, "Soil Mechanics in Engineering Practice", Second Edition.



Empire Construction Management
Cove Apartment Project
APNs 377-090-013, -037, -039 and -040
Lake Elsinore, Riverside County, California

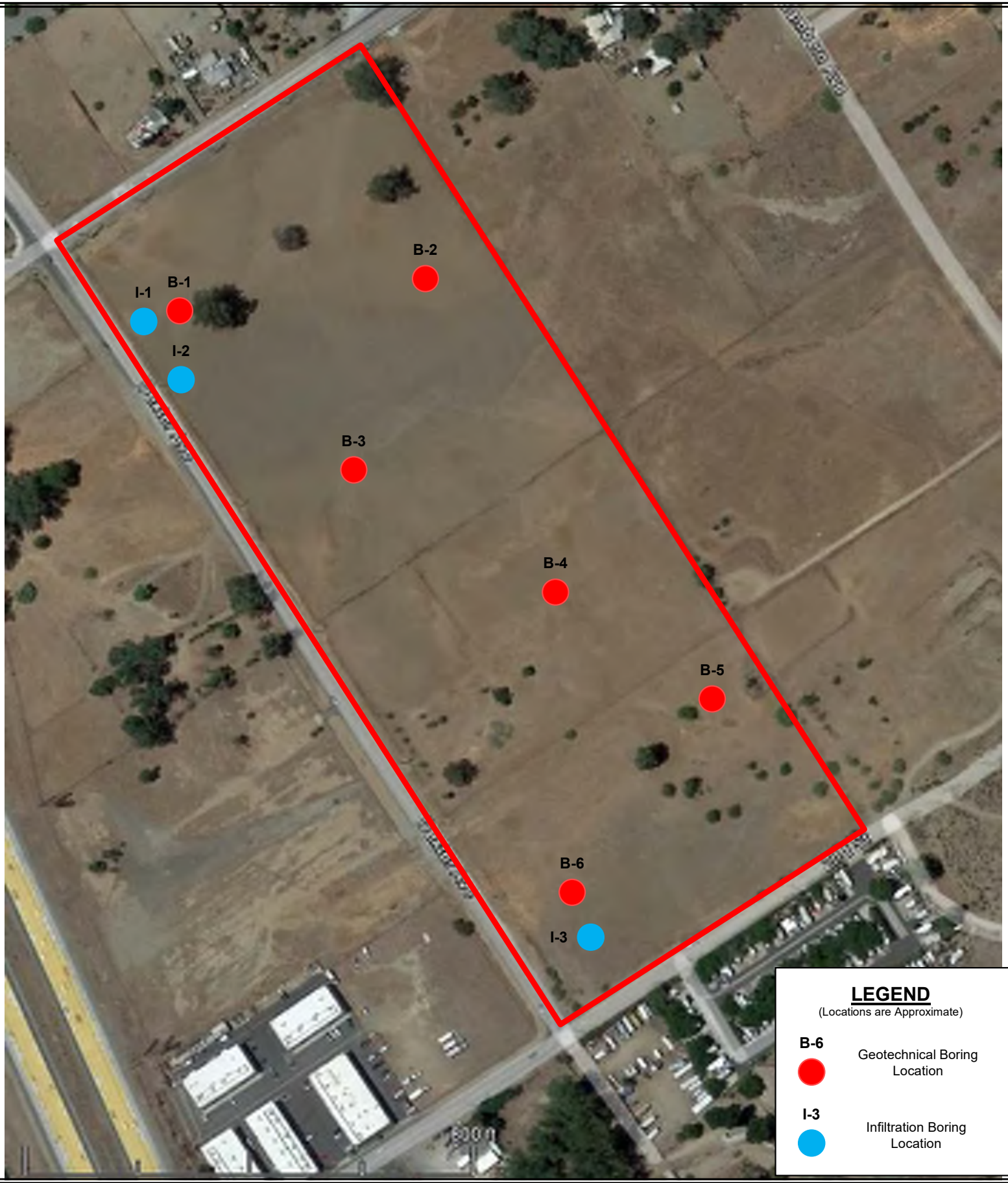
Project No. 2967-CR

NORTH

Figure 1

Site Location Map

GEOTEK



Empire Construction Management
Cove Apartment Project
Lake Elsinore, Riverside County, California

Project No. 2967-CR

NORTH

Figure 2

Boring Location Map

GEOTEK

APPENDIX A

LOGS OF EXPLORATORY BORINGS

Proposed Cove Apartment Project
Dexter Avenue and 3rd Street
Lake Elsinore, Riverside County, California
Project No. 2967-CR

GEOTEK

A - FIELD TESTING AND SAMPLING PROCEDURES

The Modified Split-Barrel Sampler (Ring)

The Ring sampler is driven into the ground at various depths in accordance with ASTM D 3550 test procedures. The sampler, with an external diameter of 3.0 inches, is lined with 1-inch long, thin brass rings with inside diameters of approximately 2.4 inches. The sampler is typically driven into the ground 12 or 18 inches with a 140-pound hammer free falling from a height of 30 inches. Blow counts are recorded for every 6 inches of penetration as indicated on the log of boring. The samples are removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

Standard Penetration Test Sampler (SPT)

Standard penetration tests (SPT) were performed with a 2.0-inch outside diameter, 1.5-inch inside diameter, split-barrel sampler. The sampler was 18 inches long. The inside diameter of the sampler shoe was 1.4 inches. The sampler was unlined. The sampler conformed to the requirements of ASTM D 1586. A 140-pound automatic trip hammer was utilized, dropping 30 inches for each blow.

Bulk Samples (Large)

These samples are normally large bags of earth materials over 20 pounds in weight collected from the field by means of hand digging or exploratory cuttings.

Bulk Samples (Small)

These are plastic bag samples which are normally airtight and contain less than 5 pounds in weight of earth materials collected from the field by means of hand digging or exploratory cuttings. These samples are primarily used for determining natural moisture content and classification indices.

B - BORING LOG LEGEND

The following abbreviations and symbols often appear in the classification and description of soil and rock on the log of borings:

SOILS

USCS	Unified Soil Classification System
f-c	Fine to coarse
f-m	Fine to medium

GEOLOGIC

B: Attitudes	Bedding: strike/dip
J: Attitudes	Joint: strike/dip
C: Contact line	
……..	Dashed line denotes USCS material change
———	Solid Line denotes unit / formational change
———	Thick solid line denotes end of boring

(Additional denotations and symbols are provided on the boring logs)

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

BORING NO.: B-1 SHEET 1 OF 2

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SM/SC	**Younger Fan Materials:** Silty/Clayey f-c SAND, brown, very moist, trace gravel			
		12 23 27		SM	Silty f-c SAND, reddish brown, slightly moist, medium dense, trace gravel, trace clay	5.5	112.6	
5		10 20 24		SC/SP	Clayey/Gravelly f-c SAND, reddish brown, moist, medium dense	10.5	123.3	
		27 37 38		CL	F-c sandy CLAY, brown, moist, hard, trace gravel			
10		16 32 36		SC/SM	Clayey/Silty f-c SAND, brown, moist, dense, trace gravel	11.7	124.1	
15		15 22				12.2	122.2	
		32		SC	Clayey f-c SAND, yellowish brown, moist, dense			
20		20 40 50/3"			Clayey silty f-c SAND, light yellowish gray, moist, very dense			
25		23 33 30		SM	Silty f SAND, light orangish brown, moist, very dense	16.0		
30		10 23 45		ML	F sandy SILT, light gray, moist, hard			

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

BORING NO.: B-1 SHEET 2 OF 2

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
35		12 12 26		CL	CLAY, light bluish gray, moist, hard, some oxidized staining	25.7		
40		10 20 24			becomes red, very moist, some seepage			
45		10 16 19		ML	F sandy SILT, light grayish brown, moist, hard	21.7		
50		12 22 32			Same as above			
					BORING TERMINATED AT 51.5 FEET No groundwater encountered Boring backfilled with excavated soils			

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

BORING NO.: B-2

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
					Younger Fan Materials:			
		12 30 50/4"		SC	Clayey f-c SAND, light reddish brown, moist, very dense, few gravel	12.2	124.0	% Passing #200 = 57
5		16 50/6"		GC/CL	Clayey GRAVEL to gravelly CLAY, brown, moist, very dense/hard	9.6	117.3	
		10 23 50/5"			Same as above			
10		25 25 30		GC	Clayey gravel, brownish gray, moist, dense	9.9	123.5	
		16 25 20		SM	Silty f-c SAND, yellowish brown, moist, medium dense	13.5	120.6	
15					**BORING TERMINATED AT 15.0 FEET** No groundwater encountered Boring backfilled with excavated soils			
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

BORING NO.: B-3

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SC	**Younger Fan Materials:** Clayey f-c SAND, brown, moist, some gravel			
		10 14 10		SM	Silty f-c SAND with gravel, dark grayish brown, slightly moist to moist, medium dense	3.9	106.9	
5		8 9 15				5.1	103.8	Collapse
		6 9 11			Silty f-c SAND, dark gray, very moist, medium dense, few gravel	8.3	108.6	Collapse
10		3 4 7		CL	F-c sandy CLAY, dark brown, very moist to wet, stiff, few gravel trace cobbles			
15		8 30				13.7	124.0	
		40		SM	Silty f-c SAND, yellowish brown, moist, dense			
20		50/6"						
					BORING TERMINATED AT 20.5 FEET No groundwater encountered Boring backfilled with excavated soils			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

BORING NO.: B-4

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
					Younger Fan Materials:			SH, EI, MD % Passing #200 = 28.1
		4 11 12		SM/SC	Silty/Clayey f-c SAND, brown to dark brown, very moist, medium dense, few gravel	11.1	121.1	
5		12 25 34			becomes dense	10.7	128.8	
		12 20 25		SC	Clayey f-c SAND, brown, moist, medium dense, trace gravel			
10		10 32 34		SM	Silty f-c SAND, brown, moist, dense, few gravel	5.5	125.8	
		10 30 48			becomes very dense	11.6	128.3	
15					**BORING TERMINATED AT 15 FEET** No groundwater encountered Boring backfilled with excavated soils			
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	BORING NO.: B-5 / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SM/SC	**Younger Fan Materials:** Silty/Clayey f-c SAND, reddish brown, moist, trace gravel			
		25 50/5"		SC	Clayey f-c SAND, reddish brown, moist, very dense, trace gravel	9.8	119.2	
5		18 50/6"		SM	Silty f-c SAND, reddish brown, moist, very dense	6.4	128.5	
		18 50/6"		SC/SM	Clayey/Silty f-c SAND, reddish brown, moist, very dense	2.5		
10		10 30 32		SM/SP	Silty f-c SAND to f-c SAND, gray, slightly moist, dense, some gravel			
15		14 18 24		SM	Silty f-c SAND, light brown, moist, medium dense	4.8	119.6	
20		17 28						
		43		CL	F sandy CLAY, brownish red, moist, hard, trace gravel			
25					**BORING TERMINATED AT 21.5 FEET** No groundwater encountered Boring backfilled with excavated soils			
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	BORING NO.: B-6 / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
					Younger Fan Materials:			SR
		4 6 8		SM	Silty f-c SAND, brown, slightly moist, loose, few gravel	2.8	109.1	% Passing #200 = 24.6
5		3 3 4		SM	Silty f-c SAND, brown, slightly moist, loose, trace gravel	2.2		
		4 30 50/5"		SC	Clayey f-c SAND, reddish brown, moist to very moist, very dense, some gravel, few cobbles			
		50/5"		GM	Silty GRAVEL, light gray, slightly moist, very dense, few cobbles			
10								
		50/5"						
15								
		50/6"		SP	F-c SAND, light gray, slightly moist, very dense, few gravel and cobbles			
20					**BORING TERMINATED AT 19 FEET** No groundwater encountered Boring backfilled with excavated soils			
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	BORING NO.: I-1 / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SM/SC	**Younger Fan Materials:** Silty/Clayey f-c SAND, brown, very moist, trace gravel			
				SM	Silty f-c SAND, reddish brown, slightly moist, trace gravel, trace clay			
5				SC	Clayey silty f-c SAND, brown, moist, trace gravel			
					BORING TERMINATED AT 5.0 FEET No groundwater encountered Boring backfilled with excavated soils			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**BORING NO.: I-2** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SM	**Younger Fan Materials:** Silty f-c SAND, brown, moist, trace gravel			
5				SM	Silty f-c SAND, brown, moist, few gravel			
				CL/SC	F-c sandy CLAY to clayey f-c SAND, reddish brown, moist			
10					**BORING TERMINATED AT 10.0 FEET**			
					No groundwater encountered			
					Boring backfilled with excavated soils			
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

GeoTek, Inc.

LOG OF EXPLORATORY BORING

CLIENT:	Empire Construction Management	**DRILLER:**	2R Drilling Inc.	**LOGGED BY:**	DRW
PROJECT NAME:	Proposed Cove Apartments	**DRILL METHOD:**	Hollow stem Auger	**OPERATOR:**	Jeff
PROJECT NO.:	2967-CR	**HAMMER:**	140lbs/30in.	**RIG TYPE:**	Track CME 75
LOCATION:	See Exploration Location Map			**DATE:**	1/3/2022

Depth (ft)	SAMPLES: Sample Type	SAMPLES: Blows/ 6 in	SAMPLES: Sample Number	USCS Symbol	**BORING NO.: I-3** / MATERIAL DESCRIPTION AND COMMENTS	Laboratory Testing: Water Content (%)	Laboratory Testing: Dry Density (pcf)	Laboratory Testing: Others
				SM	**Younger Fan Materials:** Silty f-c SAND, brown, moist, trace gravel			
5					**BORING TERMINATED AT 5.0 FEET** No groundwater encountered Boring backfilled with excavated soils			
10								
15								
20								
25								
30								

LEGEND

Sample type: ---Ring ---SPT ---Small Bulk ---Large Bulk ---No Recovery ---Water Table

Lab testing: AL = Atterberg Limits; EI = Expansion Index; SA = Sieve Analysis; RV = R-Value Test; SR = Sulfate/Resisitivity Test; SH = Shear Test; HC= Consolidation; MD = Maximum Density

APPENDIX B

LABORATORY TEST RESULTS

Proposed Cove Apartment Project
Dexter Avenue and 3rd Street
Lake Elsinore, Riverside County, California
Project No. 2967-CR

GEOTEK

SUMMARY OF LABORATORY TESTING

Classification

Soils were visually classified in general accordance with the Unified Soil Classification System (ASTM Test Method D 2487). The soil classifications are shown on the Logs of Borings in Appendix A.

Collapse Test

Collapse tests were performed on selected samples of the site soils in general accordance with ASTM D 5333 test procedures. The results of this test are presented graphically in Appendix B.

Direct Shear

Shear testing was performed in a direct shear machine of the strain-control type in general accordance with ASTM D 3080 test procedures. The rate of deformation was approximately 0.035 inch per minute. The sample was sheared under varying confining loads in order to determine the coulomb shear strength parameters, angle of internal friction and cohesion. The tests were performed on soil samples remolded to approximately 90 percent of maximum dry density as determined by ASTM D 1557 test procedures. The shear test results are presented in Appendix B.

Expansion Index

Expansion Index testing was performed on one soil sample collected during the subsurface exploration. Testing was performed in general accordance with ASTM D 4829 test procedures. The results of the testing are provided below.

Boring No.	Depth (ft.)	Description	Expansion Index	Classification
B-	0-5	Silty Sand (SM)	1	"Very Low"

In-Situ Moisture and Density

The natural water content of sampled soils was determined in general accordance with ASTM D 2216 test procedures on samples of the materials recovered during the subsurface exploration. In addition, in-place dry density of the sampled soils was determined in general accordance with ASTM D 2937 test procedures on relatively undisturbed samples to measure the unit weight of the subsurface soils. Results of these tests are shown on the Logs of Borings in Appendix A.

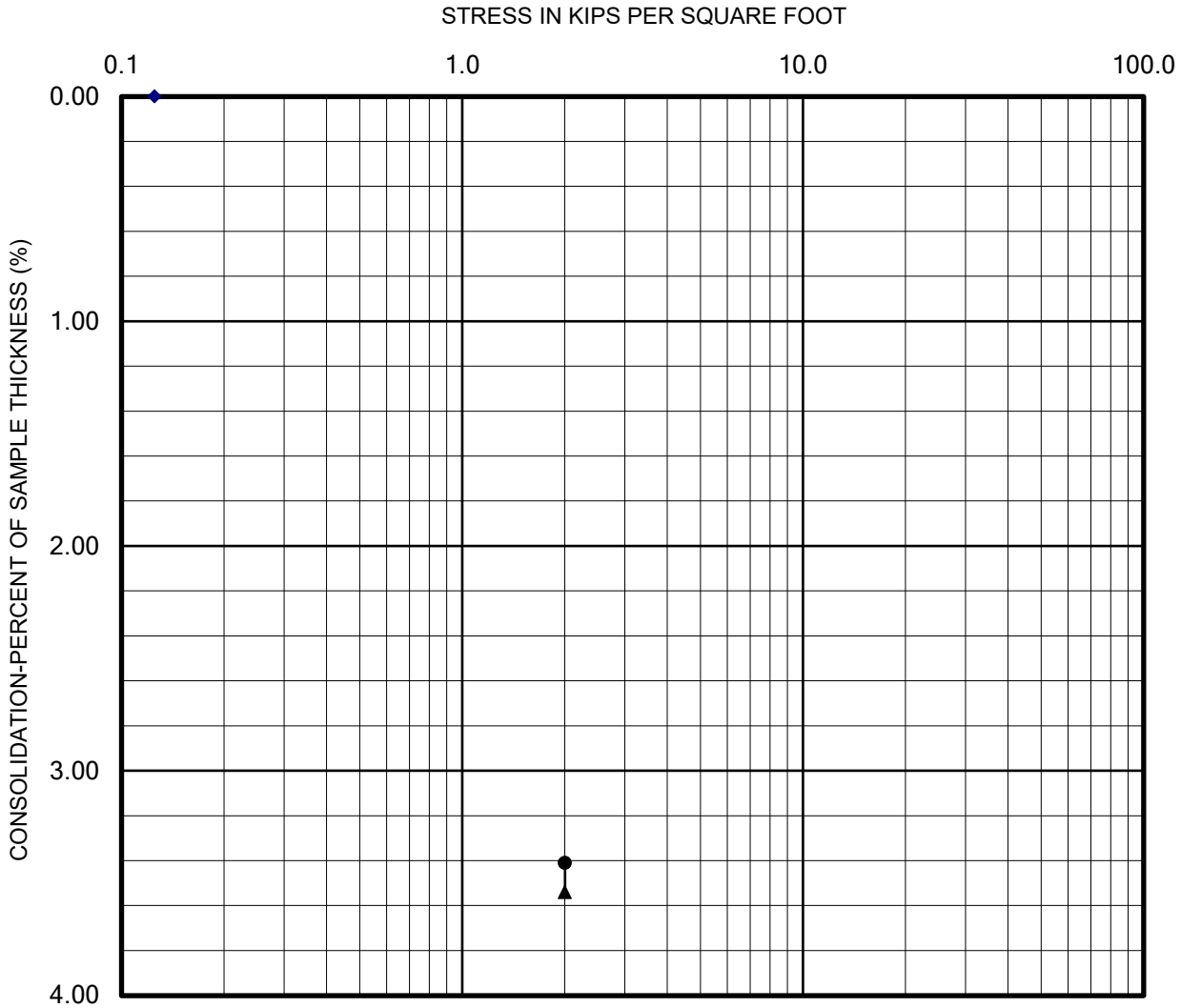
Moisture-Density Relationship

Laboratory testing was performed on a bulk sample of the site soils collected during the subsurface exploration. The laboratory maximum dry density and optimum moisture content was determined in general accordance with ASTM D 1557 test procedures. The results are presented in Appendix B.

Sulfate Content, Resistivity and Chloride Content

Testing to determine the water-soluble sulfate content was performed in general accordance with ASTM D4327 test procedures. Resistivity testing was completed in general accordance with ASTM G187 test procedures. Testing to determine the chloride content was performed in general accordance with ASTM D4327 test procedures. The results of the testing are provided in Appendix B.

Boring #	Depth (ft.)	pH ASTM D4972	Chloride ASTM D4327 (mg/kg)	Sulfate ASTM D4327 (% by weight)	Resistivity ASTM G187 (ohm-cm)
B-6	0-5	8.9	6.7	0.0014	10,720



Seating Cycle
Loading Prior to Inundation
Loading After Inundation
Rebound Cycle

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4546

GEOTEK

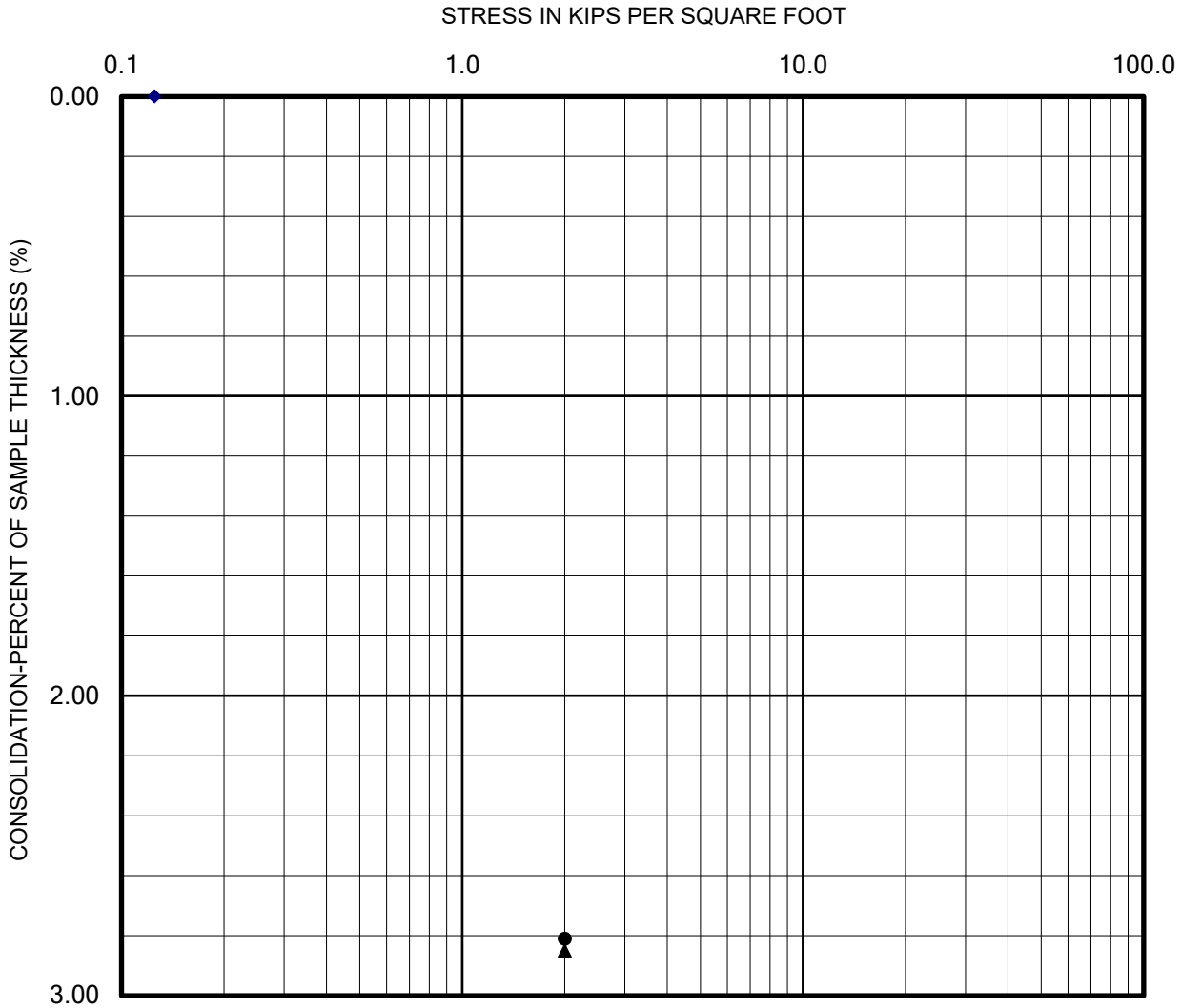
CHECKED BY: DA	Lab: Corona
PROJECT NO.: 2967-CR	Date: 1/5/2022

COLLAPSE REPORT

Sample: B-3 @ 5 feet

Cove Apartments
Lake Elsinore, California

Plate B-1



Seating Cycle
Loading Prior to Inundation
Loading After Inundation
Rebound Cycle

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4546

GEOTEK

CHECKED BY: DA	Lab: Corona
PROJECT NO.: 2967-CR	Date: 1/5/2022

COLLAPSE REPORT

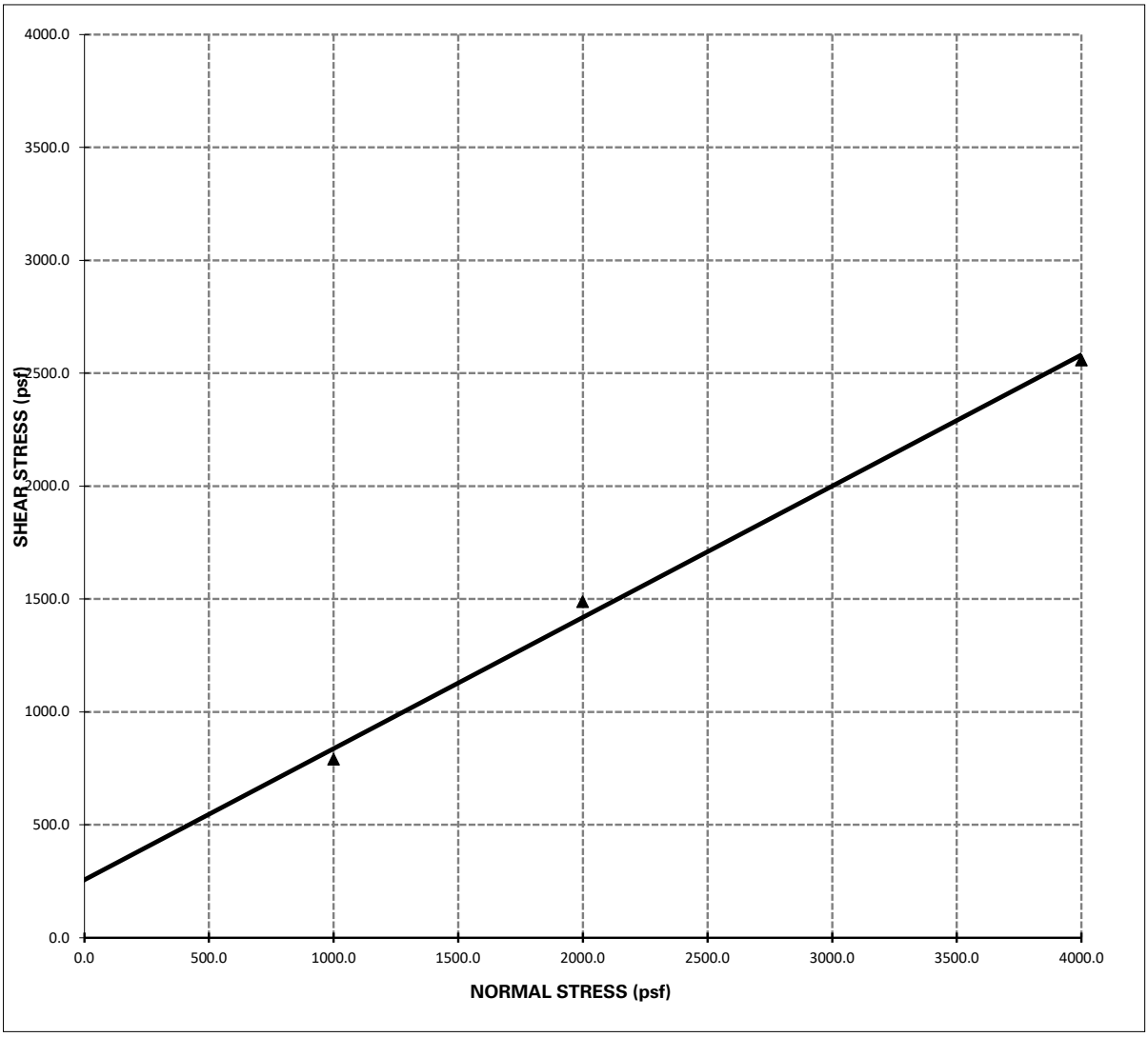
Sample: B-3 @ 7 feet

Cove Apartments
Lake Elsinore, California

Plate B-2

DIRECT SHEAR TEST

Project Name:	Cove Apartment Project, Lake Elsinore	***Sample Location:***	B-4 @ 0-5 feet
Project Number:	2967-CR	***Date Tested:***	1/12/2022



Shear Strength: Φ = **30°** , **C = 256 psf**

Notes: 1 - The soil specimen used in the shear box was a ring sample remolded to approximately 90% relative compaction from a bulk sample collected during the field investigation.

2 - The above reflect direct shear strength at saturated conditions.

3 - The tests were run at a shear rate of 0.01 in/min.

GEOTEK

EXPANSION INDEX TEST

(ASTM D4829)

Client:	Empire Construction Mgmt	***Tested/ Checked By:***	DA Lab No Corona
Project Number:	2967-CR	***Date Tested:***	1/7/2022
Project Location:	Cove Apartment Project, Lake Elsinore	***Sample Source:***	B-4 @ 0-5 feet
		Sample Description:	

Ring #: _____ Ring Dia. : 4.01" Ring Ht. 1"

DENSITY DETERMINATION

A	Weight of compacted sample & ring (gm)	788.4
B	Weight of ring (gm)	363.0
C	Net weight of sample (gm)	**425.4**
D	Wet Density, lb / ft3 (C*0.3016)	**128.3**
E	Dry Density, lb / ft3 (D/1.F)	**119.6**

SATURATION DETERMINATION

F	Moisture Content, %	7.3
G	Specific Gravity, assumed	**2.70**
H	Unit Wt. of Water @ 20 °C, (pcf)	**62.4**
I	% Saturation	**48.2**

READINGS

DATE	TIME	READING	
1/7/2022		0.5340	Initial
1/7/2022		0.5330	10 min/Dry
1/8/2022		0.5340	Final

FINAL MOISTURE

Final Weight of wet sample & tare	% Moisture
812.7	**13.0**

EXPANSION INDEX = 1

GEOTEK

MOISTURE/DENSITY RELATIONSHIP

Client: Empire Construction Mgmt
Project: Cove Apartment Project
Location: Lake Elsinore
Material Type: Gray brown silty medium sand with some clay
Material Supplier: -
Material Source: -
Sample Location: B-4 @ 0-5 feet
-

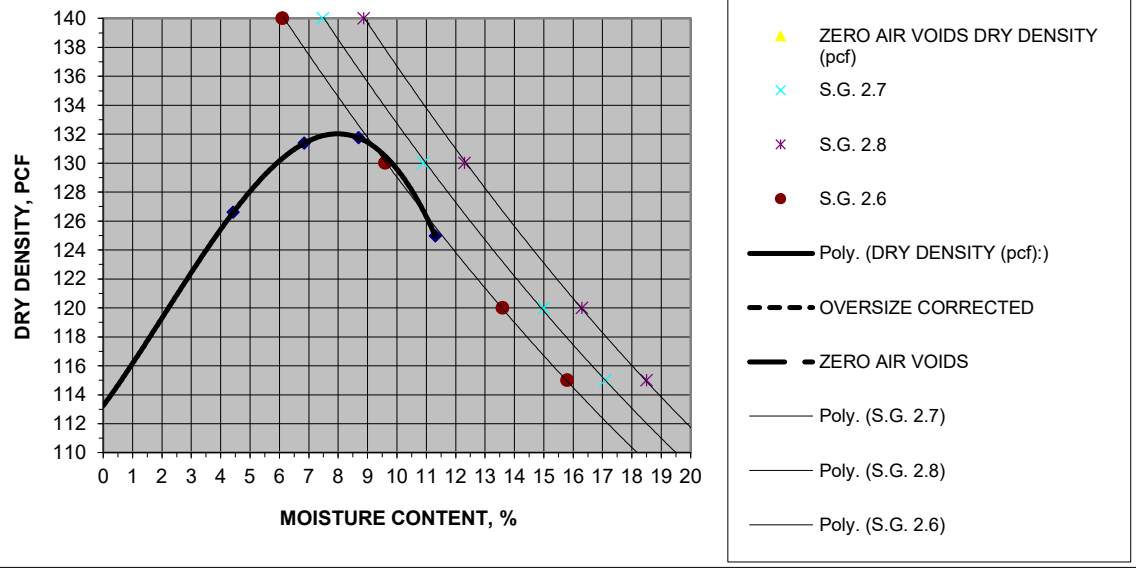
Job No.: 2967-CR
Lab No.: Corona

Sampled By: DW
Received By: CB/BL
Tested By: CB/BL
Reviewed By: DA

Date Sampled: -
Date Received: 1/5/2022
Date Tested: 1/11/2022
Date Reviewed: 1/14/2022

Test Procedure: ASTM D1557 **Method:** A
Oversized Material (%): 12.9 **Correction Required:** [x] yes [ ] no

MOISTURE/DENSITY RELATIONSHIP CURVE



MOISTURE DENSITY RELATIONSHIP VALUES

Maximum Dry Density, pcf	132.0	**@ Optimum Moisture, %**	8.0
Corrected Maximum Dry Density, pcf		**@ Optimum Moisture, %**	

MATERIAL DESCRIPTION

Grain Size Distribution:

	% Gravel (retained on No. 4)
	% Sand (Passing No. 4, Retained on No. 200)
	% Silt and Clay (Passing No. 200)

Atterberg Limits:

	Liquid Limit, %
	Plastic Limit, %
	Plasticity Index, %

Classification:

Unified Soils Classification:
AASHTO Soils Classification:

Results Only Soil Testing for Cove Apartment Project, Lake Elsinore

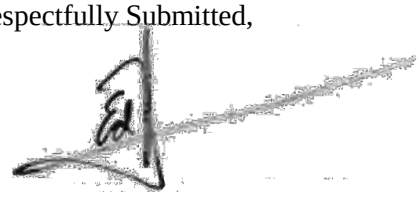
January 10, 2022

Prepared for:

Anna Scott
GeoTek, Inc.
1548 North Maple Street
Corona, CA 92280
ascott@geotekusa.com

Project X Job#: S220107C
Client Job or PO#: 2967-CR Empire Construction Management

Respectfully Submitted,





Eduardo Hernandez, M.Sc., P.E.
Sr. Corrosion Consultant
NACE Corrosion Technologist #16592
Professional Engineer
California No. M37102
ehernandez@projectxcorrosion.com

Soil Analysis Lab Results

Client: GeoTek, Inc.
Job Name: Cove Apartment Project, Lake Elsinore
Client Job Number: 2967-CR Empire Construction Management
Project X Job Number: S220107C
January 10, 2022

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM D4972	ASTM G200	ASTM D4658	ASTM D4327	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D6919	ASTM D4327	ASTM D4327
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**	**Redox**	**Sulfide** S^{2-}	**Nitrate** NO_3^-	**Ammonium** NH_4^+	**Lithium** Li^+	**Sodium** Na^+	**Potassium** K^+	**Magnesium** Mg^{2+}	**Calcium** Ca^{2+}	**Fluoride** F_2^{--}	**Phosphate** PO_4^{3-}
	(ft)	(mg/kg)	(wt%)	(mg/kg)	(wt%)	(Ohm-cm)	(Ohm-cm)		(mV)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
2967-CR B6	0-5	14.2	0.0014	6.7	0.0007	34,840	10,720	8.9	167	0.72	7.0	4.4	0.10	169.8	17.0	43.0	250.3	3.1	2.5

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

APPENDIX C

PERCOLATION DATA SHEETS & PORCHET CALCULATIONS

Proposed Cove Apartment Project

Dexter Avenue and 3rd Street

Lake Elsinore, Riverside County, California

Project No. 2967-CR

GEOTEK

PERCOLATION DATA SHEET

Project: COVE APARTMENTS Job No.: 2967-01

Test Hole No.: I-1 Tested By: DRW Date: 1/4/22

Depth of Hole As Drilled: 60 Before Test: 60 After Test: 60

1 OF 2

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
1	6:50 / 7:15	25	60	20	16	4.0		
2	7:15 / 7:40	25	60	20	16.5	3.5		
3	7:40 / 8:10	30	60	20	16.5	3.5		
4	8:10 / 8:40	30	60	20	16.75	3.25		
5	8:40 / 9:10	30	60	20	17.0	3.0		
6	9:11 / 9:41	30	60	20	17.0	3.0		
7	9:41 / 10:11	30	60	20	17.25	2.75		
8	10:12 / 10:42	30	60	20	17.25	2.75		
9	10:42 / 11:12	30	60	20	17.5	2.5		
10	11:12 / 11:42	30	60	20	17.75	2.25		

PERCOLATION DATA SHEET

Project: COVE APARTMENTS Job No.: 2967CE

Test Hole No.: I-1 Tested By: DLW Date: 1/4/22

Depth of Hole As Drilled: 60" Before Test: 60" After Test: 60"

2 OF 2

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
11	11:42 / 12:12	30	60	20	17.75	2.25		
12	12:12 / 12:42	30	60	20	17.75	2.25		
13	12:42 / 1:12	30	60	20	17.75	2.25		
14	1:12 / 1:42	30	60	20	17.75	2.25		
	/							
	/							
	/							
	/							
	/							
	/							

PERCOLATION DATA SHEET

Project: COVE APARTMENTS Job No.: 29672

Test Hole No.: I-2 Tested By: DKW Date: 1/4/21

Depth of Hole As Drilled: 120" Before Test: 120" After Test: 120"

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
1	6:52 / 7:17	25	120	20	2.5	17.5		
2	7:17 / 7:42	25	120	20	2.75	17.25		
3	7:42 / 7:52	10	120	20	14.0	6.0		
4	7:52 / 8:02	10	120	20	14.5	5.5		
5	8:02 / 8:12	10	120	20	14.75	5.25		
6	8:13 / 8:23	10	120	20	15.0	5.0		
7	8:23 / 8:33	10	120	20	15.0	5.0		
8	8:33 / 8:43	10	120	20	15.0	5.0		
	/							
	/							

PERCOLATION DATA SHEET

Project: COVE ~~ACRES~~ APARTMENTS Job No.: 29672E

Test Hole No.: I-3 Tested By: DRW Date: 1/4/22

Depth of Hole As Drilled: 60" Before Test: 60" After Test: 60"

Reading No.	Time	Time Interval (Min)	Total Depth of Hole (Inches)	Initial Water Level (Inches)	Final Water Level (Inches)	Δ In Water Level (Inches)	Rate (minutes per inch)	Comments
1	9:40 / 10:05	25	60	20	0	20+		NO H_2O IN BORING AFTER 25 MIN
2	10:05 / 9:30	25	60	20	0	20+		
3	9:30 / 9:40	10	60	20	4.5	15.5		
4	9:45 / 9:55	10	60	20	5.25	14.75		
5	9:55 / 10:05	10	60	20	5.5	14.5		
6	10:05 / 10:15	10	60	20	5.75	14.25		
7	10:15 / 10:25	10	60	20	6.0	14.0		
8	10:25 / 10:35	10	60	20	6.0	14.0		
	/							
	/							

Client:	**Emprie Construction Management**
Project:	**Cove Apartments**
Project No:	**2967-CR**
Date:	**1/4/2022**

Boring No. **I-1**

Percolation Rate (Porchet Method)

Time Interval, Δt =	30	min
Final Depth to Water, D_F =	42.75	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\ (60r)}{\Delta t\ (r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	17.25	in
$\Delta H = \Delta D = H_O - H_F$ =	2.75	in
$H_{avg} = (H_O+H_F)/2$ =	18.625	in

I_t = 0.53 **Inches per Hour**

GEOTEK

Client:	**Emprie Construction Management**
Project:	**Cove Apartments**
Project No:	**2967-CR**
Date:	**1/4/2022**

Boring No. **I-2**

Percolation Rate (Porchet Method)

Time Interval, Δt =	10	min
Final Depth to Water, D_F =	105.00	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	100	in
Total Test Hole Depth, D_T =	120	in

Equation - $I_t = \dfrac{\Delta H\ (60r)}{\Delta t\ (r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	15	in
$\Delta H = \Delta D = H_O - H_F$ =	5	in
$H_{avg} = (H_O+H_F)/2$ =	17.5	in

I_t = 3.08 **Inches per Hour**

GEOTEK

Client:	**Emprie Construction Management**
Project:	**Cove Apartments**
Project No:	**2967-CR**
Date:	**1/4/2022**

Boring No. **I-3**

Percolation Rate (Porchet Method)

Time Interval, Δt =	10	min
Final Depth to Water, D_F =	54.00	in
Test Hole Radius, r =	4	in
Initial Depth to Water, D_O =	40	in
Total Test Hole Depth, D_T =	60	in

Equation - $I_t = \dfrac{\Delta H\ (60r)}{\Delta t\ (r+2H_{avg})}$

$H_O = D_T - D_O$ =	20	in
$H_F = D_T - D_F$ =	6	in
$\Delta H = \Delta D = H_O - H_F$ =	14	in
$H_{avg} = (H_O+H_F)/2$ =	13	in

I_t = 11.20 **Inches per Hour**

GEOTEK

APPENDIX D

LIQUEFACTION ANALYSIS

Proposed Cove Apartment Project

Dexter Avenue and 3rd Street

Lake Elsinore, Riverside County, California

Project No. 2967-CR

GEOTEK

****
LIQUEFACTION ANALYSIS CALCULATION DETAILS

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****
Font: Courier New, Regular, Size 8 is recommended for this report.
Licensed to , 1/17/2022 12:32:17 PM

Input File Name: UNTITLED
Title: Cove Apartments - Lake Elsinore
Subtitle: Liquefaction

Input Data:
Surface Elev.=1291
Hole No.=B-1
Depth of Hole=50.00 ft
Water Table during Earthquake= 40.00 ft
Water Table during In-Situ Testing= 40.00 ft
Max. Acceleration=0.95 g
Earthquake Magnitude=7.30
No-Liquefiable Soils: CL, OL are Non-Liq. Soil
1. SPT or BPT Calculation.
2. Settlement Analysis Method: Ishihara / Yoshimine
3. Fines Correction for Liquefaction: Idriss/Seed
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.25
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1
   Plot one CSR curve (fs1=User)
10. Average two input data between two Depths: Yes*
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	Gamma pcf	Fines %
1.00	50.00	128.00	40.00
3.00	50.00	128.00	40.00
5.00	28.00	136.00	25.00
7.00	47.00	125.00	NoLiq
10.00	43.00	138.00	40.00
15.00	34.00	138.00	40.00
20.00	100.00	138.00	40.00

25.00	63.00	130.00	40.00
30.00	68.00	130.00	55.00
35.00	38.00	130.00	NoLiq
40.00	44.00	130.00	NoLiq
45.00	35.00	128.00	55.00
50.00	54.00	128.00	55.00

Output Results:

Calculation segment, dz=0.050 ft

User defined Print Interval, dp=1.00 ft

Peak Ground Acceleration (PGA), a_max = 0.95g

CSR Calculation:

Depth	gamma	sigma	gamma'	sigma'	rd	mZ	a(z)	CSR	x fs1	=CSRfs
ft	pcf	atm	pcf	atm		g	g			
1.00	128.00	0.060	128.00	0.060	1.00	0.000	0.946	0.61	1.00	0.61
2.00	128.00	0.121	128.00	0.121	1.00	0.000	0.946	0.61	1.00	0.61
3.00	128.00	0.181	128.00	0.181	0.99	0.000	0.946	0.61	1.00	0.61
4.00	132.00	0.243	132.00	0.243	0.99	0.000	0.946	0.61	1.00	0.61
5.00	136.00	0.306	136.00	0.306	0.99	0.000	0.946	0.61	1.00	0.61
6.00	130.50	0.369	130.50	0.369	0.99	0.000	0.946	0.61	1.00	0.61
7.00	125.00	0.430	125.00	0.430	0.98	0.000	0.946	0.60	1.00	0.60
8.00	129.33	0.490	129.33	0.490	0.98	0.000	0.946	0.60	1.00	0.60
9.00	133.67	0.552	133.67	0.552	0.98	0.000	0.946	0.60	1.00	0.60
10.00	138.00	0.616	138.00	0.616	0.98	0.000	0.946	0.60	1.00	0.60
11.00	138.00	0.681	138.00	0.681	0.97	0.000	0.946	0.60	1.00	0.60
12.00	138.00	0.746	138.00	0.746	0.97	0.000	0.946	0.60	1.00	0.60
13.00	138.00	0.811	138.00	0.811	0.97	0.000	0.946	0.60	1.00	0.60
14.00	138.00	0.877	138.00	0.877	0.97	0.000	0.946	0.59	1.00	0.59

15.00	138.00	0.942	138.00	0.942	0.97	0.000	0.946	0.59	1.00	0.59
16.00	138.00	1.007	138.00	1.007	0.96	0.000	0.946	0.59	1.00	0.59
17.00	138.00	1.072	138.00	1.072	0.96	0.000	0.946	0.59	1.00	0.59
18.00	138.00	1.138	138.00	1.138	0.96	0.000	0.946	0.59	1.00	0.59
19.00	138.00	1.203	138.00	1.203	0.96	0.000	0.946	0.59	1.00	0.59
20.00	138.00	1.268	138.00	1.268	0.95	0.000	0.946	0.59	1.00	0.59
21.00	136.40	1.333	136.40	1.333	0.95	0.000	0.946	0.58	1.00	0.58
22.00	134.80	1.397	134.80	1.397	0.95	0.000	0.946	0.58	1.00	0.58
23.00	133.20	1.460	133.20	1.460	0.95	0.000	0.946	0.58	1.00	0.58
24.00	131.60	1.523	131.60	1.523	0.94	0.000	0.946	0.58	1.00	0.58
25.00	130.00	1.585	130.00	1.585	0.94	0.000	0.946	0.58	1.00	0.58
26.00	130.00	1.646	130.00	1.646	0.94	0.000	0.946	0.58	1.00	0.58
27.00	130.00	1.708	130.00	1.708	0.94	0.000	0.946	0.58	1.00	0.58
28.00	130.00	1.769	130.00	1.769	0.93	0.000	0.946	0.57	1.00	0.57
29.00	130.00	1.830	130.00	1.830	0.93	0.000	0.946	0.57	1.00	0.57
30.00	130.00	1.892	130.00	1.892	0.93	0.000	0.946	0.57	1.00	0.57
31.00	130.00	1.953	130.00	1.953	0.92	0.000	0.946	0.57	1.00	0.57
32.00	130.00	2.015	130.00	2.015	0.91	0.000	0.946	0.56	1.00	0.56
33.00	130.00	2.076	130.00	2.076	0.91	0.000	0.946	0.56	1.00	0.56
34.00	130.00	2.138	130.00	2.138	0.90	0.000	0.946	0.55	1.00	0.55
35.00	130.00	2.199	130.00	2.199	0.89	0.000	0.946	0.55	1.00	0.55
36.00	130.00	2.260	130.00	2.260	0.88	0.000	0.946	0.54	1.00	0.54
37.00	130.00	2.322	130.00	2.322	0.87	0.000	0.946	0.54	1.00	0.54
38.00	130.00	2.383	130.00	2.383	0.86	0.000	0.946	0.53	1.00	0.53
39.00	130.00	2.445	130.00	2.445	0.86	0.000	0.946	0.53	1.00	0.53

40.00	130.00	2.506	130.00	2.506	0.85	0.000	0.946	0.52	1.00	0.52
41.00	129.60	2.567	67.20	2.539	0.84	0.000	0.946	0.52	1.00	0.52
42.00	129.20	2.629	66.80	2.571	0.83	0.000	0.946	0.52	1.00	0.52
43.00	128.80	2.690	66.40	2.603	0.82	0.000	0.946	0.52	1.00	0.52
44.00	128.40	2.750	66.00	2.634	0.82	0.000	0.946	0.52	1.00	0.52
45.00	128.00	2.811	65.60	2.665	0.81	0.000	0.946	0.52	1.00	0.52
46.00	128.00	2.871	65.60	2.696	0.80	0.000	0.946	0.52	1.00	0.52
47.00	128.00	2.932	65.60	2.727	0.79	0.000	0.946	0.52	1.00	0.52
48.00	128.00	2.992	65.60	2.758	0.78	0.000	0.946	0.52	1.00	0.52
49.00	128.00	3.053	65.60	2.789	0.78	0.000	0.946	0.52	1.00	0.52
50.00	128.00	3.113	65.60	2.820	0.77	0.000	0.946	0.52	1.00	0.52

CSR is based on water table at 40.00 during earthquake

CRR Calculation from SPT or BPT data:

Depth	SPT	Cebs	Cr	sigma'	Cn	(N1)60	Fines	d(N1)60	(N1)60f	CRR7.5
ft				atm			%			
1.00	50.00	1.25	0.75	0.060	1.70	79.69	40.00	20.94	100.63	0.50
2.00	50.00	1.25	0.75	0.121	1.70	79.69	40.00	20.94	100.63	0.50
3.00	50.00	1.25	0.75	0.181	1.70	79.69	40.00	20.94	100.63	0.50
4.00	39.00	1.25	0.75	0.243	1.70	62.16	32.50	15.75	77.91	0.50
5.00	28.00	1.25	0.75	0.306	1.70	44.63	25.00	9.42	54.05	0.50
6.00	37.50	1.25	0.75	0.369	1.65	57.86	63.00	16.57	74.44	0.50
7.00	47.00	1.25	0.75	0.430	1.53	67.23	NoLiq	18.45	85.67	0.50
8.00	45.67	1.25	0.75	0.490	1.43	61.18	80.67	17.24	78.42	0.50

9.00	44.33	1.25	0.85	0.552	1.35	63.42	60.33	17.68	81.10	0.50
10.00	43.00	1.25	0.85	0.616	1.27	58.22	40.00	16.64	74.86	0.50
11.00	41.20	1.25	0.85	0.681	1.21	53.04	40.00	15.61	68.65	0.50
12.00	39.40	1.25	0.85	0.746	1.16	48.46	40.00	14.69	63.15	0.50
13.00	37.60	1.25	0.85	0.811	1.11	44.35	40.00	13.87	58.22	0.50
14.00	35.80	1.25	0.85	0.877	1.07	40.62	40.00	13.12	53.75	0.50
15.00	34.00	1.25	0.95	0.942	1.03	41.60	40.00	13.32	54.92	0.50
16.00	47.20	1.25	0.95	1.007	1.00	55.85	40.00	16.17	72.02	0.50
17.00	60.40	1.25	0.95	1.072	0.97	69.26	40.00	18.85	88.12	0.50
18.00	73.60	1.25	0.95	1.138	0.94	81.95	40.00	21.39	103.34	0.50
19.00	86.80	1.25	0.95	1.203	0.91	93.99	40.00	23.80	117.78	0.50
20.00	100.00	1.25	0.95	1.268	0.89	105.46	40.00	26.09	131.55	0.50
21.00	92.60	1.25	0.95	1.333	0.87	95.25	40.00	24.05	119.30	0.50
22.00	85.20	1.25	0.95	1.397	0.85	85.60	40.00	22.12	107.72	0.50
23.00	77.80	1.25	0.95	1.460	0.83	76.45	40.00	20.29	96.75	0.50
24.00	70.40	1.25	0.95	1.523	0.81	67.75	40.00	18.55	86.30	0.50
25.00	63.00	1.25	0.95	1.585	0.79	59.43	40.00	16.89	76.32	0.50
26.00	64.00	1.25	0.95	1.646	0.78	59.24	43.00	16.85	76.08	0.50
27.00	65.00	1.25	0.95	1.708	0.77	59.07	46.00	16.81	75.88	0.50
28.00	66.00	1.25	1.00	1.769	0.75	62.03	49.00	17.41	79.43	0.50
29.00	67.00	1.25	1.00	1.830	0.74	61.90	52.00	17.38	79.28	0.50
30.00	68.00	1.25	1.00	1.892	0.73	61.80	55.00	17.36	79.16	0.50
31.00	62.00	1.25	1.00	1.953	0.72	55.45	64.20	16.09	71.54	0.50
32.00	56.00	1.25	1.00	2.015	0.70	49.32	73.40	14.86	64.18	0.50
33.00	50.00	1.25	1.00	2.076	0.69	43.38	82.60	13.68	57.05	0.50

34.00	44.00	1.25	1.00	2.138	0.68	37.62	91.80	12.52
50.14	0.50							
35.00	38.00	1.25	1.00	2.199	0.67	32.03	NoLiq	11.41
43.44	0.50							
36.00	39.20	1.25	1.00	2.260	0.67	32.59	NoLiq	11.52
44.11	0.50							
37.00	40.40	1.25	1.00	2.322	0.66	33.14	NoLiq	11.63
44.77	0.50							
38.00	41.60	1.25	1.00	2.383	0.65	33.68	NoLiq	11.74
45.42	0.50							
39.00	42.80	1.25	1.00	2.445	0.64	34.22	NoLiq	11.84
46.06	0.50							
40.00	44.00	1.25	1.00	2.506	0.63	34.74	NoLiq	11.95
46.69	0.50							
41.00	42.20	1.25	1.00	2.539	0.63	33.10	91.80	11.62
44.72	0.50							
42.00	40.40	1.25	1.00	2.571	0.62	31.49	82.60	11.30
42.79	0.50							
43.00	38.60	1.25	1.00	2.603	0.62	29.91	73.40	10.98
40.89	0.50							
44.00	36.80	1.25	1.00	2.634	0.62	28.34	64.20	10.67
39.01	0.50							
45.00	35.00	1.25	1.00	2.665	0.61	26.80	55.00	10.36
37.16	0.50							
46.00	38.80	1.25	1.00	2.696	0.61	29.54	55.00	10.91
40.44	0.50							
47.00	42.60	1.25	1.00	2.727	0.61	32.24	55.00	11.45
43.69	0.50							
48.00	46.40	1.25	1.00	2.758	0.60	34.92	55.00	11.98
46.91	0.50							
49.00	50.20	1.25	1.00	2.789	0.60	37.57	55.00	12.51
50.09	0.50							
50.00	54.00	1.25	1.00	2.820	0.60	40.19	55.00	13.04
53.23	0.50							

CRR is based on water table at 40.00 during In-Situ Testing

Factor of Safety, - Earthquake Magnitude= 7.30:

Depth	sigC'	CRR7.5	x Ksig	=CRRv	x MSF	=CRRm	CSRfs	F.S.=CRRm/CSRfs
ft	atm							
1.00	0.04	0.50	1.00	0.50	1.07	0.54	0.61	5.00
2.00	0.08	0.50	1.00	0.50	1.07	0.54	0.61	5.00
3.00	0.12	0.50	1.00	0.50	1.07	0.54	0.61	5.00
4.00	0.16	0.50	1.00	0.50	1.07	0.54	0.61	5.00
5.00	0.20	0.50	1.00	0.50	1.07	0.54	0.61	5.00
6.00	0.24	0.50	1.00	0.50	1.07	0.54	0.61	5.00

7.00	0.28	0.50	1.00	0.50	1.07	0.54	0.60	5.00
8.00	0.32	0.50	1.00	0.50	1.07	0.54	0.60	5.00
9.00	0.36	0.50	1.00	0.50	1.07	0.54	0.60	5.00
10.00	0.40	0.50	1.00	0.50	1.07	0.54	0.60	5.00
11.00	0.44	0.50	1.00	0.50	1.07	0.54	0.60	5.00
12.00	0.49	0.50	1.00	0.50	1.07	0.54	0.60	5.00
13.00	0.53	0.50	1.00	0.50	1.07	0.54	0.60	5.00
14.00	0.57	0.50	1.00	0.50	1.07	0.54	0.59	5.00
15.00	0.61	0.50	1.00	0.50	1.07	0.54	0.59	5.00
16.00	0.65	0.50	1.00	0.50	1.07	0.54	0.59	5.00
17.00	0.70	0.50	1.00	0.50	1.07	0.54	0.59	5.00
18.00	0.74	0.50	1.00	0.50	1.07	0.54	0.59	5.00
19.00	0.78	0.50	1.00	0.50	1.07	0.54	0.59	5.00
20.00	0.82	0.50	1.00	0.50	1.07	0.54	0.59	5.00
21.00	0.87	0.50	1.00	0.50	1.07	0.54	0.58	5.00
22.00	0.91	0.50	1.00	0.50	1.07	0.54	0.58	5.00
23.00	0.95	0.50	1.00	0.50	1.07	0.54	0.58	5.00
24.00	0.99	0.50	1.00	0.50	1.07	0.54	0.58	5.00
25.00	1.03	0.50	1.00	0.50	1.07	0.54	0.58	5.00
26.00	1.07	0.50	1.00	0.50	1.07	0.53	0.58	5.00
27.00	1.11	0.50	0.99	0.49	1.07	0.53	0.58	5.00
28.00	1.15	0.50	0.98	0.49	1.07	0.53	0.57	5.00
29.00	1.19	0.50	0.98	0.49	1.07	0.52	0.57	5.00
30.00	1.23	0.50	0.97	0.49	1.07	0.52	0.57	5.00
31.00	1.27	0.50	0.96	0.48	1.07	0.52	0.57	5.00
32.00	1.31	0.50	0.96	0.48	1.07	0.51	0.56	5.00
33.00	1.35	0.50	0.95	0.48	1.07	0.51	0.56	5.00
34.00	1.39	0.50	0.95	0.47	1.07	0.51	0.55	5.00
35.00	1.43	0.50	0.94	0.47	1.07	0.50	0.55	5.00
36.00	1.47	0.50	0.94	0.47	1.07	2.00	0.54	5.00 ^
37.00	1.51	0.50	0.93	0.47	1.07	2.00	0.54	5.00 ^
38.00	1.55	0.50	0.93	0.46	1.07	2.00	0.53	5.00 ^
39.00	1.59	0.50	0.92	0.46	1.07	2.00	0.53	5.00 ^
40.00	1.63	0.50	0.92	0.46	1.07	2.00	0.52	5.00 ^
41.00	1.65	0.50	0.91	0.46	1.07	0.49	0.52	0.94 *
42.00	1.67	0.50	0.91	0.46	1.07	0.49	0.52	0.93 *
43.00	1.69	0.50	0.91	0.45	1.07	0.49	0.52	0.93 *
44.00	1.71	0.50	0.91	0.45	1.07	0.49	0.52	0.93 *
45.00	1.73	0.50	0.90	0.45	1.07	0.48	0.52	0.92 *
46.00	1.75	0.50	0.90	0.45	1.07	0.48	0.52	0.92 *
47.00	1.77	0.50	0.90	0.45	1.07	0.48	0.52	0.92 *
48.00	1.79	0.50	0.90	0.45	1.07	0.48	0.52	0.92 *
49.00	1.81	0.50	0.89	0.45	1.07	0.48	0.52	0.92 *
50.00	1.83	0.50	0.89	0.45	1.07	0.48	0.52	0.92 *

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* F.S.<1: Liquefaction Potential Zone. (If above water table: F.S.=5)
^ No-liquefiable Soils or above Water Table.
(F.S. is limited to 5, CRR is limited to 2,   CSR is limited to 2)

CPT convert to SPT for Settlement Analysis:
Fines Correction for Settlement Analysis:

Depth ft	Ic	qc/N60	qc1 atm	(N1)60	Fines %	d(N1)60	(N1)60s
1.00	-	-	-	100.00	40.00	0.00	100.00
2.00	-	-	-	100.00	40.00	0.00	100.00
3.00	-	-	-	100.00	40.00	0.00	100.00
4.00	-	-	-	77.91	32.50	0.00	77.91
5.00	-	-	-	54.05	25.00	0.00	54.05
6.00	-	-	-	74.44	63.00	0.00	74.44
7.00	-	-	-	85.67	NoLiq	0.00	85.67
8.00	-	-	-	78.42	80.67	0.00	78.42
9.00	-	-	-	81.10	60.33	0.00	81.10
10.00	-	-	-	74.86	40.00	0.00	74.86
11.00	-	-	-	68.65	40.00	0.00	68.65
12.00	-	-	-	63.15	40.00	0.00	63.15
13.00	-	-	-	58.22	40.00	0.00	58.22
14.00	-	-	-	53.75	40.00	0.00	53.75
15.00	-	-	-	54.92	40.00	0.00	54.92
16.00	-	-	-	72.02	40.00	0.00	72.02
17.00	-	-	-	88.12	40.00	0.00	88.12
18.00	-	-	-	100.00	40.00	0.00	100.00
19.00	-	-	-	100.00	40.00	0.00	100.00
20.00	-	-	-	100.00	40.00	0.00	100.00
21.00	-	-	-	100.00	40.00	0.00	100.00
22.00	-	-	-	100.00	40.00	0.00	100.00
23.00	-	-	-	96.75	40.00	0.00	96.75
24.00	-	-	-	86.30	40.00	0.00	86.30
25.00	-	-	-	76.32	40.00	0.00	76.32
26.00	-	-	-	76.08	43.00	0.00	76.08
27.00	-	-	-	75.88	46.00	0.00	75.88
28.00	-	-	-	79.43	49.00	0.00	79.43
29.00	-	-	-	79.28	52.00	0.00	79.28
30.00	-	-	-	79.16	55.00	0.00	79.16
31.00	-	-	-	71.54	64.20	0.00	71.54
32.00	-	-	-	64.18	73.40	0.00	64.18
33.00	-	-	-	57.05	82.60	0.00	57.05
34.00	-	-	-	50.14	91.80	0.00	50.14
35.00	-	-	-	43.44	NoLiq	0.00	43.44
36.00	-	-	-	44.11	NoLiq	0.00	44.11
37.00	-	-	-	44.77	NoLiq	0.00	44.77
38.00	-	-	-	45.42	NoLiq	0.00	45.42
39.00	-	-	-	46.06	NoLiq	0.00	46.06
40.00	-	-	-	46.69	NoLiq	0.00	46.69
41.00	-	-	-	44.72	91.80	0.00	44.72
42.00	-	-	-	42.79	82.60	0.00	42.79
43.00	-	-	-	40.89	73.40	0.00	40.89
44.00	-	-	-	39.01	64.20	0.00	39.01
45.00	-	-	-	37.16	55.00	0.00	37.16

46.00	-	-	-	40.44	55.00	0.00	40.44
47.00	-	-	-	43.69	55.00	0.00	43.69
48.00	-	-	-	46.91	55.00	0.00	46.91
49.00	-	-	-	50.09	55.00	0.00	50.09
50.00	-	-	-	53.23	55.00	0.00	53.23

(N1)60s has been fines corrected in liquefaction analysis, therefore d(N1)60=0.
Fines=NoLiq means the soils are not liquefiable.

Settlement of Saturated Sands:
Settlement Analysis Method: Ishihara / Yoshimine

Depth ft	CSRsf	/ MSF*	=CSRm	F.S.	Fines %	(N1)60s	Dr %	ec %	dsz in.	dsp in.	S in.
49.95	0.52	1.00	0.52	0.92	55.00	53.08	100.00	0.000	0.0E0	0.000	0.000
49.00	0.52	1.00	0.52	0.92	55.00	50.09	100.00	0.000	0.0E0	0.000	0.000
48.00	0.52	1.00	0.52	0.92	55.00	46.91	100.00	0.000	0.0E0	0.000	0.000
47.00	0.52	1.00	0.52	0.92	55.00	43.69	100.00	0.000	0.0E0	0.000	0.000
46.00	0.52	1.00	0.52	0.92	55.00	40.44	100.00	0.000	0.0E0	0.000	0.000
45.00	0.52	1.00	0.52	0.92	55.00	37.16	100.00	0.000	0.0E0	0.000	0.000
44.00	0.52	1.00	0.52	0.93	64.20	39.01	100.00	0.000	0.0E0	0.000	0.000
43.00	0.52	1.00	0.52	0.93	73.40	40.89	100.00	0.000	0.0E0	0.000	0.000
42.00	0.52	1.00	0.52	0.93	82.60	42.79	100.00	0.000	0.0E0	0.000	0.000
41.00	0.52	1.00	0.52	0.94	91.80	44.72	100.00	0.000	0.0E0	0.000	0.000
40.05	0.52	1.00	0.52	0.94	NoLiq	46.58	100.00	0.000	0.0E0	0.000	0.000

No Settlement of Saturated Sands

Settlement of Saturated Sands=0.000 in.
qc1 and (N1)60 is after fines correction in liquefaction analysis
dsz is per each segment, dz=0.05 ft
dsp is per each print interval, dp=1.00 ft

S is cumulated settlement at this depth

Settlement of Unsaturated Sands:

Depth	sigma'	sigC'	(N1)60s	CSRsf	Gmax	g*Ge/Gm	g_eff	ec7.5	Cec	ec	dsz	dsp	S
ft	atm	atm			atm			%		%	in.	in.	in.
40.00	2.51	1.63	46.69	0.52	2052.71	6.4E-4	0.2449	0.0775	1.01	0.0781	0.00E0	0.000	0.000
39.00	2.44	1.59	46.06	0.53	2018.23	6.4E-4	0.2461	0.0778	1.01	0.0785	0.00E0	0.000	0.000
38.00	2.38	1.55	45.42	0.53	1983.45	6.4E-4	0.2472	0.0782	1.01	0.0788	0.00E0	0.000	0.000
37.00	2.32	1.51	44.77	0.54	1948.34	6.4E-4	0.2480	0.0784	1.01	0.0791	0.00E0	0.000	0.000
36.00	2.26	1.47	44.11	0.54	1912.90	6.4E-4	0.6216	0.1966	1.01	0.1982	0.00E0	0.000	0.000
35.00	2.20	1.43	43.44	0.55	1877.15	6.4E-4	0.6232	0.1971	1.01	0.1988	0.00E0	0.000	0.000
34.00	2.14	1.39	50.14	0.55	1941.34	6.1E-4	0.4798	0.1517	1.01	0.1530	1.84E-3	0.037	0.037
33.00	2.08	1.35	57.05	0.56	1997.28	5.8E-4	0.3854	0.1219	1.01	0.1229	1.47E-3	0.033	0.070
32.00	2.01	1.31	64.18	0.56	2046.17	5.5E-4	0.3191	0.1009	1.01	0.1018	1.22E-3	0.027	0.096
31.00	1.95	1.27	71.54	0.57	2088.93	5.3E-4	0.2704	0.0855	1.01	0.0862	1.03E-3	0.022	0.119
30.00	1.89	1.23	79.16	0.57	2126.23	5.1E-4	0.2332	0.0737	1.01	0.0744	8.92E-4	0.019	0.138
29.00	1.83	1.19	79.28	0.57	2092.53	5.0E-4	0.2217	0.0701	1.01	0.0707	8.48E-4	0.017	0.155
28.00	1.77	1.15	79.43	0.57	2058.42	4.9E-4	0.2105	0.0666	1.01	0.0671	8.05E-4	0.017	0.172
27.00	1.71	1.11	75.88	0.58	1991.79	4.9E-4	0.2105	0.0666	1.01	0.0671	8.06E-4	0.016	0.188
26.00	1.65	1.07	76.08	0.58	1957.35	4.9E-4	0.1991	0.0629	1.01	0.0635	7.62E-4	0.016	0.204
25.00	1.58	1.03	76.32	0.58	1922.44	4.8E-4	0.1880	0.0594	1.01	0.0599	7.19E-4	0.015	0.219
24.00	1.52	0.99	86.30	0.58	1963.28	4.5E-4	0.1568	0.0496	1.01	0.0500	6.00E-4	0.013	0.232
23.00	1.46	0.95	96.75	0.58	1997.10	4.3E-4	0.1331	0.0421	1.01	0.0424	5.09E-4	0.011	0.243
22.00	1.40	0.91	100.00	0.58	1974.95	4.1E-4	0.1223	0.0387	1.01	0.0390	4.68E-4	0.010	0.252
21.00	1.33	0.87	100.00	0.58	1929.11	4.0E-4	0.1155	0.0365	1.01	0.0369	4.42E-4	0.009	0.261

20.00	1.27	0.82	100.00	0.59	1881.59	4.0E-4	0.1089	0.0344	1.01	0.0347
4.17E-4	0.009	0.270								
19.00	1.20	0.78	100.00	0.59	1832.56	3.9E-4	0.1025	0.0324	1.01	0.0327
3.92E-4	0.008	0.278								
18.00	1.14	0.74	100.00	0.59	1782.19	3.8E-4	0.2098	0.0663	1.01	0.0669
8.03E-4	0.010	0.288								
17.00	1.07	0.70	88.12	0.59	1658.98	3.8E-4	0.2248	0.0711	1.01	0.0717
8.60E-4	0.016	0.305								
16.00	1.01	0.65	72.02	0.59	1503.31	4.0E-4	0.2698	0.0853	1.01	0.0861
1.03E-3	0.019	0.323								
15.00	0.94	0.61	54.92	0.59	1328.35	4.2E-4	0.3656	0.1156	1.01	0.1166
1.40E-3	0.024	0.347								
14.00	0.88	0.57	53.75	0.59	1272.36	4.1E-4	0.3185	0.1007	1.01	0.1016
1.22E-3	0.027	0.375								
13.00	0.81	0.53	58.22	0.60	1257.11	3.8E-4	0.2337	0.0739	1.01	0.0745
8.94E-4	0.021	0.396								
12.00	0.75	0.49	63.15	0.60	1238.64	3.6E-4	0.1734	0.0548	1.01	0.0553
6.64E-4	0.015	0.411								
11.00	0.68	0.44	68.65	0.60	1216.66	3.4E-4	0.1300	0.0411	1.01	0.0415
4.98E-4	0.011	0.422								
10.00	0.62	0.40	74.86	0.60	1190.79	3.1E-4	0.0985	0.0311	1.01	0.0314
3.77E-4	0.009	0.431								
9.00	0.55	0.36	81.10	0.60	1157.53	2.9E-4	0.0764	0.0242	1.01	0.0244
2.92E-4	0.007	0.438								
8.00	0.49	0.32	78.42	0.60	1078.32	2.7E-4	0.1387	0.0438	1.01	0.0442
5.31E-4	0.010	0.448								
7.00	0.43	0.28	85.67	0.60	1040.23	2.5E-4	0.0748	0.0236	1.01	0.0238
0.00E0	0.007	0.455								
6.00	0.37	0.24	74.44	0.61	920.18	2.4E-4	0.0657	0.0208	1.01	0.0209
2.51E-4	0.005	0.460								
5.00	0.31	0.20	54.05	0.61	753.22	2.5E-4	0.0706	0.0223	1.01	0.0225
2.70E-4	0.005	0.465								
4.00	0.24	0.16	77.91	0.61	757.75	2.0E-4	0.0384	0.0121	1.01	0.0122
1.47E-4	0.004	0.469								
3.00	0.18	0.12	100.00	0.61	711.80	1.6E-4	0.0313	0.0099	1.01	0.0100
1.20E-4	0.003	0.472								
2.00	0.12	0.08	100.00	0.61	581.18	1.3E-4	0.0236	0.0075	1.01	0.0075
9.02E-5	0.002	0.474								
1.00	0.06	0.04	100.00	0.61	410.96	9.0E-5	0.0169	0.0054	1.01	0.0054
6.48E-5	0.002	0.476								

Settlement of Unsaturated Sands=0.476 in.
dsz is per each segment, dz=0.05 ft
dsp is per each print interval, dp=1.00 ft
S is cumulated settlement at this depth

Total Settlement of Saturated and Unsaturated Sands=0.476 in.
Differential Settlement=0.238 to 0.314 in.

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

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1 atm (atmosphere) = 1.0581 tsf(1 tsf = 1 ton/ft2 = 2 kip/ft2)
1 atm (atmosphere) = 101.325 kPa(1 kPa = 1 kN/m2 = 0.001 Mpa)

SPT	Field data from Standard Penetration Test (SPT)
BPT	Field data from Becker Penetration Test (BPT)
qc	Field data from Cone Penetration Test (CPT) [atm (tsf)]
fs	Friction from CPT testing [atm (tsf)]
Rf	Ratio of fs/qc (%)
gamma	Total unit weight of soil
gamma'	Effective unit weight of soil
Fines	Fines content [%]
D50	Mean grain size
Dr	Relative Density
sigma	Total vertical stress [atm]
sigma'	Effective vertical stress [atm]
sigC'	Effective confining pressure [atm]
rd	Acceleration reduction coefficient by Seed
a_max.	Peak Ground Acceleration (PGA) in ground surface
mZ	Linear acceleration reduction coefficient X depth
a_min.	Minimum acceleration under linear reduction, mZ
CRRv	CRR after overburden stress correction, CRRv=CRR7.5 * Ksig
CRR7.5	Cyclic resistance ratio (M=7.5)
Ksig	Overburden stress correction factor for CRR7.5
CRRm	After magnitude scaling correction CRRm=CRRv * MSF
MSF	Magnitude scaling factor from M=7.5 to user input M
CSR	Cyclic stress ratio induced by earthquake
CSRfs	CSRfs=CSR*fs1 (Default fs1=1)
fs1	First CSR curve in graphic defined in #9 of Advanced page
fs2	2nd CSR curve in graphic defined in #9 of Advanced page
F.S.	Calculated factor of safety against liquefaction F.S.=CRRm/CSRsf
Cebs	Energy Ratio, Borehole Dia., and Sampling Method Corrections
Cr	Rod Length Corrections
Cn	Overburden Pressure Correction
(N1)60	SPT after corrections, (N1)60=SPT * Cr * Cn * Cebs
d(N1)60	Fines correction of SPT
(N1)60f	(N1)60 after fines corrections, (N1)60f=(N1)60 + d(N1)60
Cq	Overburden stress correction factor
qc1	CPT after Overburden stress correction
dqc1	Fines correction of CPT
qc1f	CPT after Fines and Overburden correction, qc1f=qc1 + dqc1
qc1n	CPT after normalization in Robertson's method
Kc	Fine correction factor in Robertson's Method
qc1f	CPT after Fines correction in Robertson's Method
Ic	Soil type index in Suzuki's and Robertson's Methods

(N1)60s	(N1)60 after settlement fines corrections
CSRm	After magnitude scaling correction for Settlement calculation CSRm=CSRsf / MSF*
CSRfs	Cyclic stress ratio induced by earthquake with user inputed fs
MSF*	Scaling factor from CSR, MSF*=1, based on Item 2 of Page C.
ec	Volumetric strain for saturated sands
dz	Calculation segment, dz=0.050 ft
dsz	Settlement in each segment, dz
dp	User defined print interval
dsp	Settlement in each print interval, dp
Gmax	Shear Modulus at low strain
g_eff	gamma_eff, Effective shear Strain
g*Ge/Gm	gamma_eff * G_eff/G_max, Strain-modulus ratio
ec7.5	Volumetric Strain for magnitude=7.5
Cec	Magnitude correction factor for any magnitude
ec	Volumetric strain for unsaturated sands, ec=Cec * ec7.5
NoLiq	No-Liquefy Soils

References:

1. NCEER Workshop on Evaluation of Liquefaction Resistance of Soils. Youd, T.L., and Idriss, I.M., eds., Technical Report NCEER 97-0022.
SP117. Southern California Earthquake Center. Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California. University of Southern California. March 1999.
2. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING AND SEISMIC SITE RESPONSE EVALUATION, Paper No. SPL-2, PROCEEDINGS: Fourth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA, March 2001.
3. RECENT ADVANCES IN SOIL LIQUEFACTION ENGINEERING: A UNIFIED AND CONSISTENT FRAMEWORK, Earthquake Engineering Research Center, Report No. EERC 2003-06 by R.B Seed and etc. April 2003.

Note: Print Interval you selected does not show complete results. To get complete results, you should select 'Segment' in Print Interval (Item 12, Page C).

APPENDIX E

GENERAL EARTHWORK GRADING GUIDELINES

Proposed Cove Apartment Project

Dexter Avenue and 3rd Street

Lake Elsinore, Riverside County, California

Project No. 2967-CR

GEOTEK

GENERAL GRADING GUIDELINES

Guidelines presented herein are intended to address general construction procedures for earthwork construction. Specific situations and conditions often arise which cannot reasonably be discussed in general guidelines, when anticipated these are discussed in the text of the report. Often unanticipated conditions are encountered which may necessitate modification or changes to these guidelines. It is our hope that these will assist the contractor to more efficiently complete the project by providing a reasonable understanding of the procedures that would be expected during earthwork and the testing and observation used to evaluate those procedures.

General

Grading should be performed to at least the minimum requirements of governing agencies, Chapters 18 and 33 of the Uniform Building Code, CBC (2019) and the guidelines presented below.

Preconstruction Meeting

A preconstruction meeting should be held prior to site earthwork. Any questions the contractor has regarding our recommendations, general site conditions, apparent discrepancies between reported and actual conditions and/or differences in procedures the contractor intends to use should be brought up at that meeting. The contractor (including the main onsite representative) should review our report and these guidelines in advance of the meeting. Any comments the contractor may have regarding these guidelines should be brought up at that meeting.

Grading Observation and Testing

1. Observation of the fill placement should be provided by our representative during grading. Verbal communication during the course of each day will be used to inform the contractor of test results. The contractor should receive a copy of the "Daily Field Report" indicating results of field density tests that day. If our representative does not provide the contractor with these reports, our office should be notified.
2. Testing and observation procedures are, by their nature, specific to the work or area observed and location of the tests taken, variability may occur in other locations. The contractor is responsible for the uniformity of the grading operations; our observations and test results are intended to evaluate the contractor's overall level of efforts during grading. The contractor's personnel are the only individuals participating in all aspect of site work. Compaction testing and observation should not be considered as relieving the contractor's responsibility to properly compact the fill.
3. Cleanouts, processed ground to receive fill, key excavations, and subdrains should be observed by our representative prior to placing any fill. It will be the contractor's responsibility to notify our representative or office when such areas are ready for observation.

4. Density tests may be made on the surface material to receive fill, as considered warranted by this firm.
5. In general, density tests would be made at maximum intervals of two feet of fill height or every 1,000 cubic yards of fill placed. Criteria will vary depending on soil conditions and size of the fill. More frequent testing may be performed. In any case, an adequate number of field density tests should be made to evaluate the required compaction and moisture content is generally being obtained.
6. Laboratory testing to support field test procedures will be performed, as considered warranted, based on conditions encountered (e.g. change of material sources, types, etc.) Every effort will be made to process samples in the laboratory as quickly as possible and in progress construction projects are our first priority. However, laboratory workloads may cause in delays and some soils may require a **minimum of 48 to 72 hours to complete test procedures**. Whenever possible, our representative(s) should be informed in advance of operational changes that might result in different source areas for materials.
7. Procedures for testing of fill slopes are as follows:
    a) Density tests should be taken periodically during grading on the flat surface of the fill, three to five feet horizontally from the face of the slope.
    b) If a method other than over building and cutting back to the compacted core is to be employed, slope compaction testing during construction should include testing the outer six inches to three feet in the slope face to determine if the required compaction is being achieved.
8. Finish grade testing of slopes and pad surfaces should be performed after construction is complete.

Site Clearing

1. All vegetation, and other deleterious materials, should be removed from the site. If material is not immediately removed from the site it should be stockpiled in a designated area(s) well outside of all current work areas and delineated with flagging or other means. Site clearing should be performed in advance of any grading in a specific area.
2. Efforts should be made by the contractor to remove all organic or other deleterious material from the fill, as even the most diligent efforts may result in the incorporation of some materials. This is especially important when grading is occurring near the natural grade. All equipment operators should be aware of these efforts. Laborers may be required as root pickers.
3. Nonorganic debris or concrete may be placed in deeper fill areas provided the procedures used are observed and found acceptable by our representative.

Treatment of Existing Ground

1. Following site clearing, all surficial deposits of alluvium and colluvium as well as weathered or creep effected bedrock, should be removed unless otherwise specifically indicated in the text of this report.
2. In some cases, removal may be recommended to a specified depth (e.g. flat sites where partial alluvial removals may be sufficient). The contractor should not exceed these depths unless directed otherwise by our representative.
3. Groundwater existing in alluvial areas may make excavation difficult. Deeper removals than indicated in the text of the report may be necessary due to saturation during winter months.
4. Subsequent to removals, the natural ground should be processed to a depth of six inches, moistened to near optimum moisture conditions and compacted to fill standards.
5. Exploratory back hoe or dozer trenches still remaining after site removal should be excavated and filled with compacted fill if they can be located.

Fill Placement

1. Unless otherwise indicated, all site soil and bedrock may be reused for compacted fill; however, some special processing or handling may be required (see text of report).
2. Material used in the compacting process should be evenly spread, moisture conditioned, processed, and compacted in thin lifts six (6) to eight (8) inches in compacted thickness to obtain a uniformly dense layer. The fill should be placed and compacted on a nearly horizontal plane, unless otherwise found acceptable by our representative.
3. If the moisture content or relative density varies from that recommended by this firm, the contractor should rework the fill until it is in accordance with the following:
    a) Moisture content of the fill should be at or above optimum moisture. Moisture should be evenly distributed without wet and dry pockets. Pre-watering of cut or removal areas should be considered in addition to watering during fill placement, particularly in clay or dry surficial soils. The ability of the contractor to obtain the proper moisture content will control production rates.
    b) Each six-inch layer should be compacted to at least 90 percent of the maximum dry density in compliance with the testing method specified by the controlling governmental agency. In most cases, the testing method is ASTM Test Designation D 1557.
4. Rock fragments less than eight inches in diameter may be utilized in the fill, provided:
    a) They are not placed in concentrated pockets;
    b) There is a sufficient percentage of fine-grained material to surround the rocks;
    c) The distribution of the rocks is observed by, and acceptable to, our representative.

5. Rocks exceeding eight (8) inches in diameter should be taken off site, broken into smaller fragments, or placed in accordance with recommendations of this firm in areas designated suitable for rock disposal. On projects where significant large quantities of oversized materials are anticipated, alternate guidelines for placement may be included. If significant oversize materials are encountered during construction, these guidelines should be requested.
6. In clay soil, dry or large chunks or blocks are common. If in excess of eight (8) inches minimum dimension, then they are considered as oversized. Sheepsfoot compactors or other suitable methods should be used to break up blocks. When dry, they should be moisture conditioned to provide a uniform condition with the surrounding fill.

Slope Construction

1. The contractor should obtain a minimum relative compaction of 90 percent out to the finished slope face of fill slopes. This may be achieved by either overbuilding the slope and cutting back to the compacted core, or by direct compaction of the slope face with suitable equipment.
2. Slopes trimmed to the compacted core should be overbuilt by at least three (3) feet with compaction efforts out to the edge of the false slope. Failure to properly compact the outer edge results in trimming not exposing the compacted core and additional compaction after trimming may be necessary.
3. If fill slopes are built "at grade" using direct compaction methods, then the slope construction should be performed so that a constant gradient is maintained throughout construction. Soil should not be "spilled" over the slope face nor should slopes be "pushed out" to obtain grades. Compaction equipment should compact each lift along the immediate top of slope. Slopes should be back rolled or otherwise compacted at approximately every 4 feet vertically as the slope is built.
4. Corners and bends in slopes should have special attention during construction as these are the most difficult areas to obtain proper compaction.
5. Cut slopes should be cut to the finished surface. Excessive undercutting and smoothing of the face with fill may necessitate stabilization.

UTILITY TRENCH CONSTRUCTION AND BACKFILL

Utility trench excavation and backfill is the contractors responsibility. The geotechnical consultant typically provides periodic observation and testing of these operations. While efforts are made to make sufficient observations and tests to verify that the contractors' methods and procedures are adequate to achieve proper compaction, it is typically impractical to observe all backfill procedures. As such, it is critical that the contractor use consistent backfill procedures.

Compaction methods vary for trench compaction and experience indicates many methods can be successful. However, procedures that "worked" on previous projects may or may not prove effective on a given site. The contractor(s) should outline the procedures proposed, so that we may discuss them **prior** to construction. We will offer comments based on our knowledge of site conditions and experience.

1. Utility trench backfill in slopes, structural areas, in streets and beneath flat work or hardscape should be brought to at least optimum moisture and compacted to at least 90 percent of the laboratory standard. Soil should be moisture conditioned prior to placing in the trench.
2. Flooding and jetting are not typically recommended or acceptable for native soils. Flooding or jetting may be used with select sand having a Sand Equivalent (SE) of 30 or higher. This is typically limited to the following uses:
   a) shallow (12 + inches) under slab interior trenches and,
   b) as bedding in pipe zone.

   The water should be allowed to dissipate prior to pouring slabs or completing trench compaction.
3. Care should be taken not to place soils at high moisture content within the upper three feet of the trench backfill in street areas, as overly wet soils may impact subgrade preparation. Moisture may be reduced to 2% below optimum moisture in areas to be paved within the upper three feet below sub grade.
4. Sand backfill should not be allowed in exterior trenches adjacent to and within an area extending below a 1:1 projection from the outside bottom edge of a footing, unless it is similar to the surrounding soil.
5. Trench compaction testing is generally at the discretion of the geotechnical consultant. Testing frequency will be based on trench depth and the contractors procedures. A probing rod would be used to assess the consistency of compaction between tested areas and untested areas. If zones are found that are considered less compact than other areas, this would be brought to the contractors attention.

JOB SAFETY

General

Personnel safety is a primary concern on all job sites. The following summaries are safety considerations for use by all our employees on multi-employer construction sites. On ground personnel are at highest risk of injury and possible fatality on grading construction projects. The company recognizes that construction activities will vary on each site and that job site safety is the contractor's responsibility. However, it is, imperative that all personnel be safety conscious to avoid accidents and potential injury.

In an effort to minimize risks associated with geotechnical testing and observation, the following precautions are to be implemented for the safety of our field personnel on grading and construction projects.

1. Safety Meetings: Our field personnel are directed to attend the contractor's regularly scheduled safety meetings.
2. Safety Vests: Safety vests are provided for and are to be worn by our personnel while on the job site.
3. Safety Flags: Safety flags are provided to our field technicians; one is to be affixed to the vehicle when on site, the other is to be placed atop the spoil pile on all test pits.

In the event that the contractor's representative observes any of our personnel not following the above, we request that it be brought to the attention of our office.

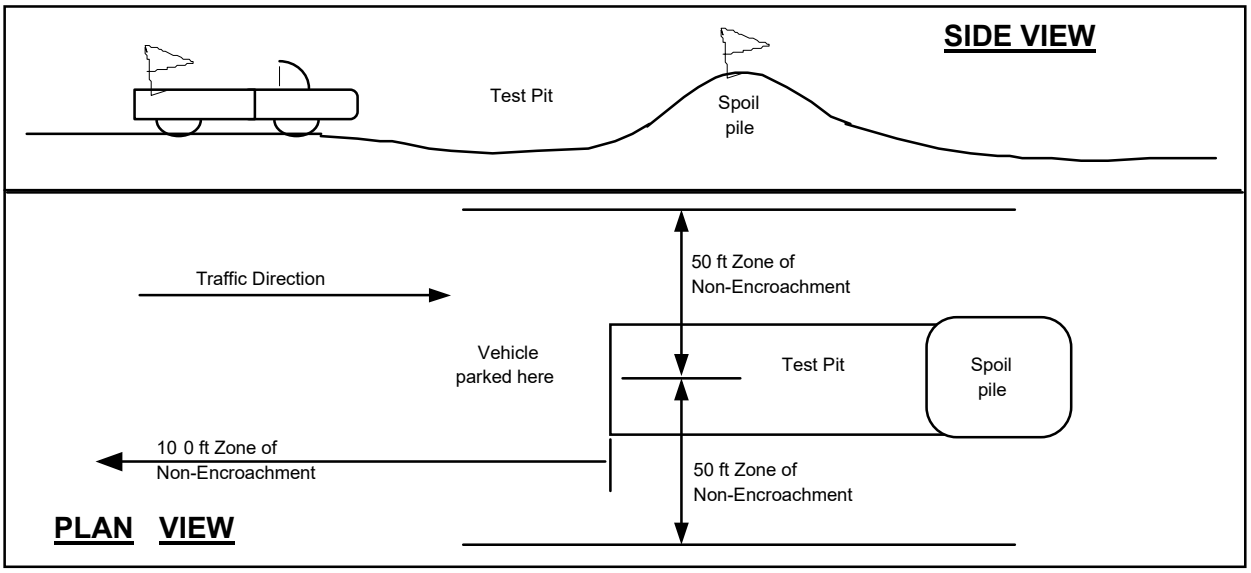
Test Pits Location, Orientation and Clearance

The technician is responsible for selecting test pit locations. The primary concern is the technician's safety. However, it is necessary to take sufficient tests at various locations to obtain a representative sampling of the fill. As such, efforts will be made to coordinate locations with the grading contractors authorized representatives (e.g. dump man, operator, supervisor, grade checker, etc.), and to select locations following or behind the established traffic pattern, preferably outside of current traffic. The contractors authorized representative should direct excavation of the pit and safety during the test period. Again, safety is the paramount concern.

Test pits should be excavated so that the spoil pile is placed away from oncoming traffic. The technician's vehicle is to be placed next to the test pit, opposite the spoil pile. This necessitates that the fill be maintained in a drivable condition. Alternatively, the contractor may opt to park a piece of equipment in front of test pits, particularly in small fill areas or those with limited access.

A zone of non-encroachment should be established for all test pits (see diagram below). No grading equipment should enter this zone during the test procedure. The zone should extend outward to the sides approximately 50 feet from the center of the test pit and 100 feet in the direction of traffic flow. This zone is established both for safety and to avoid excessive ground vibration, which typically decreases test results.

TEST PIT SAFETY PLAN



Slope Tests

When taking slope tests, the technician should park their vehicle directly above or below the test location on the slope. The contractor's representative should effectively keep all equipment at a safe operation distance (e.g. 50 feet) away from the slope during testing.

The technician is directed to withdraw from the active portion of the fill as soon as possible following testing. The technician's vehicle should be parked at the perimeter of the fill in a highly visible location.

Trench Safety

It is the contractor's responsibility to provide safe access into trenches where compaction testing is needed. Trenches for all utilities should be excavated in accordance with CAL-OSHA and any other applicable safety standards. Safe conditions will be required to enable compaction testing of the trench backfill.

All utility trench excavations in excess of 5 feet deep, which a person enters, are to be shored or laid back. Trench access should be provided in accordance with OSHA standards. Our personnel are directed not to enter any trench by being lowered or "riding down" on the equipment.

Our personnel are directed not to enter any excavation which;

1. is 5 feet or deeper unless shored or laid back,
2. exit points or ladders are not provided,
3. displays any evidence of instability, has any loose rock or other debris which could fall into the trench, or

4. displays any other evidence of any unsafe conditions regardless of depth.

If the contractor fails to provide safe access to trenches for compaction testing, our company policy requires that the soil technician withdraws and notifies their supervisor. The contractors representative will then be contacted in an effort to effect a solution. All backfill not tested due to safety concerns or other reasons is subject to reprocessing and/or removal.

Procedures

In the event that the technician's safety is jeopardized or compromised as a result of the contractor's failure to comply with any of the above, the technician is directed to inform both the developer's and contractor's representatives. If the condition is not rectified, the technician is required, by company policy, to immediately withdraw and notify their supervisor. The contractor's representative will then be contacted in an effort to effect a solution. No further testing will be performed until the situation is rectified. Any fill placed in the interim can be considered unacceptable and subject to reprocessing, recompaction or removal.

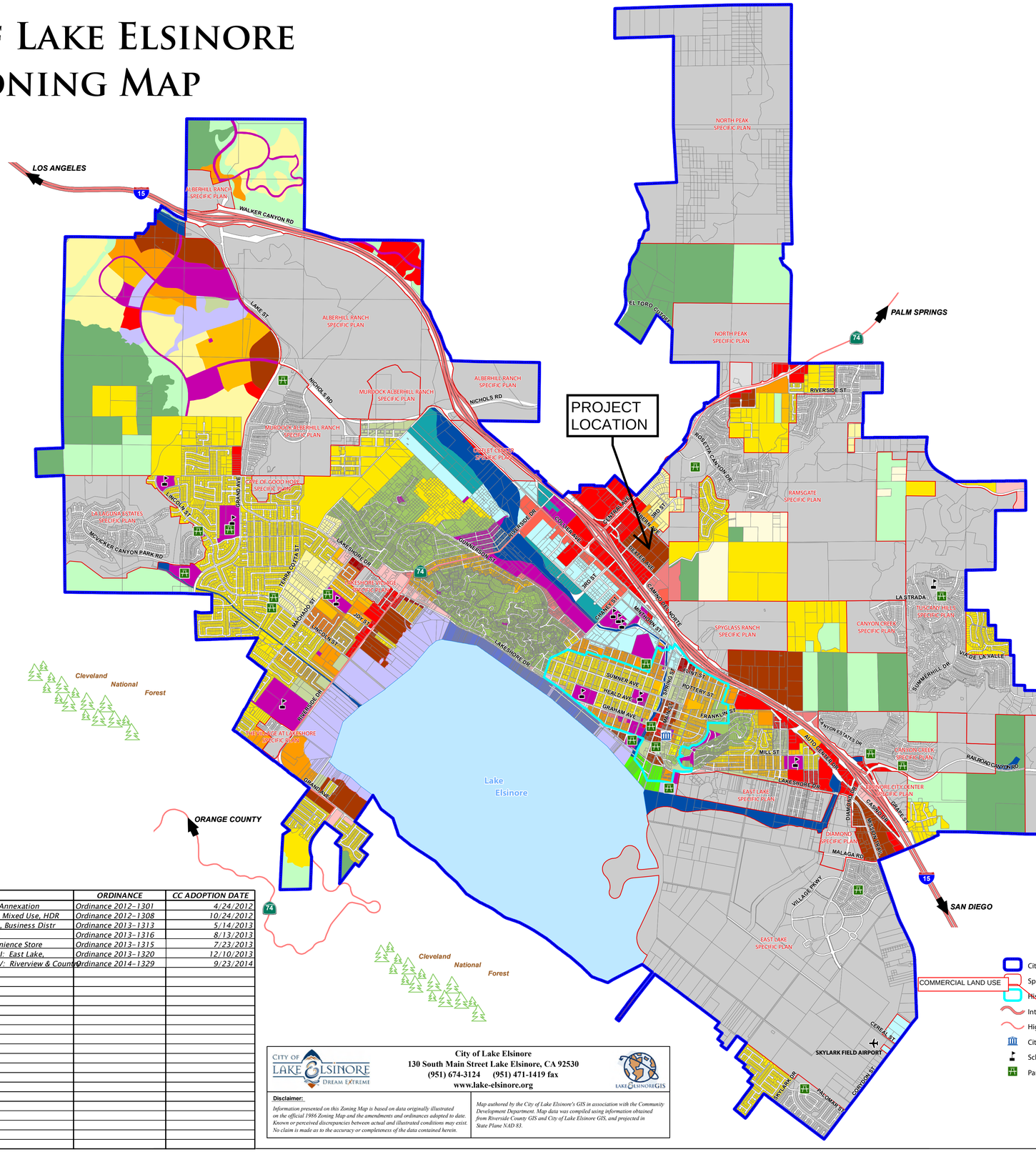
In the event that the soil technician does not comply with the above or other established safety guidelines, we request that the contractor bring this to technicians attention and notify our project manager or office. Effective communication and coordination between the contractors' representative and the field technician(s) is strongly encouraged in order to implement the above safety program and safety in general.

The safety procedures outlined above should be discussed at the contractor's safety meetings. This will serve to inform and remind equipment operators of these safety procedures particularly the zone of non-encroachment.

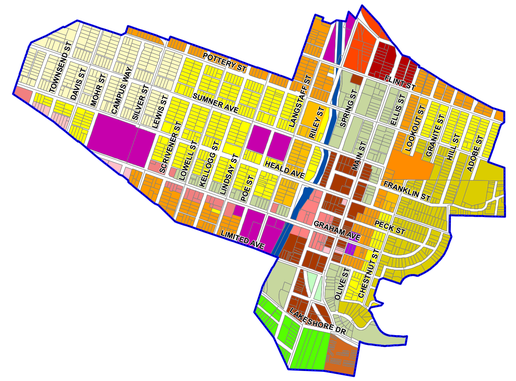
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ZONING MAP

City of Lake Elsinore Zoning Map

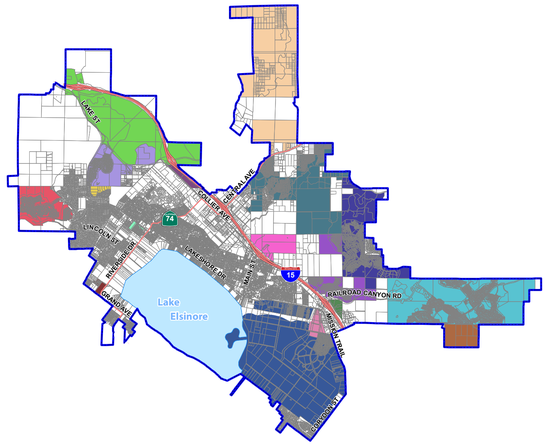


HISTORIC DOWNTOWN AREA ZONING



- R1 - Single Family Residential
- R3 - High Density Residential
- RMU - Residential Mixed Use
- CMU - Commercial Mixed Use
- C1 - Neigborhood Commercial
- C2 - General Commercial
- CO - Commercial Office
- BP - Business Professional
- M1 - Limited Manufacturing
- PI - Public/Institutional
- F - Floodway
- OS - Open Space
- LMD - Low Medium Density Residential
- MD - Medium Density Residential
- MHD - Medium High Density Residential
- HD - High Density Residential
- EC - Existing Condo Complex
- EMH - Existing Mobile Home Complex
- NC - Neighborhood Commercial
- TC - Tourist Commercial
- GC - Gateway Commercial
- DR - Downtown Recreational

SPECIFIC PLAN BOUNDARIES



- Alberhill Ranch
- Canyon Creek
- Canyon Estates
- Canyon Hills
- Cape of Good Hope
- Diamond
- East Lake
- Elsinore City Center
- La Laguna Estates
- Lakeshore Village
- Murdock Alberhill Ranch
- North Peak
- Outlet Center
- Ramsgate
- Spyglass Ranch
- The Village at Lakeshore
- Tuscany Hills

Note: Please refer to adopted Specific Plan to obtain accurate Zoning and Land Use Designations.

REVISION	ORDINANCE	CC ADOPTION DATE
ZC 2012-01 Third Street Annexation No. 81 Pre-Annexation	Ordinance 2012-1301	4/24/2012
ZC 2012-03 Consistency Zoning Project, Phase I, Mixed Use, HDR	Ordinance 2012-1308	10/24/2012
ZC 2013-01 Consistency Zoning Project, Phase II, Business Distr	Ordinance 2013-1313	5/14/2013
SPA 2013-02 East Lake SPA 10, Planning Area 46	Ordinance 2013-1316	8/13/2013
ZC 2013-03 Downtown Master Plan, 7-11 Convenience Store	Ordinance 2013-1315	7/23/2013
ZC 2013-04 Consistency Zoning Project, Phase III: East Lake,	Ordinance 2013-1320	12/10/2013
ZC 2014-04 Consistency Zoning Project, Phase IV: Riverview & Countr	Ordinance 2014-1329	9/23/2014

City of Lake Elsinore
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Disclaimer:

Information presented on this Zoning Map is based on data originally illustrated on the official 1986 Zoning Map and the amendments and ordinances adopted to date. Known or perceived discrepancies between actual and illustrated conditions may exist. No claim is made as to the accuracy or completeness of the data contained herein.

Map authored by the City of Lake Elsinore's GIS in association with the Community Development Department. Map data was compiled using information obtained from Riverside County GIS and City of Lake Elsinore GIS, and projected in State Plane NAD 83.

CITY LAYERS

- City Boundary
- Specific Plan Boundaries
- Historic Downtown District Boundary
- Interstate 15
- Highway 74
- City Hall
- Schools
- Parks

CITY ZONING

- RMR - Rural Mountainous Residential
- RH - Hillside Single Family Residential
- RR - Rural Residential
- RE - Residential Estate
- R1 - Single Family Residential
- R2 - Medium Density Residential
- R3 - High Density Residential
- MC - Mobile Home Community
- RMU - Residential Mixed Use
- CMU - Commercial Mixed Use
- C1 - Neigborhood Commercial
- C2 - General Commercial
- CM - Commercial Manufacturing
- CO - Commercial Office
- CP - Commercial Park
- BP - Business Professional
- M1 - Limited Manufacturing
- M2 - General Manufacturing
- M3 - Mineral Resources/Related Manufacturing
- L - Lakeshore
- PI - Public/Institutional
- F - Floodway
- OS - Open Space
- R - Recreation
- SP - Specific Plan
- SPA - Specific Plan Area

DOWNTOWN ZONING

- LMD - Low Medium Density Residential
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- EC - Existing Condo Complex
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