Cajalco Commerce Center
PPT220050
Riverside County, California

Preliminary Drainage Study

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TABLE OF CONTENTS

SECTION 1 - SUMMARY 1-1

PURPOSE 1-1
DESCRIPTION OF WATERSHED 1-1
PROPOSED CONDITIONS 1-2
Industrial Site onsite Drainage
Industrial Site Offsite Drainage
Industrial Site Lateral E-9.1 Connection
Park Site Onsite Drainage
Park Site Offsite Drainage
Project Impacts
METHODOLOGY 1-5
FIG. 1 VICINITY MAP
FIG. 2 USGS TOPOGRAPHY MAP
FIG. 3 AERIAL PHOTOGRAPH
FIG. 4 RECEIVING WATERBODIES
FIG. 5 SOILS MAP

SECTION 2 - HYDROLOGY ANALYSIS 2-1

HYDROLOGY PARAMETERS 2-1
TRIBUTARY FLOWS FOR EXISTING AND PROPOSED CONDITIONS 2-2
ON-SITE RATIONAL METHOD HYDROLOGY 2-3
OFF-SITE RATIONAL METHOD HYDROLOGY 2-5
ONSITE UNIT HYDROGRAPH ANALYSIS 2-6
OFFSITE UNIT HYDROGRAPH ANALYSIS 2-8

SECTION 3 - HYDRAULIC ANALYSIS 3-1

ON-SITE STORM DRAIN FACILITIES 3-1
OFF-SITE STORM DRAIN FACILITIES 3-1

SECTION 4 - ROUTING ANALYSIS 4-1

ON-SITE UNIT HYDROGRAPH METHOD HYDROLOGY 4-1
ROUTING ANALYSIS 4-1

SECTION 5 - CONCLUSION 5-1

APPENDIX A – HYDROLOGY ANALYSIS ..... A

HYDROLOGIC SOILS GROUP MAP (plate C-1.29)
ISOHYETAL MAPS
10-YEAR EXISTING ONSITE HYDROLOGY (RATIONAL METHOD)
100-YEAR EXISTING ONSITE HYDROLOGY (RATIONAL METHOD)
10-YEAR PROPOSED ONSITE HYDROLOGY (RATIONAL METHOD)
100-YEAR PROPOSED ONSITE HYDROLOGY (RATIONAL METHOD)
RATIONAL METHOD HYDROLOGY MAPS
10-YEAR OFFSITE HYDROLOGY (RATIONAL METHOD)
100-YEAR OFFSITE HYDROLOGY (RATIONAL METHOD)
EXISTING CONDITION UNIT HYDROGRAPHS
PROPOSED CONDITION UNIT HYDROGRAPHS
UNIT HYDROGRAPH HYDROLOGY MAP

APPENDIX B – HYDRAULIC ANALYSIS ..... B

APPENDIX C – ROUTING ANALYSIS C

APPENDIX D – REFERENCES ..... D

PERRIS VALLEY MDP LATERAL E-9 STAGE 2&3, LATERAL E-9.1 STAGE 1, IP200029

SECTION 1 - SUMMARY

PURPOSE

The purpose of this report is to document the hydrologic and hydraulic analyses performed in support of the Cajalco Commerce Center project located in County of Riverside, California. The industrial portion of the project site is located south of Cajalco Road, bounded by Seaton Avenue to the East, Decker Road to the west, and a Metropolitan Water District owned parcel to the south. The park portion of the project site is located south of the aforementioned Metropolitan Water District parcel, and straddles an extension of Decker Road, with existing vacant land and homes to the east, west, and south. The project proposes to build a commercial/industrial building on approximately 50 gross acres and a park on approximately 15 gross acres. This report will summarize the hydrologic and hydraulic analyses that were conducted in order to determine the necessary drainage improvements required to provide flood protection for the proposed building and safely convey the runoff through the site.

The scope of this report will include the following:

- Determine the peak 100-year and 10-year flow rates for the developed condition using the Riverside County Flood Control and Water Conservation District (RCFC&WCD) Rational Method.
- Determine the required storm drain facilities, alignment, and sizes required to flood protect the project site.
- Determine the necessary volume required for water quality treatment and to mitigate for increases in runoff.
- Preparation of a preliminary report summarizing the hydrology and hydraulic results.

DESCRIPTION OF WATERSHED

In the existing condition, a portion of the project site is tributary to Perris Valley MDP Lateral E-9.1 in Cajalco Expressway, while the other portions are tributary to the natural stream within the proposed park boundary, and to Seaton Basin, just southeast of the project site. This is depicted on the Tributary Areas Map in Appendix A. Also per this map, the project proposes to swap tributary land areas due to proposed improvements over the natural drainage paths. This is further discussed in Section 2 of this report.

As previously described, the project is proposing a commercial/industrial building (approximately 1 million square feet) on approximately 50 gross acres of land. Existing elevations across the site vary from 1604 in the northwest corner of the site to 1562 in the northeast corner of the site (NAVD88 datum). The site currently slopes down at approximately 1% to 8% grade to the east. The existing drainage pattern for the site and the general area is characterized by sheet flows that follow the slope to the east towards Seaton Avenue.

Existing flows for the site sheet flow to existing Seaton Avenue and Cajalco Road, eventually draining to MDP storm drain Lateral E-9.1 and to Seaton Basin of the Perris Valley Master Drainage Plan. While the portion of the existing site is tributary to Perris Valley MDP Lateral E-9.1, the existing Lateral E-9.1 per IP 200029 is sized to only accept 45 cfs which is consistent with the Perris Valley MDP. The pre-development flows of the industrial component of the site as explained in Section 4 of this report are actually approximately 100 cfs. The project is not located within a specific plan.

The project is also proposing a park on approximately 15 gross acres of land. Existing elevations across the site vary from 1604 in the southwest corner of the site to 1563 in the southeast corner of the site (NAVD88 datum). The site currently slopes down at approximately 1% to 8% grade to the east. The existing drainage pattern for the site and the general area is characterized by sheet flows that follow the slope to the east towards an existing stream that flows easterly along the south end to the site.

PROPOSED CONDITIONS

The Cajalco Commerce Center project consists of a proposed industrial project, a proposed park, and associated frontage road improvements. In general, the proposed industrial project will collect and detain flows onsite, treat them with LID BMPS, then discharge them north into the Perris Valley MDP system. The proposed park site will retain water quality storm flows for treatment through LID Principles, with larger storm events designed to surface flow towards the existing stream that travels through the southeast of the proposed park. Frontage road improvements will be split between these two drainage outlets.

INDUSTRIAL SITE ONSITE DRAINAGE

For the industrial component of the Cajalco Commerce Center project, onsite runoff will be conveyed throughout the site via proposed ribbon gutters and curbs and gutters. Onsite runoff will then be captured by a network of drainage inlets provided at lows points. For water quality purposes, this is considered DMA-A. Proposed private underground storm drain conveys captured flows towards an underground storage chamber before being pumped to a proposed modular wetlands system for water quality treatment.

Runoff from Cajalco Expressway and Seaton Avenue in the project frontage is collected via catch basins and conveyed via 36-inch storm drain lines in Cajalco Expressway. These road areas are considered DMA-C for water quality purposes. The onsite project treatment is oversized to compensate for the V_{BMP} of the offsite street frontages as a maximum extent practical. As further described below, Decker Road runoff within the industrial site frontage is conveyed southerly to be outletted into the existing stream that runs through the park component of the project. Similar to Cajalco Expressway and Seaton Avenue within the industrial project frontage, the Decker Road frontage area is accounted for in the V_{BMP} calculations of the industrial site onsite BMP.

INDUSTRIAL SITE OFFSITE DRAINAGE

The industrial portion of the project site intercepts offsite flows along a small portion of the southern boundary. These offsite flows enter a 0.7-acre landscape area on the project site that will be considered a self-retaining area. Larger storm events for this area will be conveyed through the project site via a proposed 12-inch storm drain Line A that outlets to the proposed extension of Perris Valley MDP Lateral E-9.1.

Existing flows that travel east on Cajalco Expressway approaching Decker Road, outside of the project frontage, are collected via a proposed catch basin at the southeast corner of the Cajalco Road and Decker Road intersection and are then conveyed via proposed public 18-inch storm drain, Line B, which connects to the proposed extension of Perris Valley MDP Lateral E-9.1 at the intersection of Cajalco Expressway and Seaton Avenue.

INDUSTRIAL SITE LATERAL E-9.1 CONNECTION

According to the approved Perris Valley MDP Lateral E-9.1 Stage 1 improvement plans (IP 200029) the existing available capacity is 45 CFS at the point of connection with Perris Valley MDP Lateral E-9.1. The detention chambers onsite have been oversized to detain the 100-year, 24-hour storm flows of the project site as well as the BMP volume. As the water quality volume is being pumped from the chamber to the modular wetlands for treatment, when a larger volume storm hits, the larger volume will gravity out of the chamber system through an orifice plate that will control the discharge rate to not exceed the capacity of the downstream lateral. The elevation of this orifice plate will be above the V_{BMP} storage elevation.

In addition to the existing flows exceeding the available downstream facility's capacity, the project's proposed change of zone and land use will produce additional runoff that the existing condition will not be able to handle. The project will be responsible for detaining flows that currently exceed the downstream facilities capacity as well as detain the increased runoff produced by the project. The target rate of discharge from the site will need to match the capacity of Perris Valley MDP Lateral E-9.1 while

insuring the dewatering of the chambers is done so within 72 hours. The preliminary routing analysis utilizes a discharge of 10 cfs leaving the detention chambers allowing the 100-year storm to leave the chambers within the 72-hour maximum timeframe. The underground chamber volume calculations can be found in Appendix 6 of the related WQMP. The Unit Hydrograph calculations can be found in Appendix A of this report.

As mentioned above, street flows in the Decker Road industrial site frontage, as well as the MWD frontage just south of the industrial site, are collected via proposed catch basins and conveyed through proposed Line C, which ranges in size from 24-inch RCP to 66-inch RCP. Line C connects to proposed three-12'x12' RCB that conveys the existing stream underneath the Decker Road culdesac. Decker Road flows in the park site frontage are accepted via reverse under sidewalk drains and are then treated by proposed bioretention basins on the park site. Larger storm flows in Decker Road will bypass the under-sidewalk drains and will be captured by proposed catch basins and directed to proposed Line C.

PARK SITE ONSITE DRAINAGE

For the proposed park component of the Cajalco Commerce Center project, onsite runoff will be conveyed through surface flows, with flows eventually draining towards the existing stream that runs through the southeast portion of the park. The park is split into multiple DMAs, DMA-E1 through E5 and DMA-W1. The proposed improvements are treated through LID Principles, while allowing larger storm events to continue towards the existing stream.

DMAs E1 and E3 allow storms to surface flow and settle into depressed self-retaining areas for treatment. Flows from larger storms will continue over the small graded berms containing these areas and flow ultimately toward the existing stream in the southeast area of the park.

The project also proposes a private, stabilized access road along the south property line of the park, east of Decker Road, to provide vehicular access to existing residences south of the park. This area is considered DMA-E4 for water quality purposes. In an effort to minimize impact, an earthen swale containing gravel is proposed along this access road to capture road runoff and convey it via proposed storm drain line and outlet it to easternmost part of the stream on the park site, at a localized point.

DMAs W1 and E2, which each contain the half width of Decker Road in the park frontage, drain to BMP-W1 and BMP-E2, respectively. The bioretention basins will have 2.5 feet of engineered media over 0.5 feet of choker gravel over 1.0 feet of gravel, and it will have a water quality ponding depth of 0.5 feet, per the Riverside County Santa Ana Region bioretention design sheet. The basins are also sized to handle the HCOC mitigation volumes for these respective DMAs in addition to the water quality volume. Water quality flows will filter through the media and gravel before being picked up by perforated pipes in the gravel section, which conveys treated flows towards proposed 66-inch storm drain, Line C in Decker Road, which then conveys flows south towards the existing stream. In the bioretention basins, flows from larger storm events will be intercepted by an overflow grate inlet in the proposed basins, which will outlet through proposed Line C. Design of the overflow inlet will be finalized in Final Engineering.

DMA-E5 on the park site is a self-treating area. The area consists of a natural stream that drains to the east offsite. There are no existing impervious areas or proposed improvements or grading within this boundary. This area accepts the flows from the proposed park and proposed storm drain Line C in Decker Road, as well as the perpetuated stream flows through the proposed 3-12'x12' RCB culverts beneath the Decker Road culdesac.

The park component of the project is subject to HCOC mitigation and increased runoff mitigation due to the discharge of flows into the existing stream that runs through the park. Per the unit hydrograph results in Section 2, all of the 10-year or 100-year storms results in a decrease in the developed condition. Therefore, mitigation is not required for increased runoff to the stream. For DMAs E-2 and W-1 there was a significant increase for the 2-Year, 24-Hour storm event flows which triggered mitigation for HCOC. The project proposes to mitigate this volume by detaining it in depressed self-retaining areas in the

DMAs. This is further discussed in the accompanying PWQMP.

PARK SITE OFFSITE DRAINAGE

There is approximately 1200 acres of offsite area tributary to the project. The three primary areas collecting this offsite stormwater proposed with the project is Decker Road, between Cajalco and the north side of the park site, a proposed channel located along the west side of the park site, and the south side of the park site via proposed box culvert conveying the existing stream.

The offsite flows that are tributary to proposed Decker Road are to be intercepted by a shotcrete swale, proposed to parallel the parkway improvements. Multiple inlets are proposed within the swale and will be connected to Line C proposed with the project. Exact inlet design and spacing to adequately accept all offsite flows will be designed in Final Engineering. The shotcrete swale and inlets will require maintenance and can be accessed from Decker Road.

Offsite flows that drain easterly to the western boundary of the park site are accepted by a proposed drainage channel that parallels the property line. This 22-foot wide concrete channel will have a slope with rip-rap on the western side to slow down flows as they enter the channel. The channel drains to proposed Line D, a 48-inch RCP storm drain that will convey flows through the park, connecting to Line C in Decker Road. The proposed concrete channel and inlet will require maintenance. The channel can be accessed via 20' access road that separates the channel from the park with a retaining wall and fencing.

Offsite flows that drain northerly to the park are generally following the existing stream already. As mentioned previously, these flows are accepted into proposed three-12'x12' RCB that continue the stream underneath the Decker Road culdesac. As these flows exit the box, they will dissipate over a design rock rip-rap outlet structure to address any increase in velocities prior to continuing in the existing stream condition. The proposed three-12'x12' RCB culvert and headwalls will require maintenance to maintain flow progression. The headwalls and inlet and outlet structures will be accessed via maintenance access roads and turnaround areas. Maintenance activities will be regular, with a minimum of once per year.

Maintenance of various storm drain infrastructure will be maintained by RCTD, RCFCWCD, or other public agency equivalent. Maintenance activities frequency will be regular with a minimum of once a year. Sediment and debris are expected from the offsite undeveloped tributary area that will convey flows to these collection channels and RCB culverts.

PROJECT IMPACTS

Analyses were completed to determine downstream impacts of drainage facilities for the park. Due to the proposed improvements and their drainage design, the Cajalco Commerce Center project proposes to swap land between the areas tributary to the industrial site and the park site. With this, impacts to the stream were analyzed for inundation and velocity conditions. This slight change in the natural drainage pattern will be addressed through grading and an outlet structure design to ensure the flood limits and velocities of the stream are back to pre-developed conditions before reaching the easterly property line and impacting adjacent property owners. None of these changes created detrimental impacts to downstream facilities. This is further explained in Section 2 of this report.

The general assumption is that storm drain up to 36-inch will be maintained by Riverside County Transportation and storm drain larger than 36-inch will be maintained by Riverside County Flood Control District.

The industrial component of the project site falls completely within the HCOC exemption area, as shown in the exhibit in Appendix 7. The park component of the project site falls within the non-exemption area, as shown in the exhibit. The difference between the pre- and post-development unit hydrograph calculations for the different DMA's in the park site are detailed in Section F of the associated PWQMP. The DMA's that create an HCOC due to a larger difference of post-development runoff mitigate for this volume in the proposed self-retaining areas of those DMA's. This is further detailed in Section F of the associated PWQMP.

METHODOLOGY

HYDROLOGY

Hydrologic calculations were performed in accordance with the RCFC&WCD Hydrology Manual, dated April 1978. The Rational Method was utilized in determining peak flow rates.

The hydrological parameters, including rainfall values and soil types were derived from the RCFC&WCD Hydrology Manual. The isohyetal maps and soil map have been included in Section 2.

Rational Method calculations were performed using a computer program developed by CivilDesign Corporation and Joseph E. Bonadiman and Associates Inc. The computer program is commonly referred to as CivilD which incorporates the hydrological parameters outlined in the RCFC&WCD Hydrology Manual.

The Rational Method was used to determine the peak flow rates to size and design the drainage facilities need to convey onsite flows through the site to the proposed basin. The flow rates were computed by generating a hydrologic "link-node" model in which the overall area is divided into separate drainage sub-areas, each tributary to a concentration point (node) determined by the proposed layout and grading.

HYDRAULICS

Water quality volume calculations were performed using spreadsheets that were created by RCFC&WCD. Final calculations and additional details can be found in the Preliminary WQMP.

Hydraulic calculations to determine the required pipe sizes of proposed storm drain facilities will be provided in the Final Drainage Study.

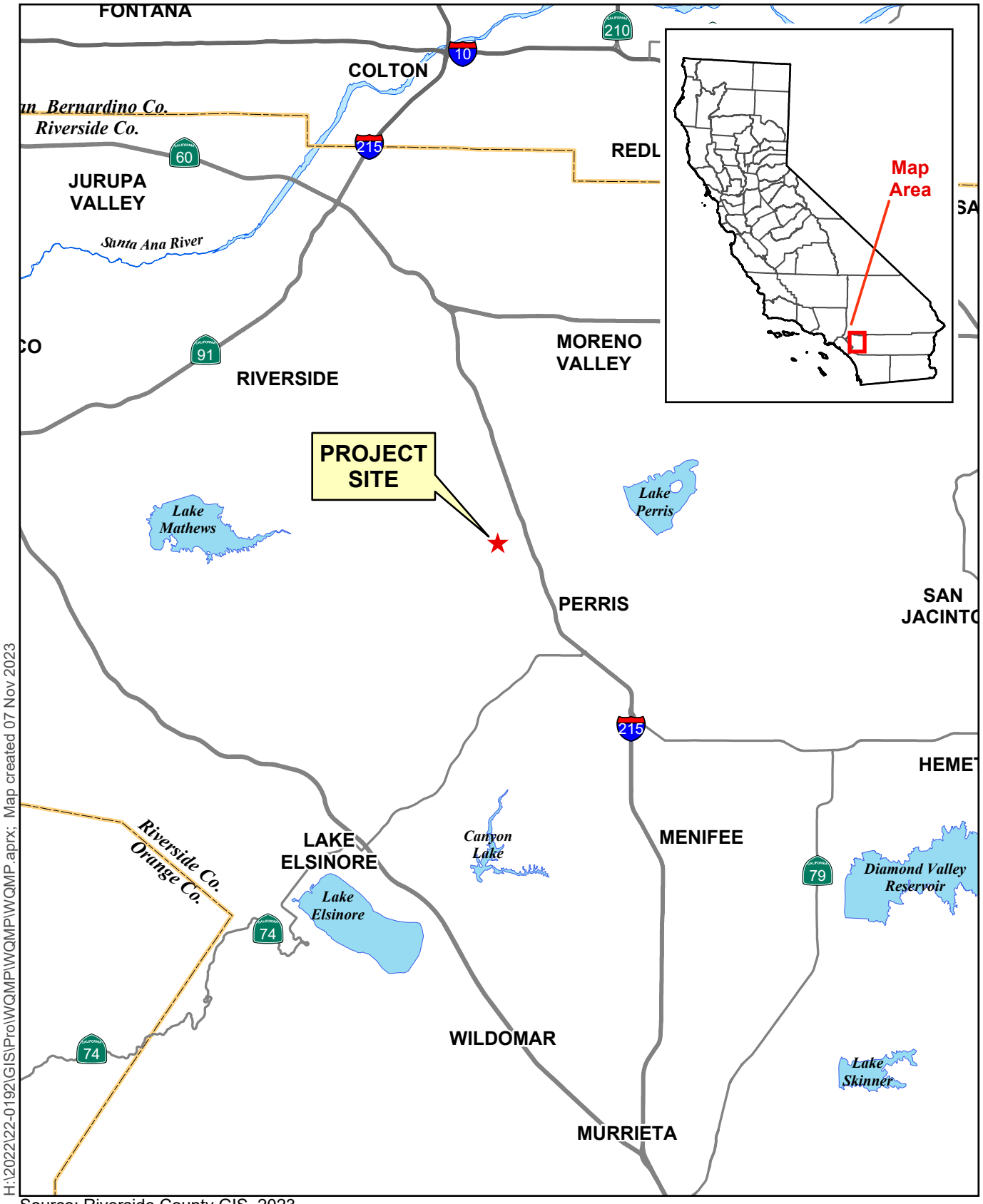
FIG. 1 VICINITY MAP

FIG. 2 USGS TOPOGRAPHY MAP

FIG. 3 AERIAL PHOTOGRAPH

FIG. 4 RECEIVING WATERBODIES

FIG. 5 SOILS MAP



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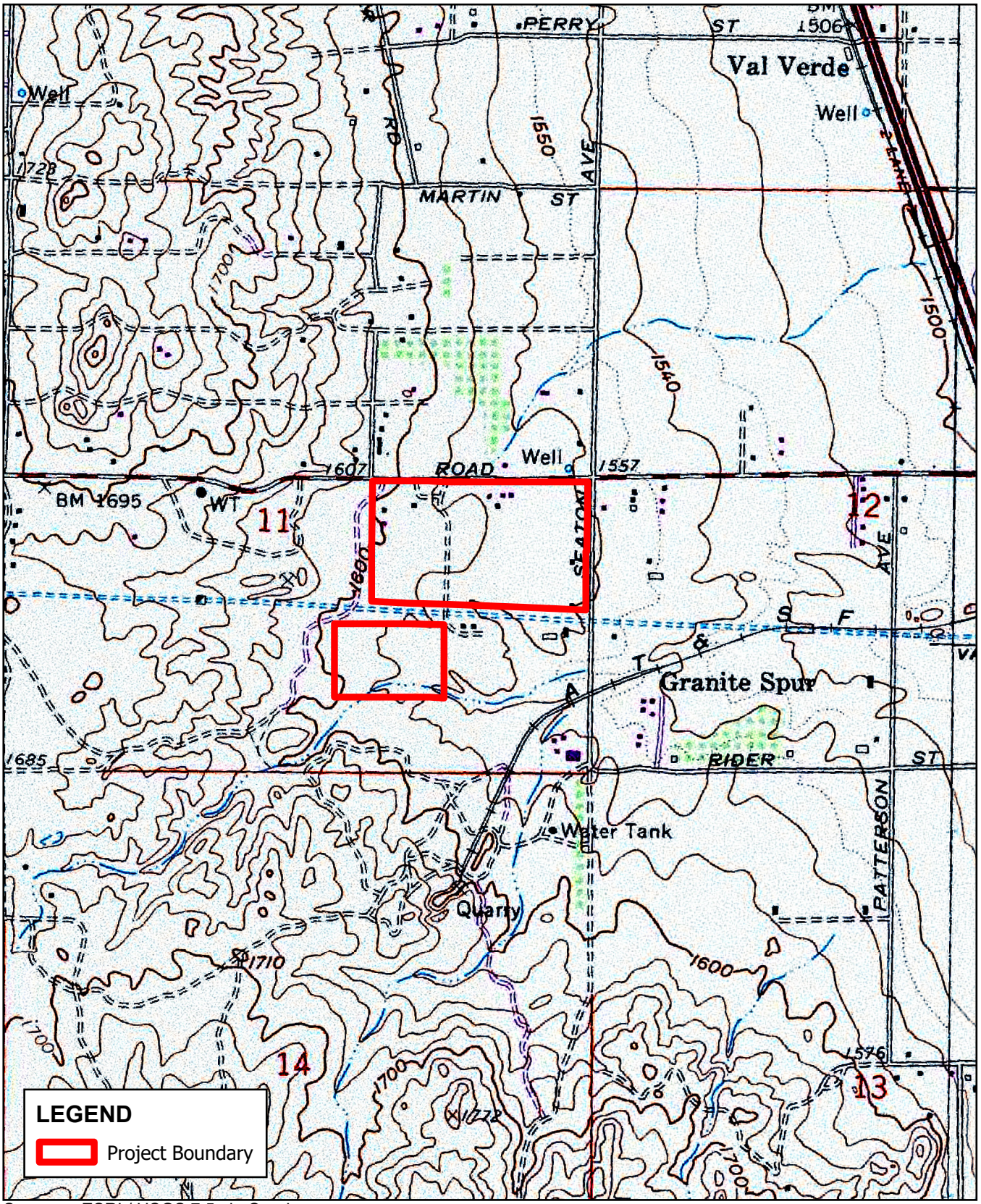
Source: Riverside County GIS, 2023.

Figure 1 – Vicinity Map

Cajalco Commerce Center

ALBERT A. WEBB ASSOCIATES



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Sources: ESRI / USGS 7.5min Quads

Figure 2 - USGS Map

Cajalco Commerce Center

0 1,000 2,000 3,000 Feet

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Sources: Riverside Co. GIS, 2023

0 300 600 900 Feet

Figure 3 - Aerial Map

Cajalco Commerce Center

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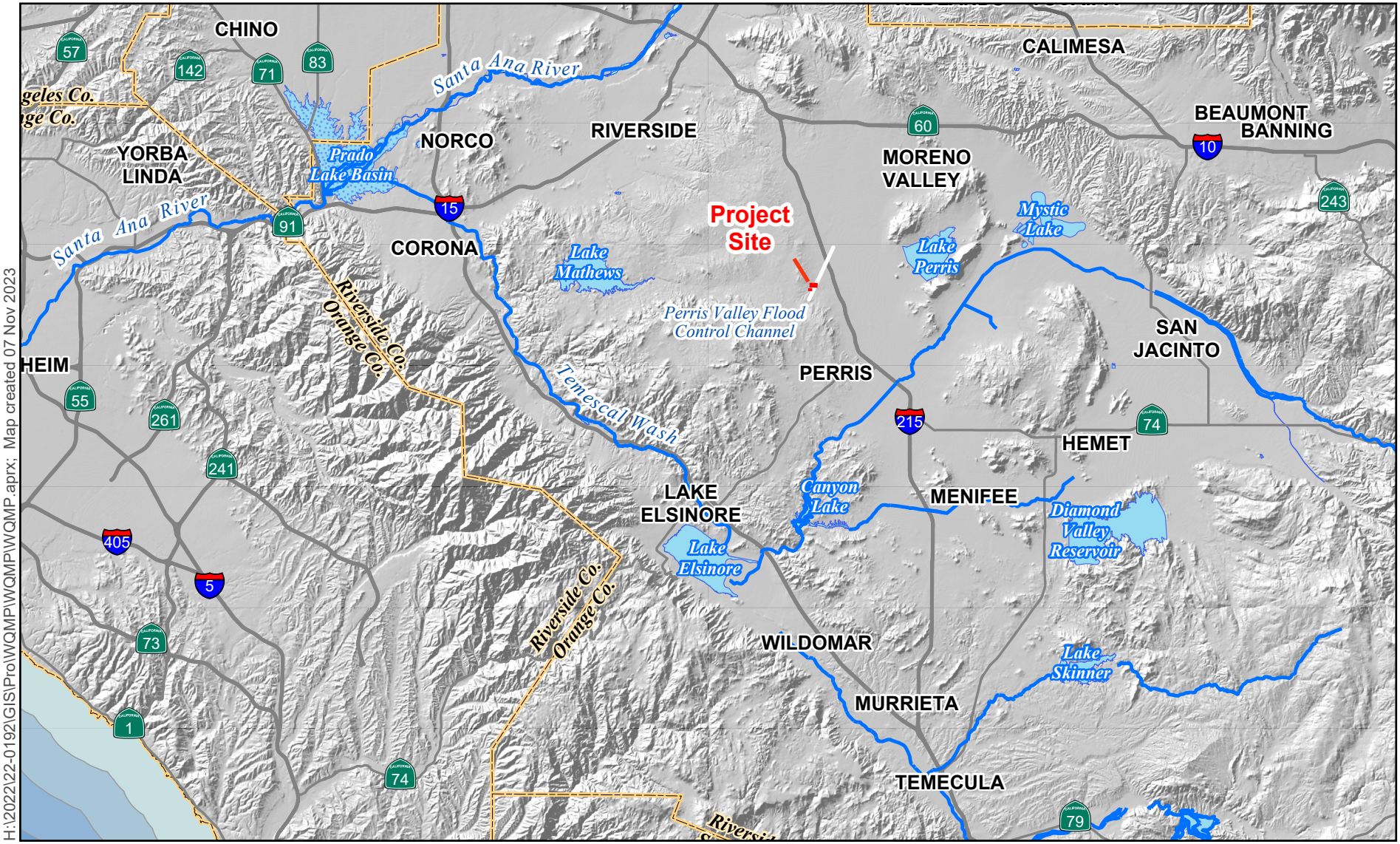

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Sources: US NHD; USGS 30 Meter DEM

0 2 4 6 8 Miles

Figure 4 – Receiving Waterbodies

Cajalco Commerce Center

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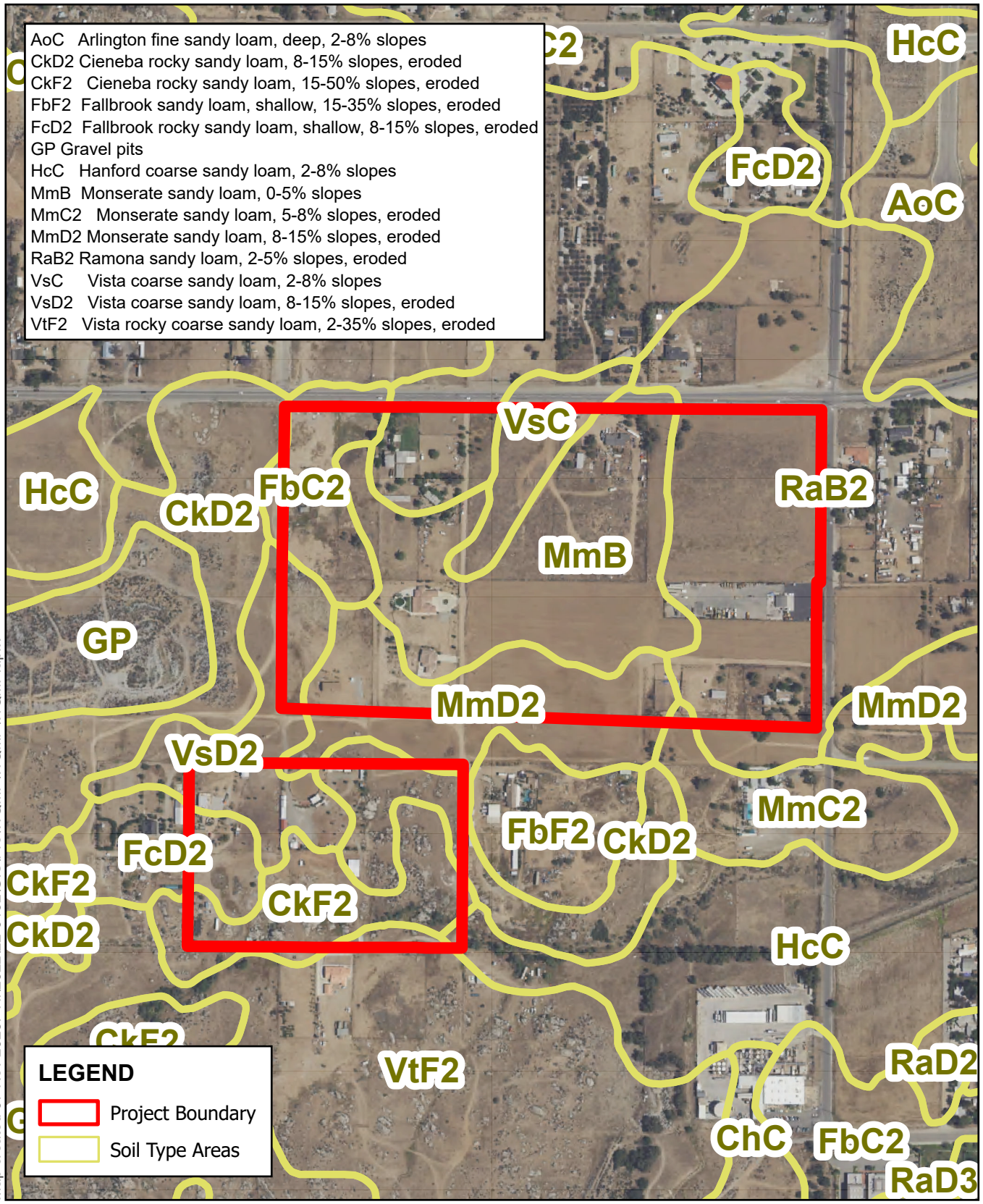


Map created 07 Nov 2023. H:\2022\22-0192\GIS\Pro\WQMP\WQMP.aprx

Sources: USDA NRCS SSURGO, 2015; Riverside Co. GIS, 2023; USDA NAIP, 2016.

Figure 5 – Soils Map

Cajalco Commerce Center

ALBERT A. WEBB ASSOCIATES

SECTION 2 - HYDROLOGY ANALYSIS

HYDROLOGY PARAMETERS

The RCFC&WCD Hydrology Manual was used to determine several of the hydrological parameters. The following rainfall depths were utilized in the hydrology analyses, which were obtained from the isohyetal maps provided in the RCFC&WCD Hydrology Manual:

Table 1 – Precipitation Values

	Duration	
Storm Event	1-Hour (inches)	24-Hour (inches)
2-Year	0.49	2.0
100-Year	1.28	5.4

The value for slope of intensity was determined to be 0.57. The isohyetal maps have been included in Appendix A.

Based on the Plate C-1.29 – Steele Peak in the RCFC&WCD Hydrology Manual, the project site is classified as majority soil types BC and C, as well as a small portion being B. To be conservative, soil type C was used for the entire site. The Perris Valley Master Drainage Plan used soil type B for the existing area calculations, however for this drainage analysis soil type C was used for both the existing and proposed conditions for comparability. The soils map is included in Appendix A.

The cover type was determined based on the existing land cover and proposed land use of the site. Hydrological computations for the existing condition were done using 'Barren'. The Commercial Landscaping cover type was used to represent the developed condition of the industrial component of the site. The park component of the site proposes approximately 20% imperviousness not including Decker Road frontage improvements. Due to this, Residential Landscaping cover type was used with a selection of ½ acre lots was used to conservatively model this area.

The table below summarizes the runoff index values and the recommended values for percentage of impervious cover for each category:

Table 2 – Cover Type

Cover Type	Soil Group A	Soil Group B	Soil Group C	Soil Group D	Percentage of Impervious Cover
Existing Condition Barren	78	86	91	93	0.0%
Developed Condition Commercial Landscaping	32	56	69	75	90%
Developed Condition Residential Landscaping	32	56	69	75	40%

TRIBUTARY FLOWS FOR EXISTING AND PROPOSED CONDITIONS

An analysis was completed of the contours within the Cajalco Commerce Center project site and the offsite areas tributary to it to show the differences in the pre- and post-developed conditions of what is tributary to MDP Lateral E-9.1 and to the existing stream. Per the Tributary Area Map in Appendix A, in the existing condition about 41 acres of this land is naturally tributary to Perris Valley MDP Lateral E-9.1 in Cajalco Expressway. Approximately 1228 acres are tributary to the natural stream within the project boundary limits, which leads to the Seaton Basin. Lastly, approximately 12.5 acres are tributary to the Seaton Basin, and not to the stream within the project boundary.

The Cajalco Commerce Center project proposes to swap land between these tributary areas due to proposed improvements. In the proposed condition, the area that will be tributary Perris Valley MDP Lateral E-9.1 will consist of a portion of the area previously tributary to Lateral E-9.1, the 12.5 acres tributary to Seaton Basin, and a portion of the area tributary to the stream, resulting in a total of 52.1 acres. While this increased area results in increased flow rates, the proposed chamber and pump system on the industrial site will release these flows at a reduced rate that Lateral E-9.1 has the capacity for. This is described further in the Routing Analysis in Section 4 of this report.

The area that will be tributary to the stream within the project boundary will consist of a portion of the area previously tributary to the stream, as well as a portion of land that was previously tributary to Lateral E-9.1, specifically the area of Decker Road and the portion of offsite land just west of Decker Road that previously flowed east and not south. These areas are depicted on the previously mentioned Tributary Areas Map in Appendix A. Per Tables 3 and 4 below, this area increased by merely 1 acre and flow by less than 1% of existing flow.

Table 3 – Unit Hydrograph Results for Tributary Areas

		Existing Condition	Proposed Condition	
Tributary Area	Storm Event	Peak Flow (cfs)	Peak Flow (cfs)	Percent Increase
Area Tributary to Perris Valley MDP Lateral E-9.1	100-Year, 1-Hour	99.79	148.82*	-
	100-Year, 3-Hour	60.32	81.04*	-
	100-Year, 6-Hour	54.69	75.37*	-
	100-Year, 24-Hour	23.69	30.36*	-
Area Tributary to Stream (within project boundary)	100-Year, 1-Hour	1664.47	1677.02	0.75%
	100-Year, 3-Hour	1218.68	1226.65	0.65%
	100-Year, 6-Hour	1147.70	1155.27	0.66%
	100-Year, 24-Hour	574.54	578.07	0.61%

*While these are the peak flows in the proposed condition, the proposed flow to Perris Valley MDP Lateral E-9.1 will be pumped from the industrial project site at a rate that the line can handle, explained further in Section 4 of this report.

Table 4 – Tributary Area Acreages

	Existing Condition	Proposed Condition
Area Tributary to Perris Vallley MDP Lateral E-9.1	41.1 Ac	52.1 Ac
Area Tributary to Seaton Basin	12.5 Ac	-
Area Tributary to Stream (within project boundary)	1227.6 Ac	1229.3 Ac
Total Area	1281.2	1281.4 Ac

An analysis was done using the HEC-RAS program to model the stream within the park site in the existing and proposed peak flow conditions to evaluate impact. The existing condition utilized the peak storm (100-year 3-hour) unit hydrograph and modeled the water surface in the stream as it flows today. The proposed condition utilized the same peak storm event unit hydrograph, but for the entire acreage that the project proposes to delineate to the stream, as described above. For conservative purposes, this HEC-RAS model did not model the proposed Line C storm Drain in Decker, but rather sent all of these proposed flows to the upstream headwall of the proposed three-12'x12' RCB culvert. Per the "Existing and Proposed Inundation" exhibit included in Appendix A of this report, the stream is not harshly affected by the proposed project. In the proposed condition there is a small portion of flows that overflow onto the park site northwest of the upstream headwall. This area is designed as a depressed area for water quality and the maximum ponding depth resulting from this storm event is no larger than 0.3 feet. The proposed grading of this area is lower than the existing grades allowing a larger ponding footprint in the proposed scenario. In the existing condition the flows from this storm pond to an elevation of 1585.6 in the stream, but in the proposed condition the flows spread out further and pond to an elevation of 1584.5.

Another analysis was done using the HEC-RAS program to model the stream velocity in the existing and proposed conditions using the peak storm unit hydrograph mentioned above. For comparison purposes, "downstream" will refer to the portion of the stream downstream from the proposed box culvert, and "upstream" will refer to the portion upstream of it, whether in the existing or proposed condition. In the existing condition of the stream, the downstream velocity of the stream ranges from 6-14.5 feet per second. This compares to 5.5-15 feet per second in the proposed condition. This difference is considered negligible. The upstream portion in the existing condition ranges from 5.5-12 feet per second, while it is 7.5-13 feet per second in the proposed condition. The difference can be explained by the modeling choice of sending all proposed flows to the upstream headwall, instead of modeling the Decker Road storm drain.

ON-SITE RATIONAL METHOD HYDROLOGY

The rational method was used to determine peak flow rates in order to adequately size the proposed subsurface storm drains and associated inlets used to convey on-site flows to the proposed basins.

The site is broken down into two components, industrial and park components. The industrial component contains four sub-areas, DMAs A through D. DMA A, totaling approximately 44 acres, consisting of the 100-series and 200-series nodes, drains through the underground storage chamber that outlets through a treatment box and then leaves the site connecting to the extension of Perris Valley MDP Lateral E-9.1 in Cajalco Expressway, proposed per PPT180028. There is a separate emergency escape storm drain line that bypasses the treatment box and connects to said extension line in Cajalco Expressway. This bypass line will be designed to outlet flows at a rate appropriate for the capacity of

Perris Valley MDP Lateral E-9.1 downstream. Design of this emergency escape bypass will be done in final engineering.

DMAs B and C consist of offsite flows, detailed in the section below.

DMA D contains approximately 6.2 acres of proposed street improvements of Cajalco Expressway and Seaton Avenue, consisting of the 500 series nodes. Flows in the proposed street frontages are collected via catch basins and conveyed through the extension of Lateral E-9.1 in Seaton Avenue as well as proposed storm drain Line B in Cajalco Expressway, which connects to said extension of Lateral E-9.1, ultimately connecting to the previously mentioned Perris Valley MDP Lateral E-9.1 at Cajalco Expressway Station 57+09.79, per IP 200029. These flows remain separate from onsite project flows.

The park component of the site contains six sub-areas, DMAs W1, E1, E2, E3, E4 and E5, as well as Offsite. The six onsite DMAs total approximately 15 acres, consisting of the 900 series nodes. DMAs E1 and E3 will be conveyed through surface flows, with larger storm flows eventually draining towards the existing stream that runs through the southeast portion of the park.

DMA E4 consists of an all-weather access road on the south side of the park. Flows in this area will drain to the south side of the road to a proposed gravel swale that will also double as a water quality swale. Flows will outlet at the southeast corner of the park and discharge into the existing stream.

DMA E5 consists of 1.6 acres of land within the project boundary. It conveys the existing stream and is not being developed. This area will accept the onsite flows from the park, flows from proposed Line C in Decker Road, and existing offsite stream flows from the south that are conveyed through the proposed RCB underneath Decker Road.

DMAs W1 and E2 drain to their respective basins within the DMAs. Each basin will contain an outlet structure that will outlet flows at the pre-development rate to protect the existing stream, which will be designed in Final Engineering. The flows leave the outlet the basins directly into proposed Line C in Decker Road, where they confluence with upstream offsite flows. They then connect to the proposed RCB culvert and existing stream.

The following table summarizes the rational method results at key points:

Table 5 – Onsite Rational Method Results – Existing Condition

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
Node 14 – Existing Project Site Flows – Industrial Component	52.0	86.8
Node 23 – Existing Project Site Flows – Park Component	24.1	39.6

Table 6 – Onsite Rational Method Results – Proposed Condition

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
Node 105– 100 Series Total Flows	29.2	54.8
Node 105– 200 Series Total Flows	43.8	69.2

Node 107 – DMA A Total Flows – Industrial Component	**63.0**	**114.6**
Node 522 – DMA D – Cajalco Expressway– Total Flows	11.1	17.7
Node 531 – DMA D – Seaton Avenue – Total Flows	1.0	1.5
Node 902– DMA-W1 Total Flows – Park Component	10.3	16.9
Node 922– DMA-E2 Total Flows – Park Component	2.2	3.6
Node 813 Line C Total Flows – (Includes Offsite flows that are confluenced)	**242.0**	**246.3**
Node 816 Total Flows – RCB Culvert & Stream (Includes Offsite flows that are confluenced)	**1224.4**	**1227.1**
Node 911– DMA-E1 Total Flows – Park Component	7.8	12.8
Node 931– DMA-E3 Total Flows – Park Component	5.6	9.1
Node 942- DMA E4 Total Flows – Park Component	1.1	1.8
Total Flows – Park Component (Includes Offsite flows that are confluenced)	1238.9	1250.8

The rational method output files and hydrology map have been included in Appendix A.

OFF-SITE RATIONAL METHOD HYDROLOGY

The rational method was used to determine peak flow rates in order to adequately size the proposed subsurface storm drains and associated inlets used to convey off-site flows to their respective outlets.

DMA B, as mentioned previously, totaling approximately 0.8 acres, consisting of the 300-series nodes, contains the offsite flows that flow from the MWD property northerly to the industrial site, as well as the onsite landscape area along the southern boundary. These flows are captured by proposed storm drain Line A and are conveyed to proposed extension of Perris Valley MDP Lateral E-9.1 in Seaton Avenue. The offsite flows were analyzed utilizing the undeveloped poor condition land use type. These flows then merge with the onsite landscape area, which was designated by manually inputting the runoff index number for commercial landscaping.

DMA C, totaling approximately 1.9 acres, consisting of the 600-series nodes, contains offsite flows from the west on Cajalco Expressway. These flows are captured by a proposed catch basin at the southeast corner of Cajalco Expressway and Decker Road are then conveyed via proposed 24-inch storm drain Line B in Cajalco Expressway, remaining separate from the onsite flows. Line B connects to proposed extension of Perris Valley MDP Lateral E-9.1 in the intersection of Cajalco Expressway and Seaton Avenue.

As mentioned previously, DMA E-5 consists of 1.6 acres of land that, while technically within the project boundary, conveys the natural stream and flows offsite. This delineated area does not contain any proposed improvements and is considered a self-treating area for water quality purposes.

The tributary area of offsite flows that ultimately drains to the park site and to the existing stream DMA E-5 contains approximately 1,203 acres of mostly undeveloped land.

- A portion of this area drains to Decker Road in the industrial site frontage. These flows consist of the 700 series and 800 series nodes and they are accepted by a proposed shotcrete swale along the western right-of-way of Decker Road. The flows are directed into proposed inlets and conveyed through proposed Line C in Decker Road, ultimately connecting to proposed three-12'x12' RCB in the Decker Road culdesac.
- Another portion of this area drains to the western property line of the proposed park site. These flows consist of the 800 series nodes and they are accepted by a proposed drainage channel along the western property line of the park site. This 22-foot wide concrete channel will have a slope with rip-rap on the western side to slow down flows as they enter the channel. The channel drains to proposed Line D, a 48-inch RCP storm drain that will convey flows through the park, connecting to Line C in Decker Road.
- The largest portion of this offsite area that drains to the southerly property line of the proposed park generally follow the existing natural stream alignment. These flows are accepted into the proposed three-12'x12' RCB in the Decker Road culdesac. As these flows exit the box, they will dissipate over a design rock rip-rap outlet structure to address any increase in velocities prior to continuing in the existing stream condition. Due to the vastness of this area, approximately 1,089 acres of the total 1,203 acre offsite area, the rational method was not run for this area. Unit hydrograph calculations were used to size the three-12'x12' RCB and are provided in Appendix A.
- The portion of Decker Road in the industrial site frontage drains to proposed catch basins and flows are conveyed through Line C in Decker Road. These flows consist of the 500 series nodes.

The following table summarizes the rational method results at key points:

Table 7 – Offsite Rational Method Results

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
Node 303 – DMA B - Line A Total Flows	2.9	4.9
Node 604 – DMA C - Line B Total Flows	0.6	1.0
Node 802.5 – Offsite Area tributary to Decker Road	25.0	40.8
Node 511 – Flows in Decker Road Industrial Site Frontage	3.2	5.0
Node 861 – Offsite Area tributary to western property line of park site – Total Line D Flows	88.8	146.6
Node 813 Line C Total Flows – (Includes Onsite flows that are confluenced)	**242.0**	**246.3**

See Appendix A for the output files of the off-site rational method analysis.

ONSITE UNIT HYDROGRAPH ANALYSIS

The unit hydrograph method was used to determine the pre-development and post-development flow differences for the park component of the project as it is subject to HCOC mitigation and increased runoff

mitigation due to the discharge of flows into the existing stream that runs through the park. As only a portion of the park is being developed, the pre and post unit hydrographs were run per DMA to show differences in flow for each improved area. As DMA E-5 is not being developed, only the pre-development hydrographs were run for this area.

Table 8 – Unit Hydrograph Results

		Existing Condition		Proposed Condition		
	Storm Event	Volume (Ac-ft)	Peak Flow (cfs)	Volume (Ac-ft)	Peak Flow (cfs)	Percent Difference
DMA E-1 4.7 Acres*	2-Year, 24-Hour	0.084	0.285	0.185	0.304	6.67%
	10-Year, 1-Hour	0.279	9.428	0.204	8.741	-7.29%
	10-Year, 3-Hour	0.370	4.983	0.214	4.084	-18.04%
	10-Year, 6-Hour	0.458	4.770	0.272	3.862	-19.04%
	10-Year, 24-Hour	0.627	1.714	0.339	0.905	-47.20%
	100-Year, 1-Hour	0.463	15.098	0.385	14.555	-3.60%
	100-Year, 3-Hour	0.646	8.006	0.434	7.131	-10.93%
	100-Year. 6-Hour	0.824	7.468	0.521	6.578	-11.92%
	100-Year, 24-Hour	1.249	3.004	0.759	2.194	-26.96%
DMA E-2 1.2 Acres*	2-Year, 24-Hour	0.036	0.122	0.140	0.230	**88.52%**
	10-Year, 1-Hour	0.119	4.781	0.099	4.692	-1.865%
	10-Year, 3-Hour	0.158	2.226	0.121	1.996	-10.33%
	10-Year. 6-Hour	0.195	2.131	0.163	1.907	-10.51%
	10-Year, 24-Hour	0.267	0.730	0.246	0.519	-28.90%
	100-Year, 1-Hour	0.197	7.631	0.177	7.629	-0.03%
	100-Year, 3-Hour	0.275	3.570	0.221	3.348	-6.22%
	100-Year, 6-Hour	0.351	3.331	0.281	3.118	-6.39%
	100-Year, 24-Hour	0.531	1.279	0.463	1.068	-16.50%
DMA E-3 3.2 Acres*	2-Year, 24-Hour	0.045	0.152	0.072	0.118	-22.37%
	10-Year, 1-Hour	0.148	5.406	0.103	5.136	-4.99%
	10-Year, 3-Hour	0.197	2.714	0.101	2.190	-19.31%
	10-Year. 6-Hour	0.244	2.590	0.124	2.061	-20.42%
	10-Year, 24-Hour	0.334	0.912	0.136	0.424	-53.51%
	100-Year, 1-Hour	0.246	8.644	0.199	8.543	-1.17%
	100-Year, 3-Hour	0.344	4.356	0.215	3.857	-11.46%
	100-Year, 6-Hour	0.439	4.052	0.251	3.543	-12.56%
	100-Year, 24-Hour	0.664	1.598	0.343	1.110	-30.54%
DMA E-4 0.6 Acres*	2-Year, 24-Hour	0.011	0.037	0.017	0.028	-24.32%
	10-Year, 1-Hour	0.036	1.819	0.025	1.145	-37.05%
	10-Year, 3-Hour	0.047	0.699	0.024	0.512	-26.75%
	10-Year, 6-Hour	0.059	0.685	0.030	0.483	-29.49%

	10-Year, 24-Hour	0.080	0.219	0.033	0.102	-53.42%
	100-Year, 1-Hour	0.059	2.893	0.048	1.914	-33.84%
	100-Year, 3-Hour	0.082	1.120	0.052	0.905	-19.20%
	100-Year, 6-Hour	0.105	1.068	0.060	0.833	-22.00%
	100-Year, 24-Hour	0.159	0.384	0.082	0.266	-30.73%
DMA E-5 2.0 Acres*	2-Year, 24-Hour	0.036	0.121	-	-	0%
	10-Year, 1-Hour	0.119	4.051	-	-	0%
	10-Year, 3-Hour	0.158	2.127	-	-	0%
	10-Year. 6-Hour	0.195	2.035	-	-	0%
	10-Year, 24-Hour	0.267	0.729	-	-	0%
	100-Year, 1-Hour	0.197	6.485	-	-	0%
	100-Year, 3-Hour	0.275	3.417	-	-	0%
	100-Year, 6-Hour	0.351	3.186	-	-	0%
	100-Year, 24-Hour	0.531	1.278	-	-	0%
DMA W-1 4.9 Acres*	2-Year, 24-Hour	0.075	0.257	0.277	0.456	**77.43%**
	10-Year, 1-Hour	0.249	10.559	0.205	7.885	-25.32%
	10-Year, 3-Hour	0.331	4.721	0.247	3.898	-17.43%
	10-Year, 6-Hour	0.410	4.542	0.329	3.707	-18.38%
	10-Year, 24-Hour	0.561	1.533	0.489	1.052	-31.38%
	100-Year, 1-Hour	0.414	16.837	0.368	12.961	-23.02%
	100-Year, 3-Hour	0.577	7.569	0.454	6.602	-12.78%
	100-Year, 6-Hour	0.737	7.095	0.574	6.119	-13.76%
	100-Year, 24-Hour	1.116	2.685	0.934	2.205	-17.88%

*There is no difference between pre- and post- acreage.

Per the unit hydrograph results above, all of the 10-year or 100-year storms result in a decrease in the developed condition. Therefore, mitigation is not required for increased runoff to the stream.

DMA E1 shows an increase for the 2-Year, 24-Hour storm event, however this does not require mitigation for HCOC per the Riverside County WQMP Guidance Document, as it is below a 10% increase. For DMAs E-2 and W-1 there was a significant increase for the 2-Year, 24-Hour storm event flows. This increase triggered mitigation for HCOC. The project proposes to mitigate this volume by detaining it proposed water quality basins within these DMAs. Each basin will contain an outlet structure that will outlet flows at the pre-development rate to protect the existing stream, which will be designed in Final Engineering. The flows leave the outlet the basins directly into proposed Line C in Decker Road, where they confluence with upstream offsite flows. They then connect to the proposed RCB culvert and existing stream.

OFFSITE UNIT HYDROGRAPH ANALYSIS

The unit hydrograph method was used to determine the existing flow for the existing stream tributary area in order to appropriately size the proposed RCB culvert that conveys the existing stream. This tributary area consists of approximately 1200 acres, making the unit hydrograph method the more

appropriate tool to size the RCB. Table 9 below accounts for the total offsite area that is tributary to the proposed RCB, whether via the existing stream from the south or via Line C in Decker Road. Line C in Decker Road is sized using the rational method, as described in the previous section.

Table 9 – Unit Hydrograph Results for Offsite Tributary Area

		Existing Condition		Proposed Condition	
Tributary Area	**Storm Event**	**Peak Flow (cfs)**	**Acreage (Ac)**	**Peak Flow (cfs)**	**Acreage (Ac)**
Offsite - 1200 Acres	100-Year, 1-Hour	1666.1	1203.5	1679.3	1210.9
	100-Year, 3-Hour	1219.9	1203.5	1228.4	1210.9
	100-Year, 6-Hour	1148.8	1203.5	1156.9	1210.9
	100-Year, 24-Hour	575.1	1203.5	578.9	1210.9

SECTION 3 - HYDRAULIC ANALYSIS

ON-SITE STORM DRAIN FACILITIES

Hydraulic analysis was not taken into consideration for the preliminary drainage.

OFF-SITE STORM DRAIN FACILITIES

Hydraulic analysis was not taken into consideration for the preliminary drainage.

SECTION 4 - ROUTING ANALYSIS

ON-SITE UNIT HYDROGRAPH METHOD HYDROLOGY

The unit hydrograph method was used to determine the peak flow rates and volumes in order to adequately size the proposed detention chamber to detain 100-year flows onsite. Unit hydrographs were performed for both the existing condition and developed condition. The existing condition is used to establish a baseline for comparative purposes. The developed condition is used for design purposes, it was utilized in the basin routing analysis in order to size and analyze the proposed underground chamber. The following table summarizes the results of the unit hydrograph analysis of the industrial component of the project site:

Table 10 – Unit Hydrograph Results

	Existing Condition		Proposed Condition	
Storm Event	Volume (Ac-ft)	Peak Flow (cfs)	Volume (Ac-ft)	Peak Flow (cfs)
100-Year, 1-Hour	3.85	99.79	4.81	148.82
100-Year, 3-Hour	5.06	60.32	6.70	81.04
100-Year, 6-Hour	6.05	54.69	9.17	75.37
100-Year, 24-Hour	9.00	23.69	17.14	30.36

The unit hydrograph output files and hydrology map have been included in Appendix C.

ROUTING ANALYSIS

A routing analysis was completed to demonstrate that the underground chambers contain sufficient volume needed to detain 100-year peak flows onsite. The stage-storage-discharge table provides input data at select elevations in the chamber which will determine the storage and discharge at each point based on the configuration of the outlet structure.

The available capacity at the point of connection with Perris Valley MDP Lateral E-9.1 per IP 200029 is 45 cfs. The following table outlines the capacity available to be accepted by the chamber outlet after subtracting out the various other flows going to the Perris Valley MDP lateral.

Table 11 – Perris Valley MDP Lateral E-9.1 Capacity

Tributary Flow	Q_{100}
Perris Valley MDP Lateral E-9.1 Capacity, IP 20029	45 cfs
Offsite Flows in Proposed Line B (Offsite Flows + Seaton Ave Frontage)	6.3 cfs
Offsite Flows in Proposed Line C (Offsite Flows + Cajalco Rd Frontage)	21.9 cfs
Water Quality BMP Outflow	1.96 cfs
Offsite Flows from Adjacent Project to East	4.3 cfs
Capacity Leftover	10.5 cfs

The routing analysis was performed using a maximum outflow of 10 cfs. Utilizing 10 cfs outflow allows for a less than 72-hour drawdown for the 100-year flows in the chamber.

The following table presents the result of routing analysis for the 1-, 3-, 6- and 24-hour 100-year storm events to demonstrate that the underground chambers provide the necessary storage volume needed to restrict the outflow to a flow rate that does not exceed the Perris Valley MDP Lateral E-9.1 capacity.

Table 12 – Routing Results

	Existing Condition		Proposed Condition		Basin Routing Results	
Storm Event	Volume (AC-ft)	Peak Flow (cfs)	Volume (AC-ft)	Peak Flow (cfs)	Peak Flow (cfs)	Maximum Chamber Depth (feet)
100-Year, 1-Hour	3.85	99.79	4.50	148.82	10	1.56
100-Year, 1-Hour	5.06	60.32	6.70	81.04	10	2.07
100-Year, 1-Hour	6.05	54.69	9.17	75.37	10	2.52
100-Year, 24-Hour	9.00	23.69	17.14	30.36	10	3.03

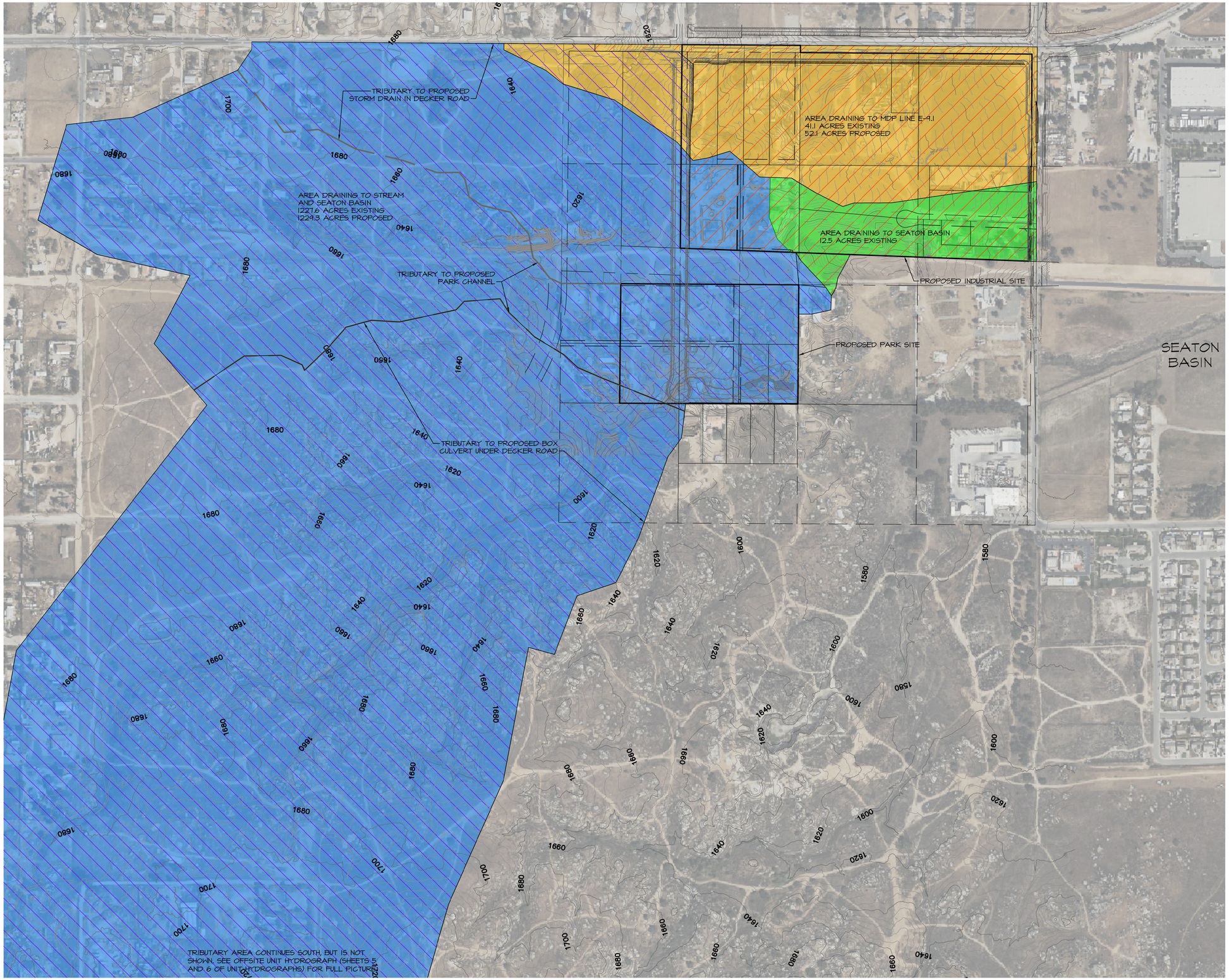
The routing calculations and other hydraulic calculations have been provided in Appendix C.

SECTION 5 - CONCLUSION

Based on the analyses and results of this report, the following conclusions were derived from the hydrology and hydraulic results:

- The proposed drainage improvements for the industrial site will adequately convey flows to the underground chambers and provide flood protection for the 100-year storm event.
- The proposed treatment box for the industrial site will provide adequate water quality treatment.
- The proposed grading of the park site will allow flows to settle gradually across site and in larger storm events, accumulate in self-retaining areas and discharge at an adequate rate to the existing stream within the project boundary.
- The proposed three-12'x12' RCB culvert will provide adequate conveyance of the water tributary to the existing stream and the outlet structure will discharge the flows at an adequate rate to protect the existing stream.
- The proposed 22' concrete channel will provide adequate acceptance and conveyance of offsite flows tributary to the proposed park site.
- For the proposed park site, the bioretention basins and self-retaining areas will provide adequate water quality treatment.
- The proposed industrial project will not impact flooding conditions to upstream or downstream properties.
- The proposed project will not impact flooding or velocity conditions to the existing stream.

APPENDIX A – HYDROLOGY ANALYSIS



LEGEND

- EXISTING AREA TRIBUTARY TO LINE E-9.1
  41.1 ACRES, Q=99.8 CFS
- PROPOSED AREA TRIBUTARY TO LINE E-9.1
  52.1 ACRES, Q=148.8 CFS*
- EXISTING AREA TRIBUTARY TO STREAM & SEATON BASIN
  1229.3 ACRES, Q=1664.5 CFS
- EXISTING AREA TRIBUTARY TO STREAM & SEATON BASIN
  1227.7 ACRES, Q=1671.0 CFS
- EXISTING AREA TRIBUTARY TO SEATON BASIN
  12.5 ACRES

NOTES:

1. THIS SHEET DETAILS THE ACREAGE DIFFERENCE BETWEEN THE EXISTING AND PROPOSED CONDITIONS AND WHAT AREAS ARE TRIBUTARY TO MDP LINE E-9.1, THE EXISTING STREAM, AND SEATON BASIN IN THOSE CONDITIONS.
2. THE STREAM ULTIMATELY LEADS TO SEATON BASIN. THE AREA IN GREEN DOES NOT DRAIN TO THE STREAM WITHIN THE PROJECT SITE.
3. THE ABOVE FLOW RATES ARE BASED ON THE 100-YEAR, 1-HOUR UNIT HYDROGRAPHS.
4. THE FLOW RATE SHOWN FOR THE PROPOSED CONDITION GOING TO LINE E-9.1 WILL BE ROUTED DOWN VIA PUMP FROM UNDERGROUND CHAMBERS ON THE PROJECT SITE TO A RATE THAT IS ACCEPTABLE FOR LINE E-9.1 TO HANDLE.

N
W WEBB E
S

1" = 250'
125 0 250 500 750

RIVERSIDE COUNTY

TRIBUTARY AREA MAP
PPT220050 CAJALCO COMMERCE CENTER

SCALE:	1"=250'	ALBERT A. WEBB ASSOCIATES	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE, CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256
DATE:	3/19/24		
DESIGNED:	RSB		
CHECKED:	SKK		
PLN CK REF:			
F.B.			

W.O. 22-0192
SHEET 1
OF 1 SHEETS
DWG. NO.

H:\2022\22-0192\DRAINAGE\HYD\DWG FOLDER\22-0192-PHYD-TRIBUTARY AREA MAP.DWG 3/19/2024 4:10:33 PM

REBECCAB

DECKER ROAD

EXISTING ALIGNMENT OF STREAM

PROPOSED 3-12'X12' BOX CULVERTS

PROJECT BOUNDARY

LEGEND

- EXTENT OF INUNDATION IN EXISTING CONDITION DURING 100-YEAR 3-HOUR PEAK STORM
- EXTENT OF INUNDATION IN PROPOSED CONDITION DURING 100-YEAR 3-HOUR STORM
- LIMIT LINE OF INUNDATION IN PROPOSED CONDITION DURING 100-YEAR 3-HOUR STORM

NOTES

EXISTING CONDITION INUNDATION IS BASED ON THE 100-YEAR 3-HOUR PEAK STORM AND THE AREA TRIBUTARY ALONG THE STREAM ALIGNMENT (APPROXIMATELY 1,096 ACRES)

WHILE THE PROPOSED BOX CULVERT ACCEPTS THE EXISTING STREAM INTO THE HEADWALL, IT ALSO ACCEPTS OFFSITE FLOWS THAT APPROACH DECKER ROAD AND THE PARK SITE FROM THE WEST VIA STORM DRAIN THAT CONNECTS TO THE SIDE OF THE CULVERT.

TO BE CONSERVATIVE, PROPOSED CONDITION INUNDATION IS BASED ON THE 100-YEAR 3-HOUR PEAK STORM AND IS BASED ON THE ENTIRE OFFSITE FLOW AREA (APPROXIMATELY 1,228 ACRES) MODELED AS FLOWING ALONG THE STREAM ALIGNMENT TO THE HEADWALL.

THIS INUNDATION MAP EXEMPLIFIES THAT IN A CONSERVATIVE PROPOSED CONDITION THE SURROUNDING PROPERTIES WILL NOT BE INUNDATED. THERE WILL BE MINOR FLOODINGS ON THE ONSITE PARK NO GREATER THAN A FEW INCHES DEEP.

N
W WEBB E
S

1" = 40'
20 0 40 80 120

RIVERSIDE COUNTY

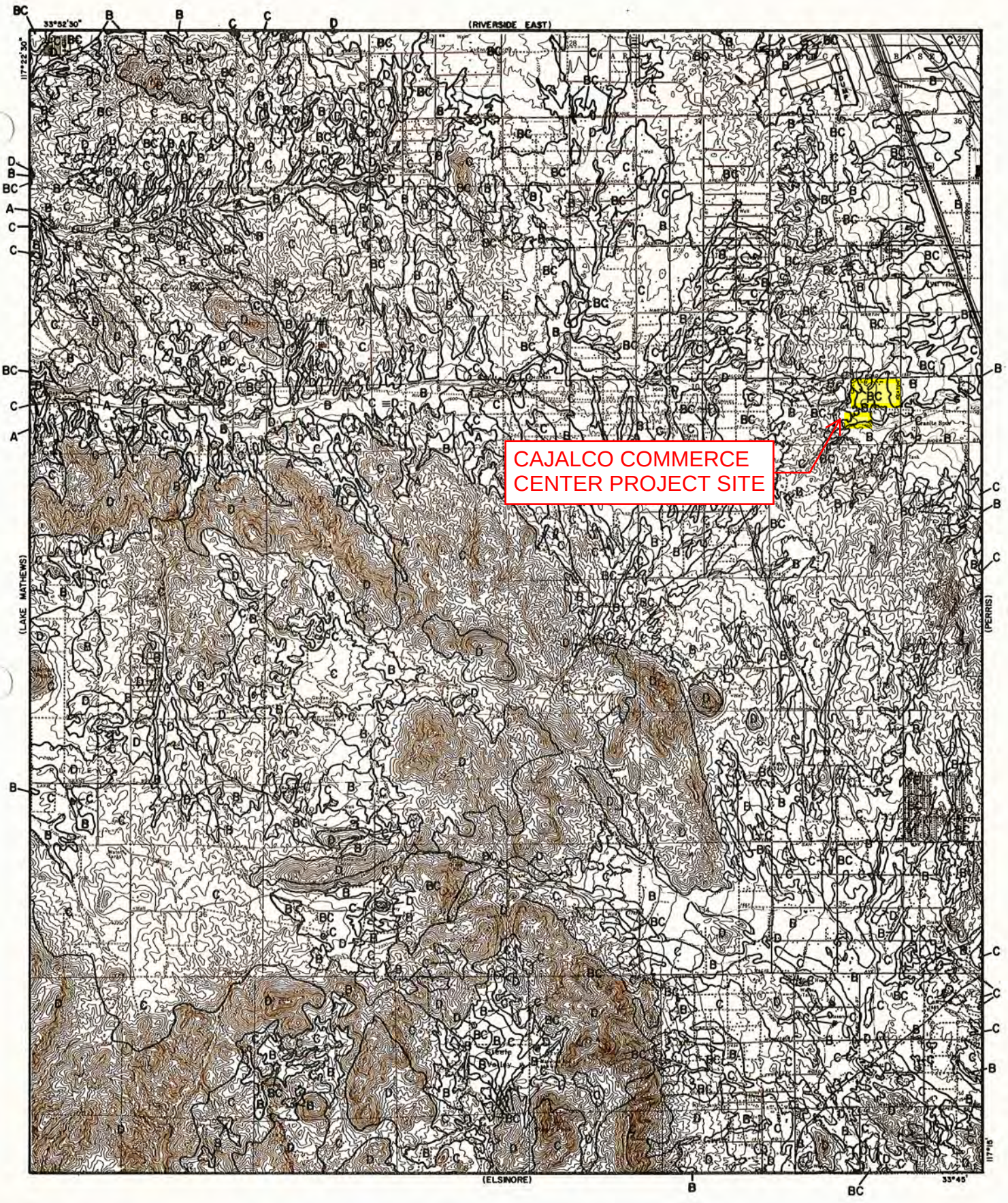
EXISTING NATURAL STREAM
PPT220050 CAJALCO COMMERCE CENTER
EXISTING AND PROPOSED INUNDATION
100-YEAR 3-HOUR STORM

SCALE:	1"=40'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	3/15/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 1
DESIGNED:	RSB		OF 1 SHEETS
CHECKED:	SKK		DWG. NO.
PLN CK REF:			
F.B.			

H:\2022\22-0192\DRAINAGE\HYDV\DWG FOLDER\22-0192-HYD-STREAM PONDING.DWG 3/15/2024 11:20:50 AM

BERBCAB

HYDROLOGIC SOILS GROUP MAP (PLATE C-1.29)



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC&WCD

HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR STEELE PEAK

PLATE C-1.29

ISOHYETAL MAPS

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S
T 02 S
T 03 S
T 04 S
T 05 S
T 06 S
T 07 S
T 08 S

0.85 MiraLoma
0.61 RiversideNorth
0.54 RiversideSouth
0.68 PigeonPass
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.90 HurkeyCreek
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

Hillwood Seaton Project Site

Santa Ana River Watershed
Santa Margarita Watershed

JURUPA VALLEY | EASTVALE | NORCO | CORONA | RIVERSIDE | MORENO VALLEY | CALIMESA | BEAUMONT | SAN JACINTO | PERRIS | CANYON LAKE | LAKE ELSINORE | WILDOMAR | MENIFEE | HEMET | MURRIETA | TEMECULA

06	05	04	03	02	01
07	08	09	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

N

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

10-YEAR EXISTING ONSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24 File:EX10.out

22-0192 - MVCC INDUSTRIAL SITE
EX ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: EX10.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1657.000(Ft.)
Bottom (of initial area) elevation = 1601.300(Ft.)

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Difference in elevation =    55.700(Ft.)
Slope =    0.05570  s(percent)=       5.57
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.966 min.
Rainfall intensity =      1.846(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.805
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      9.067(CFS)
Total initial stream area =        6.100(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       11.000 to Point/Station       12.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of natural channel elevation =   1601.300(Ft.)
End of natural channel elevation =   1582.600(Ft.)
Length of natural channel  =   969.000(Ft.)
Estimated mean flow rate at midpoint of channel =     18.134(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 =   4.05(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0193
Corrected/adjusted channel slope =  0.0193
Travel time =    3.98 min.     TC =   18.95  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.794
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.621(In/Hr) for a    10.0 year storm
Subarea runoff =     15.698(CFS) for     12.200(Ac.)
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Total runoff =     24.765(CFS)  Total area =      18.300(Ac.)


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Process from Point/Station       12.000 to Point/Station       13.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of natural channel elevation =   1582.600(Ft.)
End of natural channel elevation =   1571.000(Ft.)
Length of natural channel  =   560.000(Ft.)
Estimated mean flow rate at midpoint of channel =     34.576(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 =   5.01(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0207
Corrected/adjusted channel slope =  0.0207
Travel time =    1.86 min.     TC =   20.81  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.789
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.540(In/Hr) for a    10.0 year storm
Subarea runoff =     17.610(CFS) for     14.500(Ac.)
Total runoff =     42.375(CFS)  Total area =      32.800(Ac.)


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Process from Point/Station       13.000 to Point/Station       14.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
______________________________________________________________________________
Top of natural channel elevation =   1571.000(Ft.)
End of natural channel elevation =   1560.700(Ft.)
Length of natural channel  =   535.000(Ft.)
Estimated mean flow rate at midpoint of channel =     47.736(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)
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Velocity using mean channel flow =   5.30(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0193
Corrected/adjusted channel slope =  0.0193
Travel time =    1.68 min.     TC =   22.49  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.785
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.475(In/Hr) for a    10.0 year storm
Subarea runoff =      9.606(CFS) for      8.300(Ac.)
Total runoff =     51.981(CFS)  Total area =      41.100(Ac.)
End of computations, total study area =           41.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  86.0
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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 11/08/23 File:EX10PARK.out

22-0192 - MVCC PARK SITE
EX ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: EX10PARK.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 20.000 to Point/Station 21.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 668.000(Ft.)
Top (of initial area) elevation = 1601.200(Ft.)
Bottom (of initial area) elevation = 1579.300(Ft.)
Difference in elevation = 21.900(Ft.)
Slope = 0.03278 s(percent)= 3.28
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.160 min.
Rainfall intensity = 1.903(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.808

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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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      7.071(CFS)
Total initial stream area =        4.600(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       20.000 to Point/Station       21.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      4.600(Ac.)
Runoff from this stream =      7.071(CFS)
Time of concentration =   14.16 min.
Rainfall intensity =     1.903(In/Hr)


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Process from Point/Station       22.000 to Point/Station       21.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   327.000(Ft.)
Top (of initial area) elevation =  1590.300(Ft.)
Bottom (of initial area) elevation =  1579.300(Ft.)
Difference in elevation =    11.000(Ft.)
Slope =    0.03364  s(percent)=       3.36
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.586 min.
Rainfall intensity =      2.233(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.820
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      2.564(CFS)
Total initial stream area =        1.400(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       22.000 to Point/Station       21.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      1.400(Ac.)
Runoff from this stream =      2.564(CFS)
Time of concentration =   10.59 min.
Rainfall intensity =     2.233(In/Hr)
Summary of stream data:
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Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)


1        7.071     14.16                1.903
2        2.564     10.59                2.233
Largest stream flow has longer time of concentration
Qp =      7.071 + sum of
          Qb         Ia/Ib
           2.564 *    0.852 =      2.185
Qp =      9.256

Total of 2 streams to confluence:
Flow rates before confluence point:
       7.071       2.564
Area of streams before confluence:
        4.600        1.400
Results of confluence:
Total flow rate =      9.256(CFS)
Time of concentration =    14.160 min.
Effective stream area after confluence =      6.000(Ac.)


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Process from Point/Station       21.000 to Point/Station       23.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1579.300(Ft.)
End of natural channel elevation =   1563.900(Ft.)
Length of natural channel  =   706.000(Ft.)
Estimated mean flow rate at midpoint of channel =     12.419(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 =   3.90(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
       Normal channel slope =  0.0218
Corrected/adjusted channel slope =  0.0218
Travel time =    3.02 min.     TC =   17.18  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.799
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.711(In/Hr) for a    10.0 year storm
Subarea runoff =      5.603(CFS) for      4.100(Ac.)
Total runoff =     14.860(CFS)      Total area =      10.100(Ac.)
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Process from Point/Station       21.000 to Point/Station       23.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     10.100(Ac.)
Runoff from this stream =     14.860(CFS)
Time of concentration =   17.18 min.
Rainfall intensity =     1.711(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station       24.000 to Point/Station       23.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1606.600(Ft.)
Bottom (of initial area) elevation =  1563.900(Ft.)
Difference in elevation =    42.700(Ft.)
Slope =    0.04270  s(percent)=       4.27
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.783 min.
Rainfall intensity =      1.793(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.803
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      9.642(CFS)
Total initial stream area =        6.700(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       24.000 to Point/Station       23.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      6.700(Ac.)
Runoff from this stream =      9.642(CFS)
Time of concentration =   15.78 min.
Rainfall intensity =     1.793(In/Hr)
Summary of stream data:

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


1       14.860     17.18              1.711
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2        9.642     15.78              1.793
Largest stream flow has longer time of concentration
Qp =     14.860 + sum of
          Qb         Ia/Ib
           9.642 *    0.955 =      9.204
Qp =     24.063

Total of 2 main streams to confluence:
Flow rates before confluence point:
      14.860       9.642
Area of streams before confluence:
       10.100        6.700


Results of confluence:
Total flow rate =     24.063(CFS)
Time of concentration =    17.175 min.
Effective stream area after confluence  =     16.800(Ac.)
End of computations, total study area =           16.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  86.0
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100-YEAR EXISTING ONSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24 File:EX100.out

22-0192 - MVCC INDUSTRIAL SITE
EX ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: EX100.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 10.000 to Point/Station 11.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1657.000(Ft.)
Bottom (of initial area) elevation = 1601.300(Ft.)

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Difference in elevation =    55.700(Ft.)
Slope =    0.05570  s(percent)=       5.57
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.966 min.
Rainfall intensity =      2.897(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.837
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     14.798(CFS)
Total initial stream area =        6.100(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       11.000 to Point/Station       12.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1601.300(Ft.)
End of natural channel elevation =   1582.600(Ft.)
Length of natural channel  =   969.000(Ft.)
Estimated mean flow rate at midpoint of channel =     29.596(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 =   4.63(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0193
Corrected/adjusted channel slope =  0.0193
Travel time =    3.48 min.     TC =   18.45  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.830
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.582(In/Hr) for a   100.0 year storm
Subarea runoff =     26.155(CFS) for     12.200(Ac.)
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Total runoff =     40.954(CFS)  Total area =      18.300(Ac.)


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Process from Point/Station       12.000 to Point/Station       13.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1582.600(Ft.)
End of natural channel elevation =   1571.000(Ft.)
Length of natural channel  =   560.000(Ft.)
Estimated mean flow rate at midpoint of channel =     57.178(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 =   5.79(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0207
Corrected/adjusted channel slope =  0.0207
Travel time =    1.61 min.     TC =   20.06  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.827
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.466(In/Hr) for a   100.0 year storm
Subarea runoff =     29.579(CFS) for     14.500(Ac.)
Total runoff =     70.532(CFS)  Total area =      32.800(Ac.)


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Process from Point/Station       13.000 to Point/Station       14.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
Top of natural channel elevation =   1571.000(Ft.)
End of natural channel elevation =   1560.700(Ft.)
Length of natural channel  =   535.000(Ft.)
Estimated mean flow rate at midpoint of channel =     79.457(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)
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Velocity using mean channel flow =   6.15(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0193
Corrected/adjusted channel slope =  0.0193
Travel time =    1.45 min.     TC =   21.51  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.825
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.373(In/Hr) for a   100.0 year storm
Subarea runoff =     16.242(CFS) for      8.300(Ac.)
Total runoff =     86.775(CFS)  Total area =      41.100(Ac.)
End of computations, total study area =           41.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  86.0
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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24 File:EX100PARK.out

22-0192 - MVCC PARK SITE
EX ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: EX100PARK.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 20.000 to Point/Station 21.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 668.000(Ft.)
Top (of initial area) elevation = 1601.200(Ft.)
Bottom (of initial area) elevation = 1579.300(Ft.)

```
Difference in elevation =    21.900(Ft.)
Slope =    0.03278  s(percent)=       3.28
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.160 min.
Rainfall intensity =      2.987(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.839
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     11.529(CFS)
Total initial stream area =        4.600(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station       20.000 to Point/Station       21.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      4.600(Ac.)
Runoff from this stream =     11.529(CFS)
Time of concentration =   14.16 min.
Rainfall intensity =     2.987(In/Hr)


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Process from Point/Station       22.000 to Point/Station       21.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   327.000(Ft.)
Top (of initial area) elevation =  1590.300(Ft.)
Bottom (of initial area) elevation =  1579.300(Ft.)
Difference in elevation =    11.000(Ft.)
Slope =    0.03364  s(percent)=       3.36
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.586 min.
Rainfall intensity =      3.505(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.848
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      4.159(CFS)
```

```
Total initial stream area =        1.400(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       22.000 to Point/Station       21.000
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      1.400(Ac.)
Runoff from this stream =      4.159(CFS)
Time of concentration =   10.59 min.
Rainfall intensity =     3.505(In/Hr)
Summary of stream data:

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


1       11.529     14.16                2.987
2        4.159     10.59                3.505
Largest stream flow has longer time of concentration
Qp =     11.529 + sum of
          Qb         Ia/Ib
           4.159 *    0.852 =      3.544
Qp =     15.073

Total of 2 streams to confluence:
Flow rates before confluence point:
      11.529       4.159
Area of streams before confluence:
        4.600        1.400
Results of confluence:
Total flow rate =     15.073(CFS)
Time of concentration =    14.160 min.
Effective stream area after confluence =      6.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       21.000 to Point/Station       23.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
____________________________________________________________________________
Top of natural channel elevation =   1579.300(Ft.)
End of natural channel elevation =   1563.900(Ft.)
Length of natural channel  =   706.000(Ft.)
Estimated mean flow rate at midpoint of channel =     20.223(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 =   4.44(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0218
Corrected/adjusted channel slope =  0.0218
Travel time =    2.65 min.     TC =   16.81  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.833
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.718(In/Hr) for a   100.0 year storm
Subarea runoff =      9.288(CFS) for      4.100(Ac.)
Total runoff =     24.360(CFS)  Total area =      10.100(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       21.000 to Point/Station       23.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     10.100(Ac.)
Runoff from this stream =     24.360(CFS)
Time of concentration =   16.81 min.
Rainfall intensity =     2.718(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.000 to Point/Station       23.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1606.600(Ft.)
Bottom (of initial area) elevation =  1563.900(Ft.)
Difference in elevation =    42.700(Ft.)
Slope =    0.04270  s(percent)=       4.27
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.783 min.
Rainfall intensity =      2.814(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.836
```

```
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     15.753(CFS)
Total initial stream area =        6.700(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       24.000 to Point/Station       23.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      6.700(Ac.)
Runoff from this stream =     15.753(CFS)
Time of concentration =   15.78 min.
Rainfall intensity =     2.814(In/Hr)
Summary of stream data:

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


1       24.360     16.81                 2.718
2       15.753     15.78                 2.814
Largest stream flow has longer time of concentration
Qp =     24.360 + sum of
          Qb         Ia/Ib
          15.753 *    0.966 =     15.216
Qp =     39.576

Total of 2 main streams to confluence:
Flow rates before confluence point:
      24.360      15.753
Area of streams before confluence:
       10.100        6.700


Results of confluence:
Total flow rate =     39.576(CFS)
Time of concentration =    16.811 min.
Effective stream area after confluence  =     16.800(Ac.)
End of computations, total study area =           16.80 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.
```

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number = 86.0

10-YEAR PROPOSED ONSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 11/08/23 File:PROP10.out

22-0192 - MVCC INDUSTRIAL SITE
PROP ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

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

Initial area flow distance = 859.000(Ft.)
Top (of initial area) elevation = 1584.100(Ft.)
Bottom (of initial area) elevation = 1583.100(Ft.)
Difference in elevation = 1.000(Ft.)
Slope = 0.00116 s(percent)= 0.12
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 17.279 min.
Rainfall intensity = 1.705(In/Hr) for a 10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.877

```
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 =     13.455(CFS)
Total initial stream area =        9.000(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1578.100(Ft.)
Downstream point/station elevation =  1574.800(Ft.)
Pipe length  =   204.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.455(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    13.455(CFS)
Normal flow depth in pipe =   14.86(In.)
Flow top width inside pipe =   13.66(In.)
Critical Depth =   16.38(In.)
Pipe flow velocity =      8.62(Ft/s)
Travel time through pipe =    0.39 min.
Time of concentration (TC) =    17.67 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1574.800(Ft.)
Downstream point/station elevation =  1563.200(Ft.)
Pipe length  =   722.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.455(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    13.455(CFS)
Normal flow depth in pipe =   14.93(In.)
Flow top width inside pipe =   13.54(In.)
Critical Depth =   16.38(In.)
Pipe flow velocity =      8.59(Ft/s)
Travel time through pipe =    1.40 min.
Time of concentration (TC) =    19.08 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.876
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
Time of concentration =    19.08 min.
Rainfall intensity =      1.615(In/Hr) for a    10.0 year storm
Subarea runoff =      1.839(CFS) for      1.300(Ac.)
Total runoff =     15.294(CFS)      Total area =      10.300(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1563.200(Ft.)
Downstream point/station elevation =  1546.200(Ft.)
Pipe length  =  1316.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    15.294(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    15.294(CFS)
Normal flow depth in pipe =   14.86(In.)
Flow top width inside pipe =   19.10(In.)
Critical Depth =   17.37(In.)
Pipe flow velocity =      8.40(Ft/s)
Travel time through pipe =    2.61 min.
Time of concentration (TC) =    21.69 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      105.000
**** SUBAREA FLOW ADDITION ****
________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.874
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
Time of concentration =    21.69 min.
Rainfall intensity =      1.505(In/Hr) for a    10.0 year storm
Subarea runoff =     13.951(CFS) for     10.600(Ac.)
Total runoff =     29.245(CFS)      Total area =      20.900(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      105.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     20.900(Ac.)
Runoff from this stream =     29.245(CFS)
Time of concentration =   21.69 min.
Rainfall intensity =     1.505(In/Hr)
Program is now starting with Main Stream No. 2
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------------
Initial area flow distance =   781.000(Ft.)
Top (of initial area) elevation =  1584.100(Ft.)
Bottom (of initial area) elevation =  1570.800(Ft.)
Difference in elevation =    13.300(Ft.)
Slope =    0.01703  s(percent)=       1.70
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.726 min.
Rainfall intensity =      2.339(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.882
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 =     20.213(CFS)
Total initial stream area =        9.800(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      201.000 to Point/Station      202.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1561.400(Ft.)
Downstream point/station elevation =  1559.800(Ft.)
Pipe length  =   547.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    20.213(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    20.213(CFS)
Normal flow depth in pipe =   22.50(In.)
Flow top width inside pipe =   25.98(In.)
Critical Depth =   18.30(In.)
Pipe flow velocity =      5.12(Ft/s)
Travel time through pipe =    1.78 min.
Time of concentration (TC) =    11.51 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      203.000 to Point/Station      202.000
**** SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------------
COMMERCIAL subarea type
Runoff Coefficient = 0.880
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
Time of concentration =    11.51 min.
Rainfall intensity =      2.133(In/Hr) for a    10.0 year storm
```

```
Subarea runoff =      3.755(CFS) for      2.000(Ac.)
Total runoff =     23.968(CFS)      Total area =      11.800(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      202.000 to Point/Station      204.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1559.800(Ft.)
Downstream point/station elevation =  1559.600(Ft.)
Pipe length  =    52.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.968(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    23.968(CFS)
Normal flow depth in pipe =   23.16(In.)
Flow top width inside pipe =   25.18(In.)
Critical Depth =   19.99(In.)
Pipe flow velocity =      5.89(Ft/s)
Travel time through pipe =    0.15 min.
Time of concentration (TC) =    11.65 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      204.000 to Point/Station      205.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1559.600(Ft.)
Downstream point/station elevation =  1558.700(Ft.)
Pipe length  =   317.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    23.968(CFS)
Nearest computed pipe diameter  =     33.00(In.)
Calculated individual pipe flow  =    23.968(CFS)
Normal flow depth in pipe =   23.39(In.)
Flow top width inside pipe =   29.98(In.)
Critical Depth =   19.46(In.)
Pipe flow velocity =      5.33(Ft/s)
Travel time through pipe =    0.99 min.
Time of concentration (TC) =    12.64 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      206.000 to Point/Station      205.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.879
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
Time of concentration =    12.64 min.
Rainfall intensity =      2.025(In/Hr) for a    10.0 year storm
Subarea runoff =     10.329(CFS) for      5.800(Ac.)
Total runoff =     34.298(CFS)      Total area =      17.600(Ac.)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      205.000 to Point/Station      207.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1558.700(Ft.)
Downstream point/station elevation =  1557.300(Ft.)
Pipe length  =   440.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    34.298(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    34.298(CFS)
Normal flow depth in pipe =   27.00(In.)
Flow top width inside pipe =   31.18(In.)
Critical Depth =   22.81(In.)
Pipe flow velocity =      6.03(Ft/s)
Travel time through pipe =    1.22 min.
Time of concentration (TC) =    13.86 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      208.000 to Point/Station      207.000
**** SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------------
COMMERCIAL subarea type
Runoff Coefficient = 0.879
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
Time of concentration =    13.86 min.
Rainfall intensity =      1.925(In/Hr) for a    10.0 year storm
Subarea runoff =      9.473(CFS) for      5.600(Ac.)
Total runoff =     43.771(CFS)      Total area =      23.200(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      207.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------------
Upstream point/station elevation =  1557.300(Ft.)
Downstream point/station elevation =  1546.200(Ft.)
Pipe length  =   376.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    43.771(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    43.771(CFS)
Normal flow depth in pipe =   18.66(In.)
Flow top width inside pipe =   24.95(In.)
Critical Depth =   25.61(In.)
Pipe flow velocity =     14.94(Ft/s)
Travel time through pipe =    0.42 min.
Time of concentration (TC) =    14.28 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      207.000 to Point/Station      105.000
```

**** CONFLUENCE OF MAIN STREAMS ****

The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area = 23.200(Ac.)
Runoff from this stream = 43.771(CFS)
Time of concentration = 14.28 min.
Rainfall intensity = 1.894(In/Hr)
Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	29.245	21.69	1.505
2	43.771	14.28	1.894

Largest stream flow has longer or shorter time of concentration
Qp = 43.771 + sum of

Qa	Tb/Ta	
29.245 *	0.659 =	19.258

Qp = 63.029

Total of 2 main streams to confluence:
Flow rates before confluence point:
29.245 43.771
Area of streams before confluence:
20.900 23.200

Results of confluence:
Total flow rate = 63.029(CFS)
Time of concentration = 14.280 min.
Effective stream area after confluence = 44.100(Ac.)

++
Process from Point/Station 105.000 to Point/Station 107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 1546.200(Ft.)
Downstream point/station elevation = 1532.600(Ft.)
Pipe length = 445.00(Ft.) Manning's N = 0.013
No. of pipes = 1 Required pipe flow = 63.029(CFS)
Nearest computed pipe diameter = 30.00(In.)
Calculated individual pipe flow = 63.029(CFS)
Normal flow depth in pipe = 21.82(In.)
Flow top width inside pipe = 26.72(In.)
Critical depth could not be calculated.
Pipe flow velocity = 16.48(Ft/s)
Travel time through pipe = 0.45 min.
Time of concentration (TC) = 14.73 min.
End of computations, total study area = 44.10 (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

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 11/08/23 File:PROP10PARKE1.out

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22-0192 - MVCC PARK SITE DMA E-1
PROP ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10PARKE1.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 910.000 to Point/Station 911.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 579.000(Ft.)
Top (of initial area) elevation = 1590.300(Ft.)
Bottom (of initial area) elevation = 1578.400(Ft.)
Difference in elevation = 11.900(Ft.)
Slope = 0.02055 s(percent)= 2.06
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.634 min.
Rainfall intensity = 2.120(In/Hr) for a 10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.781

```
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      7.782(CFS)
Total initial stream area =        4.700(Ac.)
Pervious area fraction = 0.600
End of computations, total study area =            4.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number =  69.0
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 11/08/23 File:PROP10PARKE3.out

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22-0192 - MVCC PARK SITE DMA E-3
PROP ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10PARKE3.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 930.000 to Point/Station 931.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 481.000(Ft.)
Top (of initial area) elevation = 1585.300(Ft.)
Bottom (of initial area) elevation = 1573.600(Ft.)
Difference in elevation = 11.700(Ft.)
Slope = 0.02432 s(percent)= 2.43
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.445 min.
Rainfall intensity = 2.250(In/Hr) for a 10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.786

```
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      3.184(CFS)
Total initial stream area =        1.800(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      930.000 to Point/Station      931.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      1.800(Ac.)
Runoff from this stream =      3.184(CFS)
Time of concentration =   10.44 min.
Rainfall intensity =     2.250(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      932.000 to Point/Station      931.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   483.000(Ft.)
Top (of initial area) elevation =  1584.000(Ft.)
Bottom (of initial area) elevation =  1573.600(Ft.)
Difference in elevation =    10.400(Ft.)
Slope =    0.02153  s(percent)=       2.15
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.720 min.
Rainfall intensity =      2.218(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.785
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      2.438(CFS)
Total initial stream area =        1.400(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      932.000 to Point/Station      931.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.400(Ac.)
Runoff from this stream =      2.438(CFS)
```

Time of concentration = 10.72 min.
Rainfall intensity = 2.218(In/Hr)
Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	3.184	10.44	2.250
2	2.438	10.72	2.218

Largest stream flow has longer or shorter time of concentration
Qp = 3.184 + sum of
Qa Tb/Ta
2.438 * 0.974 = 2.375
Qp = 5.559

Total of 2 main streams to confluence:
Flow rates before confluence point:
3.184 2.438
Area of streams before confluence:
1.800 1.400

Results of confluence:
Total flow rate = 5.559(CFS)
Time of concentration = 10.445 min.
Effective stream area after confluence = 3.200(Ac.)
End of computations, total study area = 3.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number = 69.0

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/11/24
File:PROP10PARKE4.out

22-0192 - MVCC PARK SITE DMA E-4
PROP ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP100PARKE4.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 940.000 to Point/Station 941.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 603.000(Ft.)
Top (of initial area) elevation = 1591.300(Ft.)

```
Bottom (of initial area) elevation =  1566.300(Ft.)
Difference in elevation =    25.000(Ft.)
Slope =    0.04146  s(percent)=       4.15
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.277 min.
Rainfall intensity =      2.270(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.787
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      1.072(CFS)
Total initial stream area =        0.600(Ac.)
Pervious area fraction = 0.600


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Process from Point/Station      941.000 to Point/Station      942.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1564.300(Ft.)
Downstream point/station elevation =  1564.200(Ft.)
Pipe length  =    39.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.072(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     1.072(CFS)
Normal flow depth in pipe =    6.66(In.)
Flow top width inside pipe =   11.93(In.)
Critical Depth =    5.22(In.)
Pipe flow velocity =      2.40(Ft/s)
Travel time through pipe =    0.27 min.
Time of concentration (TC) =    10.55 min.
End of computations, total study area =            0.60 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number =  69.0
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 05/10/24
File:PROP10PARKW1E2E5.out

22-0192 - MVCC PARK SITE DMA W-1, E-2 & E-5
PROP ONSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10PARKW1E2E4.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 900.000 to Point/Station 901.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 307.000(Ft.)
Top (of initial area) elevation = 1599.400(Ft.)

```
Bottom (of initial area) elevation =  1587.800(Ft.)
Difference in elevation =    11.600(Ft.)
Slope =    0.03779  s(percent)=       3.78
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.992 min.
Rainfall intensity =      2.606(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.799
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      4.374(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 0.600


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Process from Point/Station      901.000 to Point/Station      902.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1586.000(Ft.)
Downstream point/station elevation =  1584.000(Ft.)
Pipe length  =    77.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.374(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     4.374(CFS)
Normal flow depth in pipe =    7.84(In.)
Flow top width inside pipe =   11.42(In.)
Critical Depth =   10.53(In.)
Pipe flow velocity =      8.05(Ft/s)
Travel time through pipe =    0.16 min.
Time of concentration (TC) =     8.15 min.


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Process from Point/Station      901.000 to Point/Station      902.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      2.100(Ac.)
Runoff from this stream =      4.374(CFS)
Time of concentration =    8.15 min.
Rainfall intensity =     2.578(In/Hr)


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Process from Point/Station      903.000 to Point/Station      904.000
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**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =   235.000(Ft.)
Top (of initial area) elevation =  1597.300(Ft.)
Bottom (of initial area) elevation =  1586.000(Ft.)
Difference in elevation =    11.300(Ft.)
Slope =    0.04809  s(percent)=       4.81
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.843 min.
Rainfall intensity =      2.838(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.806
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      6.634(CFS)
Total initial stream area =        2.900(Ac.)
Pervious area fraction = 0.600


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Process from Point/Station      904.000 to Point/Station      902.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1584.100(Ft.)
Downstream point/station elevation =  1584.000(Ft.)
Pipe length  =    22.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     6.634(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     6.634(CFS)
Normal flow depth in pipe =   13.83(In.)
Flow top width inside pipe =   15.19(In.)
Critical Depth =   11.97(In.)
Pipe flow velocity =      4.56(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =     6.92 min.


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Process from Point/Station      904.000 to Point/Station      902.000
**** CONFLUENCE OF MINOR STREAMS ****
_____________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      2.900(Ac.)
Runoff from this stream =      6.634(CFS)
Time of concentration =    6.92 min.
Rainfall intensity =     2.820(In/Hr)
```

```
Summary of stream data:

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


1        4.374      8.15                 2.578
2        6.634      6.92                 2.820
Largest stream flow has longer or shorter time of concentration
Qp =      6.634 + sum of
          Qa          Tb/Ta
           4.374 *    0.849 =      3.715
Qp =     10.349

Total of 2 streams to confluence:
Flow rates before confluence point:
       4.374       6.634
Area of streams before confluence:
        2.100        2.900
Results of confluence:
Total flow rate =     10.349(CFS)
Time of concentration =     6.924 min.
Effective stream area after confluence =      5.000(Ac.)


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Process from Point/Station      902.000 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1579.000(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
Pipe length  =    58.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    10.349(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    10.349(CFS)
Normal flow depth in pipe =   12.61(In.)
Flow top width inside pipe =   16.49(In.)
Critical Depth =   14.85(In.)
Pipe flow velocity =      7.82(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =     7.05 min.


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Process from Point/Station      902.000 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.000(Ac.)
Runoff from this stream =     10.349(CFS)
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Time of concentration =    7.05 min.
Rainfall intensity =     2.793(In/Hr)


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Process from Point/Station      700.000 to Point/Station      811.500
**** USER DEFINED FLOW INFORMATION AT A POINT ****
______________________________________________________________________________
Rainfall intensity =      1.497(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.786
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
User specified values are as follows:
TC =  21.90 min.  Rain intensity =       1.50(In/Hr)
Total area =       115.20(Ac.)  Total runoff =    235.00(CFS)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      811.500 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1579.000(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
Pipe length  =   162.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   235.000(CFS)
Nearest computed pipe diameter  =     66.00(In.)
Calculated individual pipe flow  =   235.000(CFS)
Normal flow depth in pipe =   53.81(In.)
Flow top width inside pipe =   51.22(In.)
Critical Depth =   51.41(In.)
Pipe flow velocity =     11.32(Ft/s)
Travel time through pipe =    0.24 min.
Time of concentration (TC) =    22.14 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      811.500 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =    115.200(Ac.)
Runoff from this stream =    235.000(CFS)
Time of concentration =   22.14 min.
Rainfall intensity =     1.488(In/Hr)
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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      920.000 to Point/Station      921.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   296.000(Ft.)
Top (of initial area) elevation =  1589.300(Ft.)
Bottom (of initial area) elevation =  1586.000(Ft.)
Difference in elevation =     3.300(Ft.)
Slope =    0.01115  s(percent)=       1.11
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.054 min.
Rainfall intensity =      2.297(In/Hr) for a    10.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.788
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      2.173(CFS)
Total initial stream area =        1.200(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      921.000 to Point/Station      922.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1584.500(Ft.)
Downstream point/station elevation =  1583.600(Ft.)
Pipe length  =    34.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.173(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     2.173(CFS)
Normal flow depth in pipe =    6.13(In.)
Flow top width inside pipe =    8.39(In.)
Critical Depth =    7.95(In.)
Pipe flow velocity =      6.78(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =    10.14 min.


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Process from Point/Station      922.000 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1578.600(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
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```
Pipe length  =    85.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.173(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.173(CFS)
Normal flow depth in pipe =    8.81(In.)
Flow top width inside pipe =   10.60(In.)
Critical Depth =    7.57(In.)
Pipe flow velocity =      3.52(Ft/s)
Travel time through pipe =    0.40 min.
Time of concentration (TC) =    10.54 min.


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Process from Point/Station      922.000 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 3
Stream flow area =      1.200(Ac.)
Runoff from this stream =      2.173(CFS)
Time of concentration =   10.54 min.
Rainfall intensity =     2.238(In/Hr)
Summary of stream data:

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


1       10.349      7.05                2.793
2      235.000     22.14                1.488
3        2.173     10.54                2.238
Largest stream flow has longer time of concentration
Qp =    235.000 + sum of
          Qb         Ia/Ib
          10.349 *    0.533 =      5.514
          Qb         Ia/Ib
           2.173 *    0.665 =      1.445
Qp =    241.959

Total of 3 streams to confluence:
Flow rates before confluence point:
      10.349     235.000       2.173
Area of streams before confluence:
        5.000      115.200        1.200
Results of confluence:
Total flow rate =    241.959(CFS)
Time of concentration =    22.138 min.
Effective stream area after confluence =    121.400(Ac.)


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Process from Point/Station      812.000 to Point/Station      813.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1578.200(Ft.)
Downstream point/station elevation =  1577.100(Ft.)
Pipe length  =   231.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   241.959(CFS)
Nearest computed pipe diameter  =     66.00(In.)
Calculated individual pipe flow  =   241.959(CFS)
Normal flow depth in pipe =   57.19(In.)
Flow top width inside pipe =   44.90(In.)
Critical Depth =   52.13(In.)
Pipe flow velocity =     11.07(Ft/s)
Travel time through pipe =    0.35 min.
Time of concentration (TC) =    22.49 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      812.000 to Point/Station      813.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    121.400(Ac.)
Runoff from this stream =    241.959(CFS)
Time of concentration =   22.49 min.
Rainfall intensity =     1.475(In/Hr)


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Process from Point/Station      310.000 to Point/Station      814.000
**** USER DEFINED FLOW INFORMATION AT A POINT ****
------------------------------------------------------------------------
Rainfall intensity =      0.689(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.684
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
User specified values are as follows:
TC =  89.80 min.  Rain intensity =       0.69(In/Hr)
Total area =      1096.00(Ac.)  Total runoff =   1110.50(CFS)


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Process from Point/Station      814.000 to Point/Station      813.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
```

```
Upstream point/station elevation =  1578.900(Ft.)
Downstream point/station elevation =  1577.100(Ft.)
Pipe length  =   100.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =  1110.500(CFS)
Nearest computed pipe diameter  =     93.00(In.)
Calculated individual pipe flow  =  1110.500(CFS)
Normal flow depth in pipe =   75.19(In.)
Flow top width inside pipe =   73.19(In.)
Critical depth could not be calculated.
Pipe flow velocity =     27.17(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    89.86 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      814.000 to Point/Station      813.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =   1096.000(Ac.)
Runoff from this stream =   1110.500(CFS)
Time of concentration =   89.86 min.
Rainfall intensity =     0.689(In/Hr)
Summary of stream data:

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


1      241.959     22.49                 1.475
2     1110.500     89.86                 0.689
Largest stream flow has longer time of concentration
Qp =   1110.500 + sum of
          Qb         Ia/Ib
         241.959 *    0.467 =    112.936
Qp =   1223.436

Total of 2 streams to confluence:
Flow rates before confluence point:
     241.959    1110.500
Area of streams before confluence:
      121.400     1096.000
Results of confluence:
Total flow rate =   1223.436(CFS)
Time of concentration =    89.861 min.
Effective stream area after confluence =   1217.400(Ac.)


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Process from Point/Station      813.000 to Point/Station      815.000
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**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1577.100(Ft.)
Downstream point/station elevation =  1575.200(Ft.)
Pipe length  =    69.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =  1223.436(CFS)
Nearest computed pipe diameter  =     87.00(In.)
Calculated individual pipe flow  =  1223.436(CFS)
Normal flow depth in pipe =   76.13(In.)
Flow top width inside pipe =   57.55(In.)
Critical depth could not be calculated.
Pipe flow velocity =     31.93(Ft/s)
Travel time through pipe =    0.04 min.
Time of concentration (TC) =    89.90 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      815.000 to Point/Station      816.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________
Top of natural channel elevation =   1575.200(Ft.)
End of natural channel elevation =   1563.900(Ft.)
Length of natural channel  =   568.000(Ft.)
Estimated mean flow rate at midpoint of channel =   1224.441(CFS)

Natural mountain channel type used
L.A. County flood control district formula for channel velocity:
 Velocity = 5.48(q^.33)(slope^.492)
Velocity using mean channel flow =   8.33(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0199
Corrected/adjusted channel slope =  0.0199
Travel time =    1.14 min.     TC =   91.03  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.683
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      0.684(In/Hr) for a    10.0 year storm
Subarea runoff =      0.934(CFS) for      2.000(Ac.)
Total runoff =   1224.370(CFS)  Total area =    1219.400(Ac.)
End of computations, total study area =         1219.40 (Ac.)
```

The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.998
Area averaged RI index number = 85.9

100-YEAR PROPOSED ONSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24 File:PROP100.out

22-0192 - MVCC INDUSTRIAL SITE
PROP ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

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

Initial area flow distance = 800.000(Ft.)
Top (of initial area) elevation = 1584.100(Ft.)
Bottom (of initial area) elevation = 1580.100(Ft.)

```
Difference in elevation =     4.000(Ft.)
Slope =    0.00500  s(percent)=       0.50
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.548 min.
Rainfall intensity =      3.192(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.886
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 =     25.732(CFS)
Total initial stream area =        9.100(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.000 to Point/Station      102.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1576.400(Ft.)
Downstream point/station elevation =  1574.800(Ft.)
Pipe length  =   258.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.732(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    25.732(CFS)
Normal flow depth in pipe =   23.81(In.)
Flow top width inside pipe =   17.42(In.)
Critical Depth =   21.26(In.)
Pipe flow velocity =      6.93(Ft/s)
Travel time through pipe =    0.62 min.
Time of concentration (TC) =    13.17 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      103.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1574.800(Ft.)
Downstream point/station elevation =  1563.200(Ft.)
Pipe length  =   722.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.732(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    25.732(CFS)
Normal flow depth in pipe =   17.77(In.)
Flow top width inside pipe =   21.05(In.)
Critical Depth =   21.36(In.)
Pipe flow velocity =     10.33(Ft/s)
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```
Travel time through pipe =    1.17 min.
Time of concentration (TC) =    14.33 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      103.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.885
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
Time of concentration =    14.33 min.
Rainfall intensity =      2.967(In/Hr) for a   100.0 year storm
Subarea runoff =      3.413(CFS) for      1.300(Ac.)
Total runoff =     29.145(CFS)  Total area =      10.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1563.200(Ft.)
Downstream point/station elevation =  1546.200(Ft.)
Pipe length  =  1316.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    29.145(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    29.145(CFS)
Normal flow depth in pipe =   18.75(In.)
Flow top width inside pipe =   24.87(In.)
Critical Depth =   22.49(In.)
Pipe flow velocity =      9.90(Ft/s)
Travel time through pipe =    2.22 min.
Time of concentration (TC) =    16.55 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      105.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.884
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
Time of concentration =    16.55 min.
Rainfall intensity =      2.741(In/Hr) for a   100.0 year storm
Subarea runoff =     25.685(CFS) for     10.600(Ac.)
Total runoff =     54.830(CFS)  Total area =      21.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      105.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     21.000(Ac.)
Runoff from this stream =     54.830(CFS)
Time of concentration =   16.55 min.
Rainfall intensity =     2.741(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   781.000(Ft.)
Top (of initial area) elevation =  1584.100(Ft.)
Bottom (of initial area) elevation =  1570.800(Ft.)
Difference in elevation =    13.300(Ft.)
Slope =    0.01703  s(percent)=       1.70
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    9.726 min.
Rainfall intensity =      3.672(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.887
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 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 =     31.284(CFS)
Total initial stream area =        9.600(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station      201.000 to Point/Station      202.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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Upstream point/station elevation =  1561.400(Ft.)
Downstream point/station elevation =  1559.800(Ft.)
Pipe length  =   547.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    31.284(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    31.284(CFS)
Normal flow depth in pipe =   25.92(In.)
Flow top width inside pipe =   32.33(In.)
Critical Depth =   21.74(In.)
Pipe flow velocity =      5.75(Ft/s)
Travel time through pipe =    1.59 min.
Time of concentration (TC) =    11.31 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      203.000 to Point/Station      202.000
**** SUBAREA FLOW ADDITION ****
______________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.886
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
Time of concentration =    11.31 min.
Rainfall intensity =      3.380(In/Hr) for a   100.0 year storm
Subarea runoff =      5.992(CFS) for      2.000(Ac.)
Total runoff =     37.276(CFS)  Total area =      11.600(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      204.000 to Point/Station      204.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1559.800(Ft.)
Downstream point/station elevation =  1558.700(Ft.)
Pipe length  =   338.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    37.276(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    37.276(CFS)
Normal flow depth in pipe =   28.88(In.)
Flow top width inside pipe =   28.69(In.)
Critical Depth =   23.82(In.)
Pipe flow velocity =      6.14(Ft/s)
Travel time through pipe =    0.92 min.
Time of concentration (TC) =    12.23 min.
```

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      205.000 to Point/Station      204.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.886
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
Time of concentration =    12.23 min.
Rainfall intensity =      3.238(In/Hr) for a   100.0 year storm
Subarea runoff =     16.636(CFS) for      5.800(Ac.)
Total runoff =     53.912(CFS)  Total area =      17.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      204.000 to Point/Station      206.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________________
Upstream point/station elevation =  1558.700(Ft.)
Downstream point/station elevation =  1557.300(Ft.)
Pipe length  =   440.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    53.912(CFS)
Nearest computed pipe diameter  =     42.00(In.)
Calculated individual pipe flow  =    53.912(CFS)
Normal flow depth in pipe =   32.67(In.)
Flow top width inside pipe =   34.92(In.)
Critical Depth =   27.56(In.)
Pipe flow velocity =      6.71(Ft/s)
Travel time through pipe =    1.09 min.
Time of concentration (TC) =    13.32 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      207.000 to Point/Station      206.000
**** SUBAREA FLOW ADDITION ****
_____________________________________________________________________________
COMMERCIAL subarea type
Runoff Coefficient = 0.885
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
Time of concentration =    13.32 min.
Rainfall intensity =      3.089(In/Hr) for a   100.0 year storm
```

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Subarea runoff =     15.314(CFS) for      5.600(Ac.)
Total runoff =     69.227(CFS)  Total area =      23.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      206.000 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1557.300(Ft.)
Downstream point/station elevation =  1546.200(Ft.)
Pipe length  =   376.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    69.227(CFS)
Nearest computed pipe diameter  =     30.00(In.)
Calculated individual pipe flow  =    69.227(CFS)
Normal flow depth in pipe =   24.14(In.)
Flow top width inside pipe =   23.79(In.)
Critical depth could not be calculated.
Pipe flow velocity =     16.37(Ft/s)
Travel time through pipe =    0.38 min.
Time of concentration (TC) =    13.71 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      207.000 to Point/Station      105.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     23.000(Ac.)
Runoff from this stream =     69.227(CFS)
Time of concentration =   13.71 min.
Rainfall intensity =     3.041(In/Hr)
Summary of stream data:

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


1       54.830     16.55                2.741
2       69.227     13.71                3.041
Largest stream flow has longer or shorter time of concentration
Qp =     69.227 + sum of
          Qa          Tb/Ta
          54.830 *    0.828 =     45.410
Qp =    114.637

Total of 2 main streams to confluence:
Flow rates before confluence point:
      54.830      69.227
Area of streams before confluence:
```

```
       21.000       23.000


Results of confluence:
Total flow rate =    114.637(CFS)
Time of concentration =    13.706 min.
Effective stream area after confluence  =     44.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      107.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1546.200(Ft.)
Downstream point/station elevation =  1532.600(Ft.)
Pipe length  =   445.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   114.637(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =   114.637(CFS)
Normal flow depth in pipe =   28.97(In.)
Flow top width inside pipe =   28.54(In.)
Critical depth could not be calculated.
Pipe flow velocity =     18.80(Ft/s)
Travel time through pipe =    0.39 min.
Time of concentration (TC) =    14.10 min.
End of computations, total study area =           44.00 (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
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:PROP100PARKE1.out

22-0192 - MVCC PARK SITE DMA E-1
PROP ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100PARKE1.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 910.000 to Point/Station 911.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 579.000(Ft.)
Top (of initial area) elevation = 1590.300(Ft.)

Bottom (of initial area) elevation = 1578.400(Ft.)
Difference in elevation =   11.900(Ft.)
Slope =   0.02055 s(percent)=   2.06
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.634 min.
Rainfall intensity =   3.328(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.818
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 = 0.600; Impervious fraction = 0.400
Initial subarea runoff =   12.788(CFS)
Total initial stream area =   4.700(Ac.)
Pervious area fraction = 0.600
End of computations, total study area =   4.70 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number = 69.0

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:PROP100PARKE3.out

22-0192 - MVCC PARK SITE DMA E-3
PROP ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100PARKE3.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 930.000 to Point/Station 931.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 481.000(Ft.)
Top (of initial area) elevation = 1585.300(Ft.)

```
Bottom (of initial area) elevation =  1573.600(Ft.)
Difference in elevation =    11.700(Ft.)
Slope =    0.02432  s(percent)=       2.43
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.445 min.
Rainfall intensity =      3.531(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.822
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      5.223(CFS)
Total initial stream area =        1.800(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      930.000 to Point/Station      931.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      1.800(Ac.)
Runoff from this stream =      5.223(CFS)
Time of concentration =   10.44 min.
Rainfall intensity =     3.531(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      932.000 to Point/Station      931.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   483.000(Ft.)
Top (of initial area) elevation =  1584.000(Ft.)
Bottom (of initial area) elevation =  1573.600(Ft.)
Difference in elevation =    10.400(Ft.)
Slope =    0.02153  s(percent)=       2.15
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.720 min.
Rainfall intensity =      3.481(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.821
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      4.000(CFS)
Total initial stream area =        1.400(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      932.000 to Point/Station      931.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.400(Ac.)
Runoff from this stream =      4.000(CFS)
Time of concentration =   10.72 min.
Rainfall intensity =     3.481(In/Hr)
Summary of stream data:

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


1        5.223     10.44                3.531
2        4.000     10.72                3.481
Largest stream flow has longer or shorter time of concentration
Qp =      5.223 + sum of
          Qa          Tb/Ta
           4.000 *    0.974 =      3.897
Qp =      9.120

Total of 2 main streams to confluence:
Flow rates before confluence point:
       5.223       4.000
Area of streams before confluence:
        1.800        1.400


Results of confluence:
Total flow rate =      9.120(CFS)
Time of concentration =    10.445 min.
Effective stream area after confluence  =      3.200(Ac.)
End of computations, total study area =            3.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number =  69.0
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/11/24
File:PROP100PARKE4.out

22-0192 - MVCC PARK SITE DMA E-4
PROP ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100PARKE4.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 940.000 to Point/Station 941.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 603.000(Ft.)
Top (of initial area) elevation = 1591.300(Ft.)

```
Bottom (of initial area) elevation =  1566.300(Ft.)
Difference in elevation =    25.000(Ft.)
Slope =    0.04146  s(percent)=       4.15
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.277 min.
Rainfall intensity =      3.563(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.822
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      1.758(CFS)
Total initial stream area =        0.600(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      941.000 to Point/Station      942.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1564.300(Ft.)
Downstream point/station elevation =  1564.200(Ft.)
Pipe length  =    39.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.758(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     1.758(CFS)
Normal flow depth in pipe =    9.56(In.)
Flow top width inside pipe =    9.66(In.)
Critical Depth =    6.77(In.)
Pipe flow velocity =      2.62(Ft/s)
Travel time through pipe =    0.25 min.
Time of concentration (TC) =    10.52 min.
End of computations, total study area =            0.60 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.600
Area averaged RI index number =  69.0
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 05/08/24
File:PROP100PARKW1E2E5.out

22-0192 - MVCC PARK SITE DMA W-1, E-2 & E-5
PROP ONSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100PARKW1E2E4.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 900.000 to Point/Station 901.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 307.000(Ft.)
Top (of initial area) elevation = 1599.400(Ft.)

```
Bottom (of initial area) elevation =  1587.800(Ft.)
Difference in elevation =    11.600(Ft.)
Slope =    0.03779  s(percent)=       3.78
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.992 min.
Rainfall intensity =      4.091(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.831
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      7.140(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      901.000 to Point/Station      902.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1586.000(Ft.)
Downstream point/station elevation =  1584.000(Ft.)
Pipe length  =    77.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.140(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     7.140(CFS)
Normal flow depth in pipe =    9.12(In.)
Flow top width inside pipe =   14.65(In.)
Critical Depth =   12.83(In.)
Pipe flow velocity =      9.14(Ft/s)
Travel time through pipe =    0.14 min.
Time of concentration (TC) =     8.13 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      901.000 to Point/Station      902.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      2.100(Ac.)
Runoff from this stream =      7.140(CFS)
Time of concentration =    8.13 min.
Rainfall intensity =     4.052(In/Hr)


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Process from Point/Station      903.000 to Point/Station      904.000
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```
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =   235.000(Ft.)
Top (of initial area) elevation =  1597.300(Ft.)
Bottom (of initial area) elevation =  1586.000(Ft.)
Difference in elevation =    11.300(Ft.)
Slope =    0.04809  s(percent)=       4.81
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    6.843 min.
Rainfall intensity =      4.456(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.836
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =     10.802(CFS)
Total initial stream area =        2.900(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      904.000 to Point/Station      902.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1584.100(Ft.)
Downstream point/station elevation =  1584.000(Ft.)
Pipe length  =    22.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    10.802(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    10.802(CFS)
Normal flow depth in pipe =   17.44(In.)
Flow top width inside pipe =   15.76(In.)
Critical Depth =   14.70(In.)
Pipe flow velocity =      5.06(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =     6.92 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      904.000 to Point/Station      902.000
**** CONFLUENCE OF MINOR STREAMS ****
_____________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      2.900(Ac.)
Runoff from this stream =     10.802(CFS)
Time of concentration =    6.92 min.
Rainfall intensity =     4.430(In/Hr)
```

```
Summary of stream data:

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


1        7.140      8.13                 4.052
2       10.802      6.92                 4.430
Largest stream flow has longer or shorter time of concentration
Qp =     10.802 + sum of
          Qa          Tb/Ta
           7.140 *    0.850 =      6.072
Qp =     16.875

Total of 2 streams to confluence:
Flow rates before confluence point:
       7.140      10.802
Area of streams before confluence:
        2.100        2.900
Results of confluence:
Total flow rate =     16.875(CFS)
Time of concentration =     6.916 min.
Effective stream area after confluence =      5.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      902.000 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1579.000(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
Pipe length  =    58.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    16.875(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    16.875(CFS)
Normal flow depth in pipe =   15.68(In.)
Flow top width inside pipe =   18.27(In.)
Critical Depth =   18.10(In.)
Pipe flow velocity =      8.76(Ft/s)
Travel time through pipe =    0.11 min.
Time of concentration (TC) =     7.03 min.


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Process from Point/Station      902.000 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.000(Ac.)
Runoff from this stream =     16.875(CFS)
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```
Time of concentration =    7.03 min.
Rainfall intensity =     4.392(In/Hr)


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Process from Point/Station      700.000 to Point/Station      811.500
**** USER DEFINED FLOW INFORMATION AT A POINT ****
______________________________________________________________________________
Rainfall intensity =      2.350(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.824
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
User specified values are as follows:
TC =  21.90 min.  Rain intensity =       2.35(In/Hr)
Total area =       115.20(Ac.)  Total runoff =    235.00(CFS)


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Process from Point/Station      811.500 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1579.000(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
Pipe length  =   162.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   235.000(CFS)
Nearest computed pipe diameter  =     66.00(In.)
Calculated individual pipe flow  =   235.000(CFS)
Normal flow depth in pipe =   53.81(In.)
Flow top width inside pipe =   51.22(In.)
Critical Depth =   51.41(In.)
Pipe flow velocity =     11.32(Ft/s)
Travel time through pipe =    0.24 min.
Time of concentration (TC) =    22.14 min.


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Process from Point/Station      811.500 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =    115.200(Ac.)
Runoff from this stream =    235.000(CFS)
Time of concentration =   22.14 min.
Rainfall intensity =     2.336(In/Hr)
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Process from Point/Station      920.000 to Point/Station      921.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   296.000(Ft.)
Top (of initial area) elevation =  1589.300(Ft.)
Bottom (of initial area) elevation =  1586.000(Ft.)
Difference in elevation =     3.300(Ft.)
Slope =    0.01115  s(percent)=       1.11
TC = k(0.420)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.054 min.
Rainfall intensity =      3.606(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.823
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 =  0.600; Impervious fraction =  0.400
Initial subarea runoff =      3.562(CFS)
Total initial stream area =        1.200(Ac.)
Pervious area fraction = 0.600


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      921.000 to Point/Station      922.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1584.500(Ft.)
Downstream point/station elevation =  1583.600(Ft.)
Pipe length  =    34.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.562(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     3.562(CFS)
Normal flow depth in pipe =    6.80(In.)
Flow top width inside pipe =   11.89(In.)
Critical Depth =    9.67(In.)
Pipe flow velocity =      7.76(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =    10.13 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      922.000 to Point/Station      812.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1578.600(Ft.)
Downstream point/station elevation =  1578.200(Ft.)
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Pipe length  =    85.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.562(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     3.562(CFS)
Normal flow depth in pipe =   10.18(In.)
Flow top width inside pipe =   14.01(In.)
Critical Depth =    9.14(In.)
Pipe flow velocity =      4.02(Ft/s)
Travel time through pipe =    0.35 min.
Time of concentration (TC) =    10.48 min.


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Process from Point/Station      922.000 to Point/Station      812.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 3
Stream flow area =      1.200(Ac.)
Runoff from this stream =      3.562(CFS)
Time of concentration =   10.48 min.
Rainfall intensity =     3.525(In/Hr)
Summary of stream data:

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


1       16.875      7.03                4.392
2      235.000     22.14                2.336
3        3.562     10.48                3.525
Largest stream flow has longer time of concentration
Qp =    235.000 + sum of
          Qb         Ia/Ib
          16.875 *    0.532 =      8.976
          Qb         Ia/Ib
           3.562 *    0.663 =      2.361
Qp =    246.337

Total of 3 streams to confluence:
Flow rates before confluence point:
      16.875     235.000       3.562
Area of streams before confluence:
        5.000      115.200        1.200
Results of confluence:
Total flow rate =    246.337(CFS)
Time of concentration =    22.138 min.
Effective stream area after confluence =    121.400(Ac.)


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Process from Point/Station      812.000 to Point/Station      813.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1578.200(Ft.)
Downstream point/station elevation =  1577.100(Ft.)
Pipe length  =   231.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   246.337(CFS)
Nearest computed pipe diameter  =     66.00(In.)
Calculated individual pipe flow  =   246.337(CFS)
Normal flow depth in pipe =   59.06(In.)
Flow top width inside pipe =   40.48(In.)
Critical Depth =   52.54(In.)
Pipe flow velocity =     10.99(Ft/s)
Travel time through pipe =    0.35 min.
Time of concentration (TC) =    22.49 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      812.000 to Point/Station      813.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 1 in normal stream number 1
Stream flow area =    121.400(Ac.)
Runoff from this stream =    246.337(CFS)
Time of concentration =   22.49 min.
Rainfall intensity =     2.316(In/Hr)


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Process from Point/Station      310.000 to Point/Station      814.000
**** USER DEFINED FLOW INFORMATION AT A POINT ****
------------------------------------------------------------------------
Rainfall intensity =      1.081(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.750
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
User specified values are as follows:
TC =  89.80 min.  Rain intensity =       1.08(In/Hr)
Total area =      1096.00(Ac.)  Total runoff =   1110.50(CFS)


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Process from Point/Station      814.000 to Point/Station      813.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
```

```
Upstream point/station elevation =  1578.900(Ft.)
Downstream point/station elevation =  1577.100(Ft.)
Pipe length  =   100.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =  1110.500(CFS)
Nearest computed pipe diameter  =     93.00(In.)
Calculated individual pipe flow  =  1110.500(CFS)
Normal flow depth in pipe =   75.19(In.)
Flow top width inside pipe =   73.19(In.)
Critical depth could not be calculated.
Pipe flow velocity =     27.17(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    89.86 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      814.000 to Point/Station      813.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =   1096.000(Ac.)
Runoff from this stream =   1110.500(CFS)
Time of concentration =   89.86 min.
Rainfall intensity =     1.081(In/Hr)
Summary of stream data:

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


1      246.337     22.49                 2.316
2     1110.500     89.86                 1.081
Largest stream flow has longer time of concentration
Qp =   1110.500 + sum of
          Qb         Ia/Ib
         246.337 *    0.467 =    114.987
Qp =   1225.487

Total of 2 streams to confluence:
Flow rates before confluence point:
     246.337    1110.500
Area of streams before confluence:
      121.400     1096.000
Results of confluence:
Total flow rate =   1225.487(CFS)
Time of concentration =    89.861 min.
Effective stream area after confluence =   1217.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      813.000 to Point/Station      815.000
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**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1577.100(Ft.)
Downstream point/station elevation =  1575.200(Ft.)
Pipe length  =    69.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =  1225.487(CFS)
Nearest computed pipe diameter  =     87.00(In.)
Calculated individual pipe flow  =  1225.487(CFS)
Normal flow depth in pipe =   76.50(In.)
Flow top width inside pipe =   56.68(In.)
Critical depth could not be calculated.
Pipe flow velocity =     31.90(Ft/s)
Travel time through pipe =    0.04 min.
Time of concentration (TC) =    89.90 min.


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Process from Point/Station      815.000 to Point/Station      816.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
_____________________________________________________________________
Top of natural channel elevation =   1575.200(Ft.)
End of natural channel elevation =   1563.900(Ft.)
Length of natural channel  =   568.000(Ft.)
Estimated mean flow rate at midpoint of channel =   1226.493(CFS)

Natural mountain channel type used
L.A. County flood control district formula for channel velocity:
 Velocity = 5.48(q^.33)(slope^.492)
Velocity using mean channel flow =   8.34(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0199
Corrected/adjusted channel slope =  0.0199
Travel time =    1.14 min.     TC =   91.03  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.749
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.073(In/Hr) for a   100.0 year storm
Subarea runoff =      1.607(CFS) for      2.000(Ac.)
Total runoff =   1227.094(CFS)  Total area =    1219.400(Ac.)
End of computations, total study area =         1219.40 (Ac.)
```

The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.998
Area averaged RI index number = 85.9

10-YEAR OFFSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/04/24
File:PROP10OFFSITE.out

22-0192 - HILLWOOD SEATON
OFFSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10OFFSITE.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

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

Initial area flow distance = 264.000(Ft.)
Top (of initial area) elevation = 1584.000(Ft.)

```
Bottom (of initial area) elevation =  1566.200(Ft.)
Difference in elevation =    17.800(Ft.)
Slope =    0.06742  s(percent)=       6.74
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.456 min.
Rainfall intensity =      2.527(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.829
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      1.675(CFS)
Total initial stream area =        0.800(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1566.200(Ft.)
End of natural channel elevation =   1561.700(Ft.)
Length of natural channel  =   294.000(Ft.)
Estimated mean flow rate at midpoint of channel =      2.513(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 =   2.23(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0153
Corrected/adjusted channel slope =  0.0153
Travel time =    2.19 min.     TC =   10.65  min.


 Adding area flow to channel
USER INPUT of soil data for subarea
Runoff Coefficient = 0.709
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 =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.226(In/Hr) for a    10.0 year storm
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Subarea runoff =      1.263(CFS) for      0.800(Ac.)
Total runoff =      2.938(CFS)  Total area =       1.600(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1558.100(Ft.)
Downstream point/station elevation =  1556.000(Ft.)
Pipe length  =   695.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.938(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     2.938(CFS)
Normal flow depth in pipe =   10.41(In.)
Flow top width inside pipe =   13.83(In.)
Critical Depth =    8.26(In.)
Pipe flow velocity =      3.23(Ft/s)
Travel time through pipe =    3.58 min.
Time of concentration (TC) =    14.23 min.
End of computations, total study area =            1.60 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  77.5
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:EXOFFSITECAJALCORUNON.out

22-0192 - HILLWOOD SEATON
OFFSITE RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: EXOFFSITECAJALCORUNON.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 602.000 to Point/Station 603.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 594.000(Ft.)
Top (of initial area) elevation = 1636.500(Ft.)

Bottom (of initial area) elevation = 1612.500(Ft.)
Difference in elevation = 24.000(Ft.)
Slope = 0.04040 s(percent)= 4.04
TC = k(0.480)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.735 min.
Rainfall intensity = 2.110(In/Hr) for a 10.0 year storm
SINGLE FAMILY (1 Acre Lot)
Runoff Coefficient = 0.741
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 = 0.800; Impervious fraction = 0.200
Initial subarea runoff = 0.625(CFS)
Total initial stream area = 0.400(Ac.)
Pervious area fraction = 0.800
End of computations, total study area = 0.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.800
Area averaged RI index number = 69.0

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/04/24
File:PROP10OFFSITEST2.out

22-0192 - HILLWOOD SEATON
OFFSITE STREET RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10OFFSITE-ST2.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 520.000 to Point/Station 521.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 935.000(Ft.)
Top (of initial area) elevation = 1612.400(Ft.)

```
Bottom (of initial area) elevation =  1577.200(Ft.)
Difference in elevation =    35.200(Ft.)
Slope =    0.03765  s(percent)=       3.76
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.919 min.
Rainfall intensity =      2.454(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.882
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 =      5.196(CFS)
Total initial stream area =        2.400(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station      521.000 to Point/Station      522.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1577.200(Ft.)
End of street segment elevation =  1559.600(Ft.)
Length of street segment  =   981.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  76.000(Ft.)
Distance from crown to crossfall grade break  =  74.000(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  =  34.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =      8.186(CFS)
Depth of flow =   0.415(Ft.), Average velocity =   3.720(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  14.401(Ft.)
Flow velocity =   3.72(Ft/s)
Travel time =    4.40 min.     TC =   13.31  min.
 Adding area flow to street
COMMERCIAL subarea type
Runoff Coefficient = 0.879
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
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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 =      1.968(In/Hr) for a    10.0 year storm
Subarea runoff =      5.883(CFS) for      3.400(Ac.)
Total runoff =     11.079(CFS)  Total area =       5.800(Ac.)
Street flow at end of street =     11.079(CFS)
Half street flow at end of street =     11.079(CFS)
Depth of flow =   0.452(Ft.), Average velocity =   4.002(Ft/s)
Flow width (from curb towards crown)=  16.253(Ft.)
End of computations, total study area =            5.80 (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
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/04/24
File:PROP10OFFSITEST3.out

22-0192 - HILLWOOD SEATON
OFFSITE STREET RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: PROP10OFFSITE-ST3.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 530.000 to Point/Station 531.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 315.000(Ft.)
Top (of initial area) elevation = 1565.200(Ft.)

Bottom (of initial area) elevation = 1561.900(Ft.)
Difference in elevation =   3.300(Ft.)
Slope =   0.01048 s(percent)=   1.05
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   7.454 min.
Rainfall intensity =   2.708(In/Hr) for a   10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.884
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 =   0.957(CFS)
Total initial stream area =   0.400(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =   0.40 (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

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 05/10/24
File:EX10PARKOFFSITETOTAL.out

22-0192 - HILLWOOD SEATON PARK
OFFSITE - RATIONAL METHOD HYDROLOGY
10 YEAR STORM EVENT
FN: EX10PARKOFFSITETOTAL.OUT RSB

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

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

Program License Serial Number 6586

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

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.860(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 700.000 to Point/Station 701.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1652.000(Ft.)

```
Bottom (of initial area) elevation =  1599.900(Ft.)
Difference in elevation =    52.100(Ft.)
Slope =    0.05210  s(percent)=       5.21
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.167 min.
Rainfall intensity =      1.832(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.805
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.404(CFS)
Total initial stream area =        5.700(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      802.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1592.000(Ft.)
Downstream point/station elevation =  1590.000(Ft.)
Pipe length  =   110.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     8.404(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     8.404(CFS)
Normal flow depth in pipe =   11.84(In.)
Flow top width inside pipe =   12.24(In.)
Critical Depth =   13.59(In.)
Pipe flow velocity =      8.08(Ft/s)
Travel time through pipe =    0.23 min.
Time of concentration (TC) =    15.39 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      802.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.700(Ac.)
Runoff from this stream =      8.404(CFS)
Time of concentration =   15.39 min.
Rainfall intensity =     1.817(In/Hr)


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Process from Point/Station      800.000 to Point/Station      801.000
```

**** INITIAL AREA EVALUATION ****

Initial area flow distance = 908.000(Ft.)
Top (of initial area) elevation = 1673.000(Ft.)
Bottom (of initial area) elevation = 1616.000(Ft.)
Difference in elevation = 57.000(Ft.)
Slope = 0.06278 s(percent)= 6.28
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.059 min.
Rainfall intensity = 1.910(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.808
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) = 86.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 10.498(CFS)
Total initial stream area = 6.800(Ac.)
Pervious area fraction = 1.000

++
Process from Point/Station 801.000 to Point/Station 802.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****

Top of natural channel elevation = 1616.000(Ft.)
End of natural channel elevation = 1601.600(Ft.)
Length of natural channel = 479.000(Ft.)
Estimated mean flow rate at midpoint of channel = 12.505(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 = 4.59(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
Normal channel slope = 0.0301
Corrected/adjusted channel slope = 0.0301
Travel time = 1.74 min. TC = 15.80 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 = 0.000
Decimal fraction soil group C = 1.000

```
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.792(In/Hr) for a    10.0 year storm
Subarea runoff =      3.739(CFS) for      2.600(Ac.)
Total runoff =     14.238(CFS)  Total area =       9.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      801.000 to Point/Station      802.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      9.400(Ac.)
Runoff from this stream =     14.238(CFS)
Time of concentration =   15.80 min.
Rainfall intensity =     1.792(In/Hr)
Summary of stream data:

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


1        8.404     15.39                 1.817
2       14.238     15.80                 1.792
Largest stream flow has longer time of concentration
Qp =     14.238 + sum of
          Qb         Ia/Ib
           8.404 *    0.986 =      8.285
Qp =     22.522

Total of 2 streams to confluence:
Flow rates before confluence point:
       8.404      14.238
Area of streams before confluence:
        5.700        9.400
Results of confluence:
Total flow rate =     22.522(CFS)
Time of concentration =    15.799 min.
Effective stream area after confluence =     15.100(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      802.000 to Point/Station      802.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1590.000(Ft.)
Downstream point/station elevation =  1578.700(Ft.)
Pipe length  =   502.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.522(CFS)
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```
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    22.522(CFS)
Normal flow depth in pipe =   16.31(In.)
Flow top width inside pipe =   17.49(In.)
Critical Depth =   19.77(In.)
Pipe flow velocity =     11.24(Ft/s)
Travel time through pipe =    0.75 min.
Time of concentration (TC) =    16.54 min.


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Process from Point/Station      802.000 to Point/Station      802.500
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     15.100(Ac.)
Runoff from this stream =     22.522(CFS)
Time of concentration =   16.54 min.
Rainfall intensity =     1.747(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      510.000 to Point/Station      511.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   943.000(Ft.)
Top (of initial area) elevation =  1605.600(Ft.)
Bottom (of initial area) elevation =  1590.100(Ft.)
Difference in elevation =    15.500(Ft.)
Slope =    0.01644  s(percent)=       1.64
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.562 min.
Rainfall intensity =      2.236(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.881
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 =      3.151(CFS)
Total initial stream area =        1.600(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station      511.000 to Point/Station      802.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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```
Upstream point/station elevation =  1582.900(Ft.)
Downstream point/station elevation =  1581.800(Ft.)
Pipe length  =    53.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.151(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     3.151(CFS)
Normal flow depth in pipe =    6.82(In.)
Flow top width inside pipe =   11.89(In.)
Critical Depth =    9.12(In.)
Pipe flow velocity =      6.84(Ft/s)
Travel time through pipe =    0.13 min.
Time of concentration (TC) =    10.69 min.


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Process from Point/Station      511.000 to Point/Station      802.500
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      1.600(Ac.)
Runoff from this stream =      3.151(CFS)
Time of concentration =   10.69 min.
Rainfall intensity =     2.221(In/Hr)
Summary of stream data:

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


1       22.522     16.54                 1.747
2        3.151     10.69                 2.221
Largest stream flow has longer time of concentration
Qp =     22.522 + sum of
          Qb         Ia/Ib
           3.151 *    0.787 =      2.479
Qp =     25.001

Total of 2 streams to confluence:
Flow rates before confluence point:
      22.522       3.151
Area of streams before confluence:
       15.100        1.600
Results of confluence:
Total flow rate =     25.001(CFS)
Time of concentration =    16.544 min.
Effective stream area after confluence =     16.700(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      802.500 to Point/Station      803.000
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```
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1581.800(Ft.)
Downstream point/station elevation =  1581.200(Ft.)
Pipe length  =    38.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.001(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =    25.001(CFS)
Normal flow depth in pipe =   17.55(In.)
Flow top width inside pipe =   21.27(In.)
Critical Depth =   21.13(In.)
Pipe flow velocity =     10.15(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    16.61 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      802.500 to Point/Station      803.000
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     16.700(Ac.)
Runoff from this stream =     25.001(CFS)
Time of concentration =   16.61 min.
Rainfall intensity =     1.743(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      804.000 to Point/Station      805.000
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1659.000(Ft.)
Difference in elevation =    45.000(Ft.)
Slope =    0.04500  s(percent)=       4.50
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.618 min.
Rainfall intensity =      1.803(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.803
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     13.179(CFS)
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Total initial stream area =        9.100(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      805.000 to Point/Station      806.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1659.000(Ft.)
End of natural channel elevation =   1638.000(Ft.)
Length of natural channel  =   499.000(Ft.)
Estimated mean flow rate at midpoint of channel =     15.497(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 =   5.74(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0421
Corrected/adjusted channel slope =  0.0421
Travel time =    1.45 min.     TC =   17.07  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.799
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.717(In/Hr) for a    10.0 year storm
Subarea runoff =      4.390(CFS) for      3.200(Ac.)
Total runoff =     17.570(CFS)  Total area =      12.300(Ac.)


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Process from Point/Station      805.000 to Point/Station      806.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     12.300(Ac.)
Runoff from this stream =     17.570(CFS)
Time of concentration =   17.07 min.
Rainfall intensity =     1.717(In/Hr)
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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      807.000 to Point/Station      806.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   819.000(Ft.)
Top (of initial area) elevation =  1684.500(Ft.)
Bottom (of initial area) elevation =  1638.000(Ft.)
Difference in elevation =    46.500(Ft.)
Slope =    0.05678  s(percent)=       5.68
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.764 min.
Rainfall intensity =      1.933(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.809
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      4.691(CFS)
Total initial stream area =        3.000(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      807.000 to Point/Station      806.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.000(Ac.)
Runoff from this stream =      4.691(CFS)
Time of concentration =   13.76 min.
Rainfall intensity =     1.933(In/Hr)
Summary of stream data:

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


1       17.570     17.07                1.717
2        4.691     13.76                1.933
Largest stream flow has longer time of concentration
Qp =     17.570 + sum of
          Qb         Ia/Ib
           4.691 *    0.888 =      4.168
Qp =     21.738

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

```
      17.570       4.691
Area of streams before confluence:
       12.300        3.000
Results of confluence:
Total flow rate =     21.738(CFS)
Time of concentration =    17.067 min.
Effective stream area after confluence =     15.300(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      806.000 to Point/Station      808.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1638.000(Ft.)
End of natural channel elevation =   1608.000(Ft.)
Length of natural channel  =   686.000(Ft.)
Estimated mean flow rate at midpoint of channel =     23.514(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.55(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0437
Corrected/adjusted channel slope =  0.0437
Travel time =    1.75 min.     TC =   18.81  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.794
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.628(In/Hr) for a    10.0 year storm
Subarea runoff =      3.231(CFS) for      2.500(Ac.)
Total runoff =     24.969(CFS)  Total area =      17.800(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      806.000 to Point/Station      808.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     17.800(Ac.)
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Runoff from this stream =     24.969(CFS)
Time of concentration =   18.81 min.
Rainfall intensity =     1.628(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      809.000 to Point/Station      808.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   881.000(Ft.)
Top (of initial area) elevation =  1648.000(Ft.)
Bottom (of initial area) elevation =  1608.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.04540  s(percent)=       4.54
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.820 min.
Rainfall intensity =      1.856(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.806
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      5.832(CFS)
Total initial stream area =        3.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      809.000 to Point/Station      808.000
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.900(Ac.)
Runoff from this stream =      5.832(CFS)
Time of concentration =   14.82 min.
Rainfall intensity =     1.856(In/Hr)
Summary of stream data:

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


1       24.969     18.81                1.628
2        5.832     14.82                1.856
Largest stream flow has longer time of concentration
Qp =     24.969 + sum of
          Qb         Ia/Ib
```

```
          5.832 *    0.877 =      5.114
Qp =     30.084

Total of 2 streams to confluence:
Flow rates before confluence point:
      24.969       5.832
Area of streams before confluence:
       17.800        3.900
Results of confluence:
Total flow rate =     30.084(CFS)
Time of concentration =    18.813 min.
Effective stream area after confluence =     21.700(Ac.)


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Process from Point/Station      808.000 to Point/Station      803.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1608.000(Ft.)
End of natural channel elevation =   1588.500(Ft.)
Length of natural channel  =   706.000(Ft.)
Estimated mean flow rate at midpoint of channel =     33.272(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 =   5.73(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0276
Corrected/adjusted channel slope =  0.0276
Travel time =    2.05 min.     TC =   20.87  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.789
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.537(In/Hr) for a    10.0 year storm
Subarea runoff =      5.577(CFS) for      4.600(Ac.)
Total runoff =     35.661(CFS)  Total area =      26.300(Ac.)


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Process from Point/Station      808.000 to Point/Station      803.000
**** CONFLUENCE OF MAIN STREAMS ****
--------------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     26.300(Ac.)
Runoff from this stream =     35.661(CFS)
Time of concentration =   20.87 min.
Rainfall intensity =     1.537(In/Hr)
Summary of stream data:

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


1       25.001     16.61                 1.743
2       35.661     20.87                 1.537
Largest stream flow has longer time of concentration
Qp =     35.661 + sum of
          Qb         Ia/Ib
          25.001 *    0.882 =     22.051
Qp =     57.712

Total of 2 main streams to confluence:
Flow rates before confluence point:
      25.001      35.661
Area of streams before confluence:
       16.700       26.300


Results of confluence:
Total flow rate =     57.712(CFS)
Time of concentration =    20.867 min.
Effective stream area after confluence  =     43.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      803.000 to Point/Station      810.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
--------------------------------------------------------------------------------
Upstream point/station elevation =  1581.200(Ft.)
Downstream point/station elevation =  1580.600(Ft.)
Pipe length  =   114.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    57.712(CFS)
Nearest computed pipe diameter  =     39.00(In.)
Calculated individual pipe flow  =    57.712(CFS)
Normal flow depth in pipe =   30.75(In.)
Flow top width inside pipe =   31.86(In.)
Critical Depth =   29.10(In.)
Pipe flow velocity =      8.22(Ft/s)
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Travel time through pipe =    0.23 min.
Time of concentration (TC) =    21.10 min.


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Process from Point/Station      803.000 to Point/Station      810.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     43.000(Ac.)
Runoff from this stream =     57.712(CFS)
Time of concentration =   21.10 min.
Rainfall intensity =     1.528(In/Hr)


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Process from Point/Station      811.000 to Point/Station      810.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   839.000(Ft.)
Top (of initial area) elevation =  1648.500(Ft.)
Bottom (of initial area) elevation =  1586.500(Ft.)
Difference in elevation =    62.000(Ft.)
Slope =    0.07390  s(percent)=       7.39
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.184 min.
Rainfall intensity =      1.979(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.811
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     10.112(CFS)
Total initial stream area =        6.300(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      811.000 to Point/Station      810.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      6.300(Ac.)
Runoff from this stream =     10.112(CFS)
Time of concentration =   13.18 min.
Rainfall intensity =     1.979(In/Hr)
Summary of stream data:
```

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


1       57.712     21.10                 1.528
2       10.112     13.18                 1.979
Largest stream flow has longer time of concentration
Qp =     57.712 + sum of
          Qb         Ia/Ib
          10.112 *    0.772 =      7.808
Qp =     65.520

Total of 2 streams to confluence:
Flow rates before confluence point:
      57.712      10.112
Area of streams before confluence:
       43.000        6.300
Results of confluence:
Total flow rate =     65.520(CFS)
Time of concentration =    21.098 min.
Effective stream area after confluence =     49.300(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      810.000 to Point/Station      811.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1580.600(Ft.)
Downstream point/station elevation =  1579.000(Ft.)
Pipe length  =   273.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    65.520(CFS)
Nearest computed pipe diameter  =     39.00(In.)
Calculated individual pipe flow  =    65.520(CFS)
Normal flow depth in pipe =   33.38(In.)
Flow top width inside pipe =   27.40(In.)
Critical Depth =   30.93(In.)
Pipe flow velocity =      8.66(Ft/s)
Travel time through pipe =    0.53 min.
Time of concentration (TC) =    21.62 min.


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Process from Point/Station      810.000 to Point/Station      811.500
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     49.300(Ac.)
Runoff from this stream =     65.520(CFS)
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Time of concentration =   21.62 min.
Rainfall intensity =     1.508(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station      850.000 to Point/Station      851.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   820.000(Ft.)
Top (of initial area) elevation =  1698.000(Ft.)
Bottom (of initial area) elevation =  1670.000(Ft.)
Difference in elevation =    28.000(Ft.)
Slope =    0.03415  s(percent)=       3.41
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.245 min.
Rainfall intensity =      1.827(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.804
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     14.551(CFS)
Total initial stream area =        9.900(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      850.000 to Point/Station      851.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      9.900(Ac.)
Runoff from this stream =     14.551(CFS)
Time of concentration =   15.25 min.
Rainfall intensity =     1.827(In/Hr)


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Process from Point/Station      852.000 to Point/Station      851.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   784.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1670.000(Ft.)
Difference in elevation =    34.000(Ft.)
Slope =    0.04337  s(percent)=       4.34
```

```
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.275 min.
Rainfall intensity =      1.894(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.807
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     13.614(CFS)
Total initial stream area =        8.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      852.000 to Point/Station      851.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      8.900(Ac.)
Runoff from this stream =     13.614(CFS)
Time of concentration =   14.27 min.
Rainfall intensity =     1.894(In/Hr)
Summary of stream data:

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


1       14.551     15.25                1.827
2       13.614     14.27                1.894
Largest stream flow has longer time of concentration
Qp =     14.551 + sum of
          Qb         Ia/Ib
          13.614 *    0.964 =     13.130
Qp =     27.681

Total of 2 streams to confluence:
Flow rates before confluence point:
      14.551      13.614
Area of streams before confluence:
        9.900        8.900
Results of confluence:
Total flow rate =     27.681(CFS)
Time of concentration =    15.245 min.
Effective stream area after confluence =     18.800(Ac.)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      851.000 to Point/Station      853.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1670.000(Ft.)
End of natural channel elevation =   1664.000(Ft.)
Length of natural channel  =   324.000(Ft.)
Estimated mean flow rate at midpoint of channel =     29.522(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 =   4.54(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0185
Corrected/adjusted channel slope =  0.0185
Travel time =    1.19 min.     TC =   16.44  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.801
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.753(In/Hr) for a    10.0 year storm
Subarea runoff =      3.510(CFS) for      2.500(Ac.)
Total runoff =     31.191(CFS)  Total area =      21.300(Ac.)


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Process from Point/Station      851.000 to Point/Station      853.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     21.300(Ac.)
Runoff from this stream =     31.191(CFS)
Time of concentration =   16.44 min.
Rainfall intensity =     1.753(In/Hr)


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Process from Point/Station      854.000 to Point/Station      853.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
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Initial area flow distance =   836.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1664.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.04785  s(percent)=       4.78
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.361 min.
Rainfall intensity =      1.888(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.807
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      5.487(CFS)
Total initial stream area =        3.600(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      854.000 to Point/Station      853.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.600(Ac.)
Runoff from this stream =      5.487(CFS)
Time of concentration =   14.36 min.
Rainfall intensity =     1.888(In/Hr)
Summary of stream data:

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


1       31.191     16.44                1.753
2        5.487     14.36                1.888
Largest stream flow has longer time of concentration
Qp =     31.191 + sum of
          Qb         Ia/Ib
           5.487 *    0.928 =      5.094
Qp =     36.285

Total of 2 streams to confluence:
Flow rates before confluence point:
      31.191       5.487
Area of streams before confluence:
       21.300        3.600
Results of confluence:
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```
Total flow rate =     36.285(CFS)
Time of concentration =    16.435 min.
Effective stream area after confluence =     24.900(Ac.)


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Process from Point/Station      853.000 to Point/Station      855.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1664.000(Ft.)
End of natural channel elevation =   1650.000(Ft.)
Length of natural channel  =   425.000(Ft.)
Estimated mean flow rate at midpoint of channel =     37.378(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.46(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0329
Corrected/adjusted channel slope =  0.0329
Travel time =    1.10 min.     TC =   17.53  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.798
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.692(In/Hr) for a    10.0 year storm
Subarea runoff =      2.024(CFS) for      1.500(Ac.)
Total runoff =     38.310(CFS)  Total area =      26.400(Ac.)


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Process from Point/Station      853.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     26.400(Ac.)
Runoff from this stream =     38.310(CFS)
Time of concentration =   17.53 min.
Rainfall intensity =     1.692(In/Hr)
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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      856.000 to Point/Station      855.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1698.000(Ft.)
Bottom (of initial area) elevation =  1650.000(Ft.)
Difference in elevation =    48.000(Ft.)
Slope =    0.04800  s(percent)=       4.80
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.418 min.
Rainfall intensity =      1.816(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.804
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     14.597(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      856.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =     10.000(Ac.)
Runoff from this stream =     14.597(CFS)
Time of concentration =   15.42 min.
Rainfall intensity =     1.816(In/Hr)


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Process from Point/Station      857.000 to Point/Station      855.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   679.000(Ft.)
Top (of initial area) elevation =  1694.000(Ft.)
Bottom (of initial area) elevation =  1650.000(Ft.)
Difference in elevation =    44.000(Ft.)
Slope =    0.06480  s(percent)=       6.48
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.437 min.
Rainfall intensity =      2.044(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
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Runoff Coefficient = 0.814
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      3.990(CFS)
Total initial stream area =        2.400(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      857.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 3
Stream flow area =      2.400(Ac.)
Runoff from this stream =      3.990(CFS)
Time of concentration =   12.44 min.
Rainfall intensity =     2.044(In/Hr)
Summary of stream data:

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


1       38.310     17.53                1.692
2       14.597     15.42                1.816
3        3.990     12.44                2.044
Largest stream flow has longer time of concentration
Qp =     38.310 + sum of
          Qb         Ia/Ib
          14.597 *    0.932 =     13.602
          Qb         Ia/Ib
           3.990 *    0.828 =      3.304
Qp =     55.215

Total of 3 streams to confluence:
Flow rates before confluence point:
      38.310      14.597       3.990
Area of streams before confluence:
       26.400       10.000        2.400
Results of confluence:
Total flow rate =     55.215(CFS)
Time of concentration =    17.531 min.
Effective stream area after confluence =     38.800(Ac.)


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Process from Point/Station      855.000 to Point/Station      858.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of natural channel elevation =   1650.000(Ft.)
End of natural channel elevation =   1643.000(Ft.)
Length of natural channel  =   244.000(Ft.)
Estimated mean flow rate at midpoint of channel =     56.069(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.78(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0287
Corrected/adjusted channel slope =  0.0287
Travel time =    0.60 min.     TC =   18.13  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.796
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.661(In/Hr) for a    10.0 year storm
Subarea runoff =      1.586(CFS) for      1.200(Ac.)
Total runoff =     56.802(CFS)  Total area =      40.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      855.000 to Point/Station      858.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     40.000(Ac.)
Runoff from this stream =     56.802(CFS)
Time of concentration =   18.13 min.
Rainfall intensity =     1.661(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      859.000 to Point/Station      858.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   816.000(Ft.)
```

```
Top (of initial area) elevation =  1693.000(Ft.)
Bottom (of initial area) elevation =  1643.000(Ft.)
Difference in elevation =    50.000(Ft.)
Slope =    0.06127  s(percent)=       6.13
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.536 min.
Rainfall intensity =      1.951(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.810
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.530(CFS)
Total initial stream area =        5.400(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      859.000 to Point/Station      858.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      5.400(Ac.)
Runoff from this stream =      8.530(CFS)
Time of concentration =   13.54 min.
Rainfall intensity =     1.951(In/Hr)
Summary of stream data:

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


1       56.802     18.13                 1.661
2        8.530     13.54                 1.951
Largest stream flow has longer time of concentration
Qp =     56.802 + sum of
          Qb         Ia/Ib
           8.530 *    0.852 =      7.264
Qp =     64.065

Total of 2 streams to confluence:
Flow rates before confluence point:
      56.802       8.530
Area of streams before confluence:
       40.000        5.400
Results of confluence:
Total flow rate =     64.065(CFS)
```

```
Time of concentration =    18.131 min.
Effective stream area after confluence =     45.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      858.000 to Point/Station      860.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1643.000(Ft.)
End of natural channel elevation =   1628.000(Ft.)
Length of natural channel  =   645.000(Ft.)
Estimated mean flow rate at midpoint of channel =     69.780(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.50(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0233
Corrected/adjusted channel slope =  0.0233
Travel time =    1.65 min.     TC =   19.78  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.791
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.583(In/Hr) for a    10.0 year storm
Subarea runoff =     10.149(CFS) for      8.100(Ac.)
Total runoff =     74.215(CFS)  Total area =      53.500(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      860.000 to Point/Station      861.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1628.000(Ft.)
End of natural channel elevation =   1600.300(Ft.)
Length of natural channel  =  1000.000(Ft.)
Estimated mean flow rate at midpoint of channel =     82.815(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
```

```
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.47(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0277
Corrected/adjusted channel slope =  0.0277
Travel time =    2.23 min.     TC =   22.02  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.786
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      1.493(In/Hr) for a    10.0 year storm
Subarea runoff =     14.544(CFS) for     12.400(Ac.)
Total runoff =     88.758(CFS)  Total area =      65.900(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      861.000 to Point/Station      811.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1585.000(Ft.)
Downstream point/station elevation =  1579.000(Ft.)
Pipe length  =   331.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    88.758(CFS)
Nearest computed pipe diameter  =     36.00(In.)
Calculated individual pipe flow  =    88.758(CFS)
Normal flow depth in pipe =   29.16(In.)
Flow top width inside pipe =   28.25(In.)
Critical Depth =   34.06(In.)
Pipe flow velocity =     14.48(Ft/s)
Travel time through pipe =    0.38 min.
Time of concentration (TC) =    22.40 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      861.000 to Point/Station      811.500
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     65.900(Ac.)
Runoff from this stream =     88.758(CFS)
```

Time of concentration = 22.40 min.
Rainfall intensity = 1.479(In/Hr)
Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	65.520	21.62	1.508
2	88.758	22.40	1.479

Largest stream flow has longer time of concentration
Qp = 88.758 + sum of
  Qb Ia/Ib
  65.520 * 0.981 = 64.265
Qp = 153.023

Total of 2 main streams to confluence:
Flow rates before confluence point:
  65.520 88.758
Area of streams before confluence:
  49.300 65.900

Results of confluence:
Total flow rate = 153.023(CFS)
Time of concentration = 22.397 min.
Effective stream area after confluence = 115.200(Ac.)
End of computations, total study area = 115.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.988
Area averaged RI index number = 85.8

100-YEAR OFFSITE HYDROLOGY (RATIONAL METHOD)

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:PROP100OFFSITE.out

22-0192 - HILLWOOD SEATON
OFFSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100OFFSITE.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

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

Initial area flow distance = 264.000(Ft.)
Top (of initial area) elevation = 1584.000(Ft.)

```
Bottom (of initial area) elevation =  1566.200(Ft.)
Difference in elevation =    17.800(Ft.)
Slope =    0.06742  s(percent)=       6.74
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.456 min.
Rainfall intensity =      3.966(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.853
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      2.708(CFS)
Total initial stream area =        0.800(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      301.000 to Point/Station      302.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1566.200(Ft.)
End of natural channel elevation =   1561.700(Ft.)
Length of natural channel  =   294.000(Ft.)
Estimated mean flow rate at midpoint of channel =      4.061(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 =   2.49(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0153
Corrected/adjusted channel slope =  0.0153
Travel time =    1.97 min.     TC =   10.43  min.


 Adding area flow to channel
USER INPUT of soil data for subarea
Runoff Coefficient = 0.770
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 =  1.000; Impervious fraction =  0.000
Rainfall intensity =      3.535(In/Hr) for a   100.0 year storm
```

```
Subarea runoff =      2.176(CFS) for      0.800(Ac.)
Total runoff =      4.884(CFS)  Total area =       1.600(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      302.000 to Point/Station      303.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1558.100(Ft.)
Downstream point/station elevation =  1556.000(Ft.)
Pipe length  =   695.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.884(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     4.884(CFS)
Normal flow depth in pipe =   12.70(In.)
Flow top width inside pipe =   16.41(In.)
Critical Depth =   10.20(In.)
Pipe flow velocity =      3.67(Ft/s)
Travel time through pipe =    3.16 min.
Time of concentration (TC) =    13.59 min.
End of computations, total study area =            1.60 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  77.5
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:EXOFFSITECAJALCORUNON.out

22-0192 - HILLWOOD SEATON
OFFSITE RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: EXOFFSITECAJALCORUNON.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 602.000 to Point/Station 603.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 594.000(Ft.)
Top (of initial area) elevation = 1636.500(Ft.)

Bottom (of initial area) elevation = 1612.500(Ft.)
Difference in elevation =   24.000(Ft.)
Slope =   0.04040 s(percent)=   4.04
TC = k(0.480)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   11.735 min.
Rainfall intensity =   3.312(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1 Acre Lot)
Runoff Coefficient = 0.790
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 = 0.800; Impervious fraction = 0.200
Initial subarea runoff =   1.046(CFS)
Total initial stream area =   0.400(Ac.)
Pervious area fraction = 0.800
End of computations, total study area =   0.40 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.800
Area averaged RI index number = 69.0

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:PROP100OFFSITEST2.out

22-0192 - HILLWOOD SEATON
OFFSITE STREET RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100OFFSITE-ST2.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 520.000 to Point/Station 521.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 935.000(Ft.)
Top (of initial area) elevation = 1612.400(Ft.)

```
Bottom (of initial area) elevation =  1577.200(Ft.)
Difference in elevation =    35.200(Ft.)
Slope =    0.03765  s(percent)=       3.76
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.919 min.
Rainfall intensity =      3.852(In/Hr) for a   100.0 year storm
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
Initial subarea runoff =      8.208(CFS)
Total initial stream area =        2.400(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      521.000 to Point/Station      522.000
**** STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of street segment elevation =  1577.200(Ft.)
End of street segment elevation =  1559.600(Ft.)
Length of street segment  =   981.000(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  76.000(Ft.)
Distance from crown to crossfall grade break  =  74.000(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  =  34.000(Ft.)
Slope from curb to property line (v/hz) =   0.020
Gutter width =   2.000(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0150
 Manning's N from grade break to crown =  0.0150
Estimated mean flow rate at midpoint of street =     12.987(CFS)
Depth of flow =   0.473(Ft.), Average velocity =   4.159(Ft/s)
Streetflow hydraulics at midpoint of street travel:
Halfstreet flow width =  17.308(Ft.)
Flow velocity =   4.16(Ft/s)
Travel time =    3.93 min.     TC =   12.85  min.
 Adding area flow to street
COMMERCIAL subarea type
Runoff Coefficient = 0.886
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 =      3.151(In/Hr) for a   100.0 year storm
Subarea runoff =      9.488(CFS) for      3.400(Ac.)
Total runoff =     17.695(CFS)  Total area =       5.800(Ac.)
Street flow at end of street =     17.695(CFS)
Half street flow at end of street =     17.695(CFS)
Depth of flow =   0.522(Ft.), Average velocity =   4.374(Ft/s)
Warning: depth of flow exceeds top of curb
Distance that curb overflow reaches into property =    1.10(Ft.)
Flow width (from curb towards crown)=  19.765(Ft.)
End of computations, total study area =            5.80 (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
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 03/07/24
File:PROP100OFFSITEST3.out

22-0192 - HILLWOOD SEATON
OFFSITE STREET RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: PROP100OFFSITE-ST3.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 530.000 to Point/Station 531.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 315.000(Ft.)
Top (of initial area) elevation = 1565.200(Ft.)

Bottom (of initial area) elevation = 1561.900(Ft.)
Difference in elevation =   3.300(Ft.)
Slope =   0.01048 s(percent)=   1.05
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   7.454 min.
Rainfall intensity =   4.251(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 =   1.511(CFS)
Total initial stream area =   0.400(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =   0.40 (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

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2018 Version 9.0
Rational Hydrology Study Date: 05/08/24
File:EX100PARKOFFSITETOTAL.out

22-0192 - HILLWOOD SEATON PARK
OFFSITE - RATIONAL METHOD HYDROLOGY
100 YEAR STORM EVENT
FN: EX100PARKOFFSITETOTAL.OUT RSB

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

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

Program License Serial Number 6586

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 [Woodcrest] area used.
10 year storm 10 minute intensity = 2.300(In/Hr)
10 year storm 60 minute intensity = 0.860(In/Hr)
100 year storm 10 minute intensity = 3.620(In/Hr)
100 year storm 60 minute intensity = 1.350(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.350(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 700.000 to Point/Station 701.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 1000.000(Ft.)
Top (of initial area) elevation = 1652.000(Ft.)

```
Bottom (of initial area) elevation =  1599.900(Ft.)
Difference in elevation =    52.100(Ft.)
Slope =    0.05210  s(percent)=       5.21
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.167 min.
Rainfall intensity =      2.876(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.837
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     13.719(CFS)
Total initial stream area =        5.700(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      802.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1592.000(Ft.)
Downstream point/station elevation =  1590.000(Ft.)
Pipe length  =   110.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    13.719(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =    13.719(CFS)
Normal flow depth in pipe =   14.27(In.)
Flow top width inside pipe =   14.59(In.)
Critical Depth =   16.48(In.)
Pipe flow velocity =      9.13(Ft/s)
Travel time through pipe =    0.20 min.
Time of concentration (TC) =    15.37 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      701.000 to Point/Station      802.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =      5.700(Ac.)
Runoff from this stream =     13.719(CFS)
Time of concentration =   15.37 min.
Rainfall intensity =     2.855(In/Hr)


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Process from Point/Station      800.000 to Point/Station      801.000
```

**** INITIAL AREA EVALUATION ****

Initial area flow distance = 908.000(Ft.)
Top (of initial area) elevation = 1673.000(Ft.)
Bottom (of initial area) elevation = 1616.000(Ft.)
Difference in elevation = 57.000(Ft.)
Slope = 0.06278 s(percent)= 6.28
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.059 min.
Rainfall intensity = 2.999(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.839
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) = 86.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 17.114(CFS)
Total initial stream area = 6.800(Ac.)
Pervious area fraction = 1.000

++
Process from Point/Station 801.000 to Point/Station 802.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****

Top of natural channel elevation = 1616.000(Ft.)
End of natural channel elevation = 1601.600(Ft.)
Length of natural channel = 479.000(Ft.)
Estimated mean flow rate at midpoint of channel = 20.386(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 = 5.22(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
Normal channel slope = 0.0301
Corrected/adjusted channel slope = 0.0301
Travel time = 1.53 min. TC = 15.59 min.

Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.836
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.833(In/Hr) for a   100.0 year storm
Subarea runoff =      6.158(CFS) for      2.600(Ac.)
Total runoff =     23.272(CFS)  Total area =       9.400(Ac.)


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Process from Point/Station      801.000 to Point/Station      802.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      9.400(Ac.)
Runoff from this stream =     23.272(CFS)
Time of concentration =   15.59 min.
Rainfall intensity =     2.833(In/Hr)
Summary of stream data:

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


1       13.719     15.37                2.855
2       23.272     15.59                2.833
Largest stream flow has longer time of concentration
Qp =     23.272 + sum of
          Qb         Ia/Ib
          13.719 *    0.992 =     13.613
Qp =     36.885

Total of 2 streams to confluence:
Flow rates before confluence point:
      13.719      23.272
Area of streams before confluence:
        5.700        9.400
Results of confluence:
Total flow rate =     36.885(CFS)
Time of concentration =    15.588 min.
Effective stream area after confluence =     15.100(Ac.)


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Process from Point/Station      802.000 to Point/Station      802.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1590.000(Ft.)
Downstream point/station elevation =  1578.700(Ft.)
Pipe length  =   502.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    36.885(CFS)
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Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    36.885(CFS)
Normal flow depth in pipe =   18.16(In.)
Flow top width inside pipe =   25.34(In.)
Critical Depth =   24.53(In.)
Pipe flow velocity =     12.96(Ft/s)
Travel time through pipe =    0.65 min.
Time of concentration (TC) =    16.23 min.


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Process from Point/Station      802.000 to Point/Station      802.500
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     15.100(Ac.)
Runoff from this stream =     36.885(CFS)
Time of concentration =   16.23 min.
Rainfall intensity =     2.771(In/Hr)


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Process from Point/Station      510.000 to Point/Station      511.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   943.000(Ft.)
Top (of initial area) elevation =  1605.600(Ft.)
Bottom (of initial area) elevation =  1590.100(Ft.)
Difference in elevation =    15.500(Ft.)
Slope =    0.01644  s(percent)=       1.64
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.562 min.
Rainfall intensity =      3.510(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.887
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 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 =      4.980(CFS)
Total initial stream area =        1.600(Ac.)
Pervious area fraction = 0.100


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Process from Point/Station      511.000 to Point/Station      802.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
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Upstream point/station elevation =  1582.900(Ft.)
Downstream point/station elevation =  1581.800(Ft.)
Pipe length  =    53.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.980(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     4.980(CFS)
Normal flow depth in pipe =    9.57(In.)
Flow top width inside pipe =    9.64(In.)
Critical Depth =   10.99(In.)
Pipe flow velocity =      7.41(Ft/s)
Travel time through pipe =    0.12 min.
Time of concentration (TC) =    10.68 min.


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Process from Point/Station      511.000 to Point/Station      802.500
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      1.600(Ac.)
Runoff from this stream =      4.980(CFS)
Time of concentration =   10.68 min.
Rainfall intensity =     3.488(In/Hr)
Summary of stream data:

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


1       36.885     16.23                2.771
2        4.980     10.68                3.488
Largest stream flow has longer time of concentration
Qp =     36.885 + sum of
          Qb         Ia/Ib
           4.980 *    0.794 =      3.956
Qp =     40.841

Total of 2 streams to confluence:
Flow rates before confluence point:
      36.885       4.980
Area of streams before confluence:
       15.100        1.600
Results of confluence:
Total flow rate =     40.841(CFS)
Time of concentration =    16.234 min.
Effective stream area after confluence =     16.700(Ac.)


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Process from Point/Station      802.500 to Point/Station      803.000
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**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
_____________________________________________________________________
Upstream point/station elevation =  1581.800(Ft.)
Downstream point/station elevation =  1581.200(Ft.)
Pipe length  =    38.50(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    40.841(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    40.841(CFS)
Normal flow depth in pipe =   23.81(In.)
Flow top width inside pipe =   17.42(In.)
Critical Depth =   25.23(In.)
Pipe flow velocity =     10.99(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =    16.29 min.


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Process from Point/Station      802.500 to Point/Station      803.000
**** CONFLUENCE OF MAIN STREAMS ****
_____________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     16.700(Ac.)
Runoff from this stream =     40.841(CFS)
Time of concentration =   16.29 min.
Rainfall intensity =     2.765(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station      804.000 to Point/Station      805.000
**** INITIAL AREA EVALUATION ****
_____________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1659.000(Ft.)
Difference in elevation =    45.000(Ft.)
Slope =    0.04500  s(percent)=       4.50
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.618 min.
Rainfall intensity =      2.830(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.836
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     21.528(CFS)
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Total initial stream area =        9.100(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      805.000 to Point/Station      806.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1659.000(Ft.)
End of natural channel elevation =   1638.000(Ft.)
Length of natural channel  =   499.000(Ft.)
Estimated mean flow rate at midpoint of channel =     25.314(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.55(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0421
Corrected/adjusted channel slope =  0.0421
Travel time =    1.27 min.     TC =   16.89  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.833
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.711(In/Hr) for a   100.0 year storm
Subarea runoff =      7.229(CFS) for      3.200(Ac.)
Total runoff =     28.758(CFS)  Total area =      12.300(Ac.)


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Process from Point/Station      805.000 to Point/Station      806.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     12.300(Ac.)
Runoff from this stream =     28.758(CFS)
Time of concentration =   16.89 min.
Rainfall intensity =     2.711(In/Hr)
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Process from Point/Station      807.000 to Point/Station      806.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   819.000(Ft.)
Top (of initial area) elevation =  1684.500(Ft.)
Bottom (of initial area) elevation =  1638.000(Ft.)
Difference in elevation =    46.500(Ft.)
Slope =    0.05678  s(percent)=       5.68
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.764 min.
Rainfall intensity =      3.034(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.840
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      7.645(CFS)
Total initial stream area =        3.000(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      807.000 to Point/Station      806.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.000(Ac.)
Runoff from this stream =      7.645(CFS)
Time of concentration =   13.76 min.
Rainfall intensity =     3.034(In/Hr)
Summary of stream data:

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


1       28.758     16.89                2.711
2        7.645     13.76                3.034
Largest stream flow has longer time of concentration
Qp =     28.758 + sum of
          Qb         Ia/Ib
           7.645 *    0.894 =      6.831
Qp =     35.589

Total of 2 streams to confluence:
Flow rates before confluence point:
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```
      28.758       7.645
Area of streams before confluence:
       12.300        3.000
Results of confluence:
Total flow rate =     35.589(CFS)
Time of concentration =    16.887 min.
Effective stream area after confluence =     15.300(Ac.)


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Process from Point/Station      806.000 to Point/Station      808.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1638.000(Ft.)
End of natural channel elevation =   1608.000(Ft.)
Length of natural channel  =   686.000(Ft.)
Estimated mean flow rate at midpoint of channel =     38.497(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.51(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0437
Corrected/adjusted channel slope =  0.0437
Travel time =    1.52 min.     TC =   18.41  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.830
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.586(In/Hr) for a   100.0 year storm
Subarea runoff =      5.367(CFS) for      2.500(Ac.)
Total runoff =     40.956(CFS)  Total area =      17.800(Ac.)


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Process from Point/Station      806.000 to Point/Station      808.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     17.800(Ac.)
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Runoff from this stream =     40.956(CFS)
Time of concentration =   18.41 min.
Rainfall intensity =     2.586(In/Hr)


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Process from Point/Station      809.000 to Point/Station      808.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   881.000(Ft.)
Top (of initial area) elevation =  1648.000(Ft.)
Bottom (of initial area) elevation =  1608.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.04540  s(percent)=       4.54
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.820 min.
Rainfall intensity =      2.913(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.838
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      9.516(CFS)
Total initial stream area =        3.900(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      809.000 to Point/Station      808.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.900(Ac.)
Runoff from this stream =      9.516(CFS)
Time of concentration =   14.82 min.
Rainfall intensity =     2.913(In/Hr)
Summary of stream data:

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


1       40.956     18.41                2.586
2        9.516     14.82                2.913
Largest stream flow has longer time of concentration
Qp =     40.956 + sum of
          Qb         Ia/Ib
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          9.516 *    0.888 =      8.446
Qp =     49.402

Total of 2 streams to confluence:
Flow rates before confluence point:
      40.956       9.516
Area of streams before confluence:
       17.800        3.900
Results of confluence:
Total flow rate =     49.402(CFS)
Time of concentration =    18.409 min.
Effective stream area after confluence =     21.700(Ac.)


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Process from Point/Station      808.000 to Point/Station      803.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1608.000(Ft.)
End of natural channel elevation =   1588.500(Ft.)
Length of natural channel  =   706.000(Ft.)
Estimated mean flow rate at midpoint of channel =     54.638(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   6.60(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0276
Corrected/adjusted channel slope =  0.0276
Travel time =    1.78 min.     TC =   20.19  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.827
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.457(In/Hr) for a   100.0 year storm
Subarea runoff =      9.348(CFS) for      4.600(Ac.)
Total runoff =     58.750(CFS)  Total area =      26.300(Ac.)


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Process from Point/Station      808.000 to Point/Station      803.000
**** CONFLUENCE OF MAIN STREAMS ****
--------------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     26.300(Ac.)
Runoff from this stream =     58.750(CFS)
Time of concentration =   20.19 min.
Rainfall intensity =     2.457(In/Hr)
Summary of stream data:

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


1       40.841     16.29                 2.765
2       58.750     20.19                 2.457
Largest stream flow has longer time of concentration
Qp =     58.750 + sum of
          Qb         Ia/Ib
          40.841 *    0.889 =     36.294
Qp =     95.044

Total of 2 main streams to confluence:
Flow rates before confluence point:
      40.841      58.750
Area of streams before confluence:
       16.700       26.300


Results of confluence:
Total flow rate =     95.044(CFS)
Time of concentration =    20.192 min.
Effective stream area after confluence  =     43.000(Ac.)


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Process from Point/Station      803.000 to Point/Station      810.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
--------------------------------------------------------------------------------
Upstream point/station elevation =  1581.200(Ft.)
Downstream point/station elevation =  1580.600(Ft.)
Pipe length  =   114.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    95.044(CFS)
Nearest computed pipe diameter  =     48.00(In.)
Calculated individual pipe flow  =    95.044(CFS)
Normal flow depth in pipe =   36.00(In.)
Flow top width inside pipe =   41.57(In.)
Critical Depth =   35.44(In.)
Pipe flow velocity =      9.40(Ft/s)
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Travel time through pipe =    0.20 min.
Time of concentration (TC) =    20.39 min.


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Process from Point/Station      803.000 to Point/Station      810.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 1
Stream flow area =     43.000(Ac.)
Runoff from this stream =     95.044(CFS)
Time of concentration =   20.39 min.
Rainfall intensity =     2.444(In/Hr)


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Process from Point/Station      811.000 to Point/Station      810.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   839.000(Ft.)
Top (of initial area) elevation =  1648.500(Ft.)
Bottom (of initial area) elevation =  1586.500(Ft.)
Difference in elevation =    62.000(Ft.)
Slope =    0.07390  s(percent)=       7.39
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.184 min.
Rainfall intensity =      3.107(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.841
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     16.464(CFS)
Total initial stream area =        6.300(Ac.)
Pervious area fraction = 1.000


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Process from Point/Station      811.000 to Point/Station      810.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 1 in normal stream number 2
Stream flow area =      6.300(Ac.)
Runoff from this stream =     16.464(CFS)
Time of concentration =   13.18 min.
Rainfall intensity =     3.107(In/Hr)
Summary of stream data:
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```
Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)


1       95.044     20.39                 2.444
2       16.464     13.18                 3.107
Largest stream flow has longer time of concentration
Qp =     95.044 + sum of
          Qb         Ia/Ib
          16.464 *    0.787 =     12.952
Qp =    107.996

Total of 2 streams to confluence:
Flow rates before confluence point:
      95.044      16.464
Area of streams before confluence:
       43.000        6.300
Results of confluence:
Total flow rate =    107.996(CFS)
Time of concentration =    20.394 min.
Effective stream area after confluence =     49.300(Ac.)


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Process from Point/Station      810.000 to Point/Station      811.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1580.600(Ft.)
Downstream point/station elevation =  1579.000(Ft.)
Pipe length  =   273.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   107.996(CFS)
Nearest computed pipe diameter  =     48.00(In.)
Calculated individual pipe flow  =   107.996(CFS)
Normal flow depth in pipe =   38.63(In.)
Flow top width inside pipe =   38.06(In.)
Critical Depth =   37.73(In.)
Pipe flow velocity =      9.98(Ft/s)
Travel time through pipe =    0.46 min.
Time of concentration (TC) =    20.85 min.


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Process from Point/Station      810.000 to Point/Station      811.500
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     49.300(Ac.)
Runoff from this stream =    107.996(CFS)
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Time of concentration =   20.85 min.
Rainfall intensity =     2.414(In/Hr)
Program is now starting with Main Stream No. 2


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Process from Point/Station      850.000 to Point/Station      851.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   820.000(Ft.)
Top (of initial area) elevation =  1698.000(Ft.)
Bottom (of initial area) elevation =  1670.000(Ft.)
Difference in elevation =    28.000(Ft.)
Slope =    0.03415  s(percent)=       3.41
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.245 min.
Rainfall intensity =      2.868(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.837
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     23.757(CFS)
Total initial stream area =        9.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      850.000 to Point/Station      851.000
**** CONFLUENCE OF MINOR STREAMS ****
______________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =      9.900(Ac.)
Runoff from this stream =     23.757(CFS)
Time of concentration =   15.25 min.
Rainfall intensity =     2.868(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      852.000 to Point/Station      851.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   784.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1670.000(Ft.)
Difference in elevation =    34.000(Ft.)
Slope =    0.04337  s(percent)=       4.34
```

```
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.275 min.
Rainfall intensity =      2.974(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.839
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     22.199(CFS)
Total initial stream area =        8.900(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      852.000 to Point/Station      851.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      8.900(Ac.)
Runoff from this stream =     22.199(CFS)
Time of concentration =   14.27 min.
Rainfall intensity =     2.974(In/Hr)
Summary of stream data:

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


1       23.757     15.25                2.868
2       22.199     14.27                2.974
Largest stream flow has longer time of concentration
Qp =     23.757 + sum of
          Qb         Ia/Ib
          22.199 *    0.964 =     21.411
Qp =     45.168

Total of 2 streams to confluence:
Flow rates before confluence point:
      23.757      22.199
Area of streams before confluence:
        9.900        8.900
Results of confluence:
Total flow rate =     45.168(CFS)
Time of concentration =    15.245 min.
Effective stream area after confluence =     18.800(Ac.)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      851.000 to Point/Station      853.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1670.000(Ft.)
End of natural channel elevation =   1664.000(Ft.)
Length of natural channel  =   324.000(Ft.)
Estimated mean flow rate at midpoint of channel =     48.171(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 =   5.21(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0185
Corrected/adjusted channel slope =  0.0185
Travel time =    1.04 min.     TC =   16.28  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.835
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.766(In/Hr) for a   100.0 year storm
Subarea runoff =      5.771(CFS) for      2.500(Ac.)
Total runoff =     50.939(CFS)  Total area =      21.300(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      851.000 to Point/Station      853.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     21.300(Ac.)
Runoff from this stream =     50.939(CFS)
Time of concentration =   16.28 min.
Rainfall intensity =     2.766(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      854.000 to Point/Station      853.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
```

```
Initial area flow distance =   836.000(Ft.)
Top (of initial area) elevation =  1704.000(Ft.)
Bottom (of initial area) elevation =  1664.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.04785  s(percent)=       4.78
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.361 min.
Rainfall intensity =      2.964(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.839
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.948(CFS)
Total initial stream area =        3.600(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      854.000 to Point/Station      853.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      3.600(Ac.)
Runoff from this stream =      8.948(CFS)
Time of concentration =   14.36 min.
Rainfall intensity =     2.964(In/Hr)
Summary of stream data:

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


1       50.939     16.28                2.766
2        8.948     14.36                2.964
Largest stream flow has longer time of concentration
Qp =     50.939 + sum of
          Qb         Ia/Ib
           8.948 *    0.933 =      8.351
Qp =     59.290

Total of 2 streams to confluence:
Flow rates before confluence point:
      50.939       8.948
Area of streams before confluence:
       21.300        3.600
Results of confluence:
```

```
Total flow rate =     59.290(CFS)
Time of concentration =    16.281 min.
Effective stream area after confluence =     24.900(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      853.000 to Point/Station      855.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1664.000(Ft.)
End of natural channel elevation =   1650.000(Ft.)
Length of natural channel  =   425.000(Ft.)
Estimated mean flow rate at midpoint of channel =     61.075(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.44(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0329
Corrected/adjusted channel slope =  0.0329
Travel time =    0.95 min.     TC =   17.23  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.833
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.681(In/Hr) for a   100.0 year storm
Subarea runoff =      3.348(CFS) for      1.500(Ac.)
Total runoff =     62.638(CFS)  Total area =      26.400(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      853.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     26.400(Ac.)
Runoff from this stream =     62.638(CFS)
Time of concentration =   17.23 min.
Rainfall intensity =     2.681(In/Hr)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      856.000 to Point/Station      855.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =  1000.000(Ft.)
Top (of initial area) elevation =  1698.000(Ft.)
Bottom (of initial area) elevation =  1650.000(Ft.)
Difference in elevation =    48.000(Ft.)
Slope =    0.04800  s(percent)=       4.80
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   15.418 min.
Rainfall intensity =      2.850(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.836
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     23.838(CFS)
Total initial stream area =       10.000(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      856.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =     10.000(Ac.)
Runoff from this stream =     23.838(CFS)
Time of concentration =   15.42 min.
Rainfall intensity =     2.850(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      857.000 to Point/Station      855.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   679.000(Ft.)
Top (of initial area) elevation =  1694.000(Ft.)
Bottom (of initial area) elevation =  1650.000(Ft.)
Difference in elevation =    44.000(Ft.)
Slope =    0.06480  s(percent)=       6.48
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.437 min.
Rainfall intensity =      3.208(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
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```
Runoff Coefficient = 0.843
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      6.490(CFS)
Total initial stream area =        2.400(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      857.000 to Point/Station      855.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 3
Stream flow area =      2.400(Ac.)
Runoff from this stream =      6.490(CFS)
Time of concentration =   12.44 min.
Rainfall intensity =     3.208(In/Hr)
Summary of stream data:

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


1       62.638     17.23                2.681
2       23.838     15.42                2.850
3        6.490     12.44                3.208
Largest stream flow has longer time of concentration
Qp =     62.638 + sum of
          Qb         Ia/Ib
          23.838 *    0.941 =     22.423
          Qb         Ia/Ib
           6.490 *    0.836 =      5.424
Qp =     90.485

Total of 3 streams to confluence:
Flow rates before confluence point:
      62.638      23.838       6.490
Area of streams before confluence:
       26.400       10.000        2.400
Results of confluence:
Total flow rate =     90.485(CFS)
Time of concentration =    17.233 min.
Effective stream area after confluence =     38.800(Ac.)


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Process from Point/Station      855.000 to Point/Station      858.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
------------------------------------------------------------------------
Top of natural channel elevation =   1650.000(Ft.)
End of natural channel elevation =   1643.000(Ft.)
Length of natural channel  =   244.000(Ft.)
Estimated mean flow rate at midpoint of channel =     91.884(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.84(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0287
Corrected/adjusted channel slope =  0.0287
Travel time =    0.52 min.     TC =   17.75  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.832
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.638(In/Hr) for a   100.0 year storm
Subarea runoff =      2.632(CFS) for      1.200(Ac.)
Total runoff =     93.117(CFS)  Total area =      40.000(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      855.000 to Point/Station      858.000
**** CONFLUENCE OF MINOR STREAMS ****
------------------------------------------------------------------------
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     40.000(Ac.)
Runoff from this stream =     93.117(CFS)
Time of concentration =   17.75 min.
Rainfall intensity =     2.638(In/Hr)


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Process from Point/Station      859.000 to Point/Station      858.000
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   816.000(Ft.)
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```
Top (of initial area) elevation =  1693.000(Ft.)
Bottom (of initial area) elevation =  1643.000(Ft.)
Difference in elevation =    50.000(Ft.)
Slope =    0.06127  s(percent)=       6.13
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.536 min.
Rainfall intensity =      3.062(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.840
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     13.896(CFS)
Total initial stream area =        5.400(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      859.000 to Point/Station      858.000
**** CONFLUENCE OF MINOR STREAMS ****
________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      5.400(Ac.)
Runoff from this stream =     13.896(CFS)
Time of concentration =   13.54 min.
Rainfall intensity =     3.062(In/Hr)
Summary of stream data:

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


1       93.117     17.75                2.638
2       13.896     13.54                3.062
Largest stream flow has longer time of concentration
Qp =     93.117 + sum of
          Qb         Ia/Ib
          13.896 *    0.861 =     11.971
Qp =    105.088

Total of 2 streams to confluence:
Flow rates before confluence point:
      93.117      13.896
Area of streams before confluence:
       40.000        5.400
Results of confluence:
Total flow rate =    105.088(CFS)
```

```
Time of concentration =    17.752 min.
Effective stream area after confluence =     45.400(Ac.)


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Process from Point/Station      858.000 to Point/Station      860.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1643.000(Ft.)
End of natural channel elevation =   1628.000(Ft.)
Length of natural channel  =   645.000(Ft.)
Estimated mean flow rate at midpoint of channel =    114.463(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow =   7.54(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0233
Corrected/adjusted channel slope =  0.0233
Travel time =    1.43 min.     TC =   19.18  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.829
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.528(In/Hr) for a   100.0 year storm
Subarea runoff =     16.972(CFS) for      8.100(Ac.)
Total runoff =    122.060(CFS)  Total area =      53.500(Ac.)


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Process from Point/Station      860.000 to Point/Station      861.000
**** NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION ****
________________________________________________________________________
Top of natural channel elevation =   1628.000(Ft.)
End of natural channel elevation =   1600.300(Ft.)
Length of natural channel  =  1000.000(Ft.)
Estimated mean flow rate at midpoint of channel =    136.206(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 =   8.67(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
        Normal channel slope =  0.0277
Corrected/adjusted channel slope =  0.0277
Travel time =    1.92 min.     TC =   21.10  min.


 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.825
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)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.399(In/Hr) for a   100.0 year storm
Subarea runoff =     24.548(CFS) for     12.400(Ac.)
Total runoff =    146.608(CFS)  Total area =      65.900(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      861.000 to Point/Station      811.500
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1585.000(Ft.)
Downstream point/station elevation =  1579.000(Ft.)
Pipe length  =   331.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =   146.608(CFS)
Nearest computed pipe diameter  =     45.00(In.)
Calculated individual pipe flow  =   146.608(CFS)
Normal flow depth in pipe =   33.38(In.)
Flow top width inside pipe =   39.39(In.)
Critical Depth =   42.06(In.)
Pipe flow velocity =     16.68(Ft/s)
Travel time through pipe =    0.33 min.
Time of concentration (TC) =    21.43 min.


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Process from Point/Station      861.000 to Point/Station      811.500
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     65.900(Ac.)
Runoff from this stream =    146.608(CFS)
```

```
Time of concentration =   21.43 min.
Rainfall intensity =     2.378(In/Hr)
Summary of stream data:

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


1      107.996     20.85                 2.414
2      146.608     21.43                 2.378
Largest stream flow has longer time of concentration
Qp =    146.608 + sum of
          Qb         Ia/Ib
         107.996 *    0.985 =    106.380
Qp =    252.988

Total of 2 main streams to confluence:
Flow rates before confluence point:
     107.996     146.608
Area of streams before confluence:
       49.300       65.900

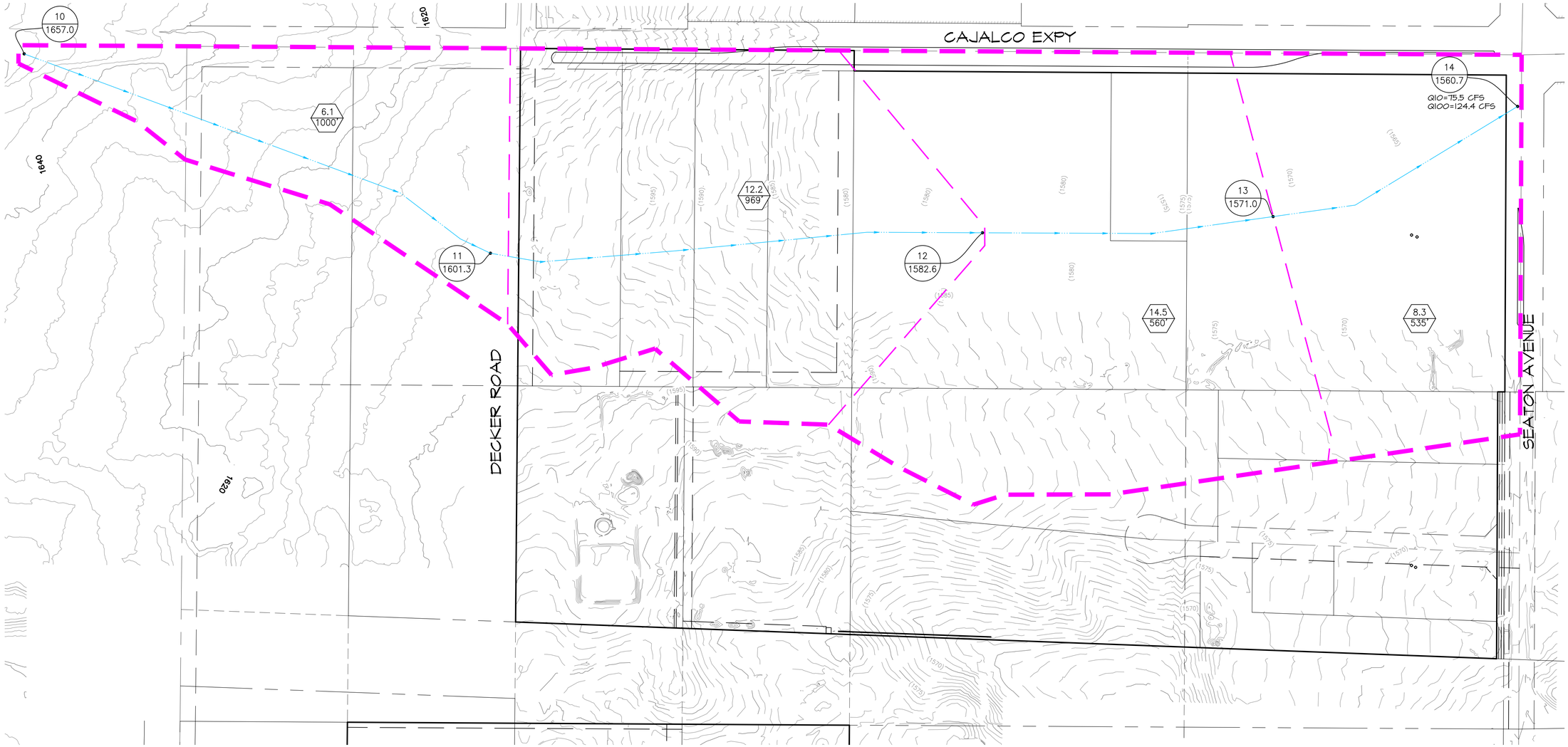

Results of confluence:
Total flow rate =    252.988(CFS)
Time of concentration =    21.430 min.
Effective stream area after confluence  =    115.200(Ac.)
End of computations, total study area =          115.20 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.988
Area averaged RI index number =  85.8
```

RATIONAL METHOD HYDROLOGY MAPS

LEGEND

- ONSITE DRAINAGE MANAGEMENT BOUNDARY
- ONSITE DRAINAGE MANAGEMENT SUB-AREA
- OFFSITE DRAINAGE MANAGEMENT BOUNDARY
- OFFSITE DRAINAGE MANAGEMENT SUB-AREA
- FLOW DIRECTION
- SD — STORM DRAIN
- 101 / 15xx — NODE DESIGNATION / NODE ELEVATION
- *15XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)





1" = 100'

50 0 100 200 300

RIVERSIDE COUNTY

RATIONAL METHOD HYDROLOGY MAP
PPT220050 CAJALCO COMMERCE CENTER
EXISTING HYDROLOGY - INDUSTRIAL SITE

SCALE:	1"=80'
DATE:	5/10/24
DESIGNED:	RSB
CHECKED:	SKK
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	22-0192
SHEET	1
OF	5 SHEETS
DWG. NO.	

H:\2022\22-0192\DRAINAGE\HYD\DWG FOLDER\22-0192-PHYD-RATIONAL.DWG 3/19/2024 4:47:43 PM

BERECYAB

LEGEND

- ONSITE DRAINAGE MANAGEMENT BOUNDARY
- ONSITE DRAINAGE MANAGEMENT SUB-AREA
- OFFSITE DRAINAGE MANAGEMENT BOUNDARY
- OFFSITE DRAINAGE MANAGEMENT SUB-AREA
- FLOW DIRECTION
- SD — STORM DRAIN
- 101 / 15xx — NODE DESIGNATION / NODE ELEVATION
- *15XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)

CAJALCO EXPY

PROPOSED EXTENSION OF MDP LATERAL E-9.1

SD CONNECT TO LAT E-9.1, IP200029
Q100=45 CFS
CAJALCO EXPY STA 57+09.79
APPROX. 2,010'

DMA-C
0.4 ACRES

DMA-C
Q10=0.6 CFS
Q100=1.0 CFS

DMA-D
Q10=12.0 CFS
Q100=19.2 CFS

DMA-A
Q10=63.0 CFS
Q100=114.6 CFS

DMA-A
44 ACRES

DMA-D
6.2 ACRES

DMA-B
0.8 ACRES

PROPOSED UNDERGROUND STORAGE CHAMBER

PROPOSED LIFT STATION

PROPOSED 66" LINE C

PROPOSED PUBLIC "B" LINE B

PROPOSED 12" LINE A

DECKER ROAD

SEATON AVENUE

520 / 1612.4
602 / 1636.5
603 / 1612.5
521 / 1577.2
522 / 1559.6
530 / 1565.2
531 / 1561.9
100 / 1584.1
101 / 1580.1 / *1576.4
102 / *1574.8
103 / *1563.2
104
105 / *1546.2
106
107 / *1532.6
200 / 1584.1
201 / 1570.8 / *1561.4
202 / *1559.8
203
204 / *1558.7
205
206 / *1557.3
207
300 / 1584.0
301 / 1566.2
302 / 1565.5 / *1564.3
303 / *1556.0

0.4 / 594'
2.4 / 935'
1.3
3.4 / 981'
9.1 / 800'
9.6 / 781'
10.6
5.6
5.8
0.4 / 315'
2.0
0.8 / 264'
0.7 / 80'

N
W WEBB E
S

1" = 80'
40 0 80 160 240

RIVERSIDE COUNTY

RATIONAL METHOD HYDROLOGY MAP
PPT220050 CAJALCO COMMERCE CENTER
PROP ONSITE HYDROLOGY - INDUSTRIAL SITE

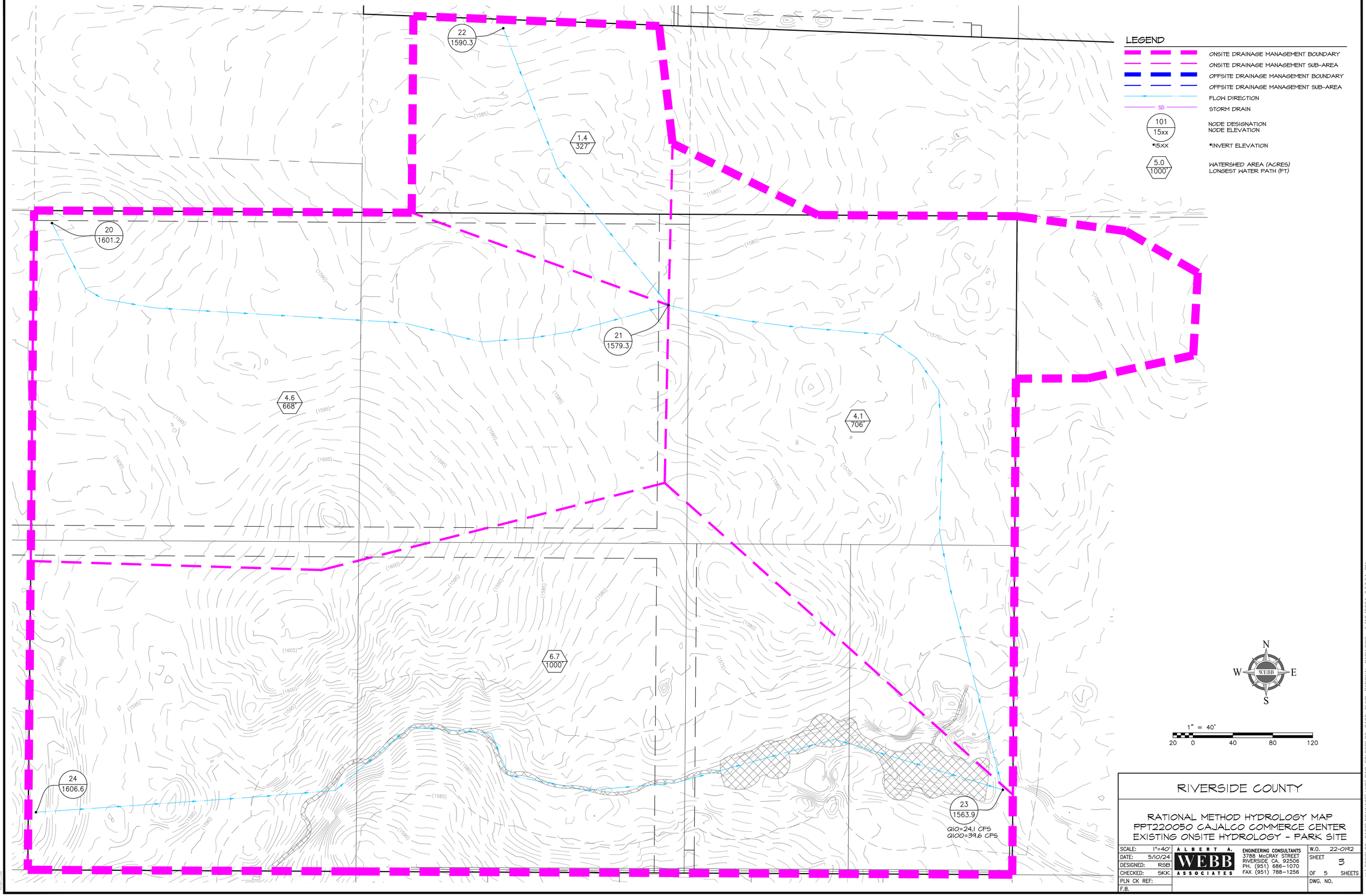
SCALE:	1"=80'
DATE:	5/10/24
DESIGNED:	RSB
CHECKED:	SKK
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	22-0192
SHEET	2
OF	5 SHEETS
DWG. NO.	

H:\2022\22-0192\DRAINAGE\HYD\DWG FOLDER\22-0192-PHYD-RATIONAL.DWG 3/19/2024 4:47:43 PM

REVISED 4-8



RIVERSIDE COUNTY

RATIONAL METHOD HYDROLOGY MAP
PPT220050 CAJALCO COMMERCE CENTER
EXISTING ONSITE HYDROLOGY - PARK SITE

SCALE:	1"=40'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	5/10/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 3
DESIGNED:	RSB		OF 5 SHEETS
CHECKED:	SKK		
PLN CK REF:			DWG. NO.
F.B.			

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BDEECCAB

LEGEND

- ONSITE DRAINAGE MANAGEMENT BOUNDARY
- OFFSITE DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- SD — STORM DRAIN
- 101 / 15xx — NODE DESIGNATION / NODE ELEVATION
- *15XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)

PROPOSED 4' EARTHEN SWALE

PROPOSED CB110 INLET

910 / 1590.3

900 / 1599.4

920 / 1589.3

932 / 1584.0

1.4 / 483'

4.7 / 579'

DMA E-1 4.7 AC

2.1 / 307'

811.5 / —

*1579.0 | USER INPUT Q FROM NODE 811.5 ON SHEET 5

PROPOSED 66" LINE C

DECKER ROAD

911 / 1578.4

Q10=7.8 CFS
Q100=12.8 CFS

DMA W-1 5.0 AC

12 STALLS

901 / 1587.8

*1586.0

75 STALLS

921 / 1586.0

*1584.5

922 / 1583.6

*1578.6
Q10=2.2 CFS
Q100=3.6 CFS

48"SD

PROPOSED 48" LINE D FOR OFFSITE FLOWS

902 / 1584.0

*1579.0
Q10=10.3 CFS
Q100=16.9 CFS

812 / —

*1578.2

1.2 / 296'

DMA E-2 1.2 AC

930 / 1585.3

1.8 / 481'

DMA E-3 3.2 AC

Q10=5.6 CFS
Q100=9.1 CFS

931 / 1573.6

PROPOSED 22' CONCRETE CHANNEL FOR OFFSITE FLOWS

904 / 1586.0

*1584.1

2.9 / 235'

813 / —

*1577.1

PROPOSED 3-12'X12' RCB FOR OFFSITE FLOWS

815 / —

*1575.2

2.0 / 568'

DMA E-5 2.0 AC

816 / 1563.9

Q10=1224.4 CFS
Q100=1227.1 CFS

942 / 1564.2

*1564.2
Q10=1.1 CFS
Q100=1.8 CFS

814 / —

*1578.9
USER-INPUT Q FROM PRORATED UNIT HYDROGRAPH Q=1110.5 CFS

903 / 1597.3

940 / 1591.3

0.6 / 603'

DMA E-4 0.6 AC

941 / 1566.3

*1564.3

N
W WEBB E
S

1" = 40'
20 0 40 80 120

RIVERSIDE COUNTY

RATIONAL METHOD HYDROLOGY MAP
PPT220050 CAJALCO COMMERCE CENTER
PROP ONSITE HYDROLOGY - PARK SITE

SCALE:	1"=40'	W.O.	22-0192
DATE:	5/10/24	SHEET	4
DESIGNED:	RSB	OF	5 SHEETS
CHECKED:	SKK		
PLN CK REF:		DWG. NO.	
F.B.			

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

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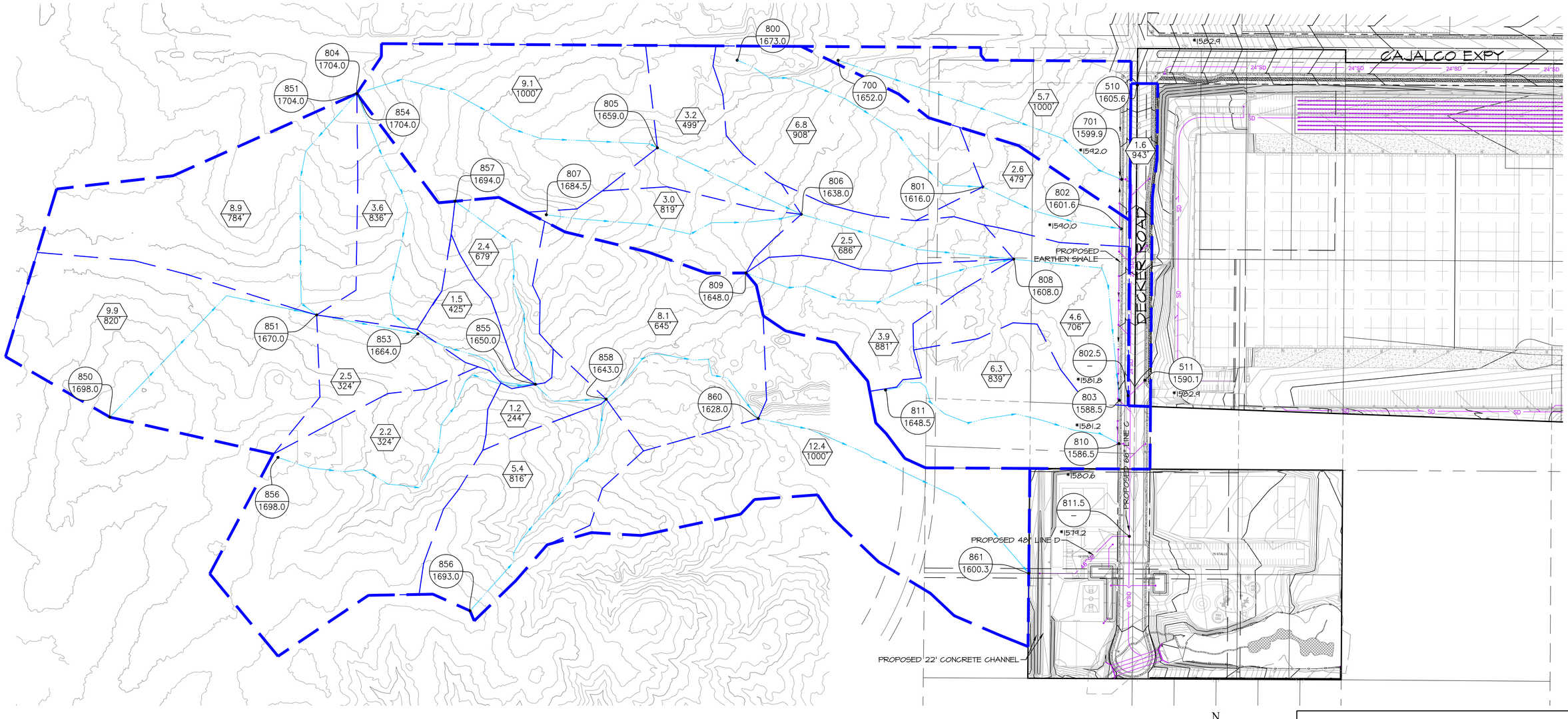
LEGEND

- ONSITE DRAINAGE MANAGEMENT BOUNDARY
- OFFSITE DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- SD — STORM DRAIN
- 101 / 15xx — NODE DESIGNATION / NODE ELEVATION
- *15XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)



N
W WEBB E
S

1" = 150'
75 0 150 300 450

RIVERSIDE COUNTY

RATIONAL METHOD HYDROLOGY MAP
PPT220050 CAJALCO COMMERCE CENTER
OFFSITE HYDROLOGY

SCALE:	1"=150'	ALBERT A. WEBB ASSOCIATES ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 22-0192
DATE:	5/10/24		SHEET 5
DESIGNED:	RSB		OF 5 SHEETS
CHECKED:	SKK		
PLN CK REF:			DWG. NO.
F.B.			

H:\2022\22-0192\DRAINAGE\HYD\DWG FOLDER\22-0192-PHYD-RATIONAL PARK.DWG 5/10/2024 3:53:51 PM

XREFCAB

EXISTING CONDITION UNIT HYDROGRAPHS

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/06/24 File: ONSITEPRE1100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - CAJALCO COMMERCE CENTER
INDUSTRIAL UNIT HYDROGRAPH ANALYSIS
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPRE.OUT- RSB

Drainage Area = 41.10(Ac.) = 0.064 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 41.10(Ac.) = 0.064 Sq. Mi.
Length along longest watercourse = 3070.00(Ft.)
Length along longest watercourse measured to centroid = 1205.00(Ft.)
Length along longest watercourse = 0.581 Mi.
Length along longest watercourse measured to centroid = 0.228 Mi.
Difference in elevation = 96.00(Ft.)
Slope along watercourse = 165.1075 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.127 Hr.
Lag time = 7.60 Min.
25% of lag time = 1.90 Min.
40% of lag time = 3.04 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]
       41.10            0.50                  20.55

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       41.10            1.30                  53.43

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =   99.96 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    41.100           86.00         0.000
 Total Area Entered =     41.10(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
86.0  86.0      0.176     0.000        0.176       1.000      0.176
                                                 Sum (F) =   0.176
Area averaged mean soil loss (F) (In/Hr) =  0.176
Minimum soil loss rate ((In/Hr)) =  0.088
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         65.792          9.576              3.967
    2   0.167        131.585         37.753             15.638
    3   0.250        197.377         24.597             10.188
    4   0.333        263.170          9.467              3.921
    5   0.417        328.962          5.729              2.373
    6   0.500        394.755          3.845              1.593
```

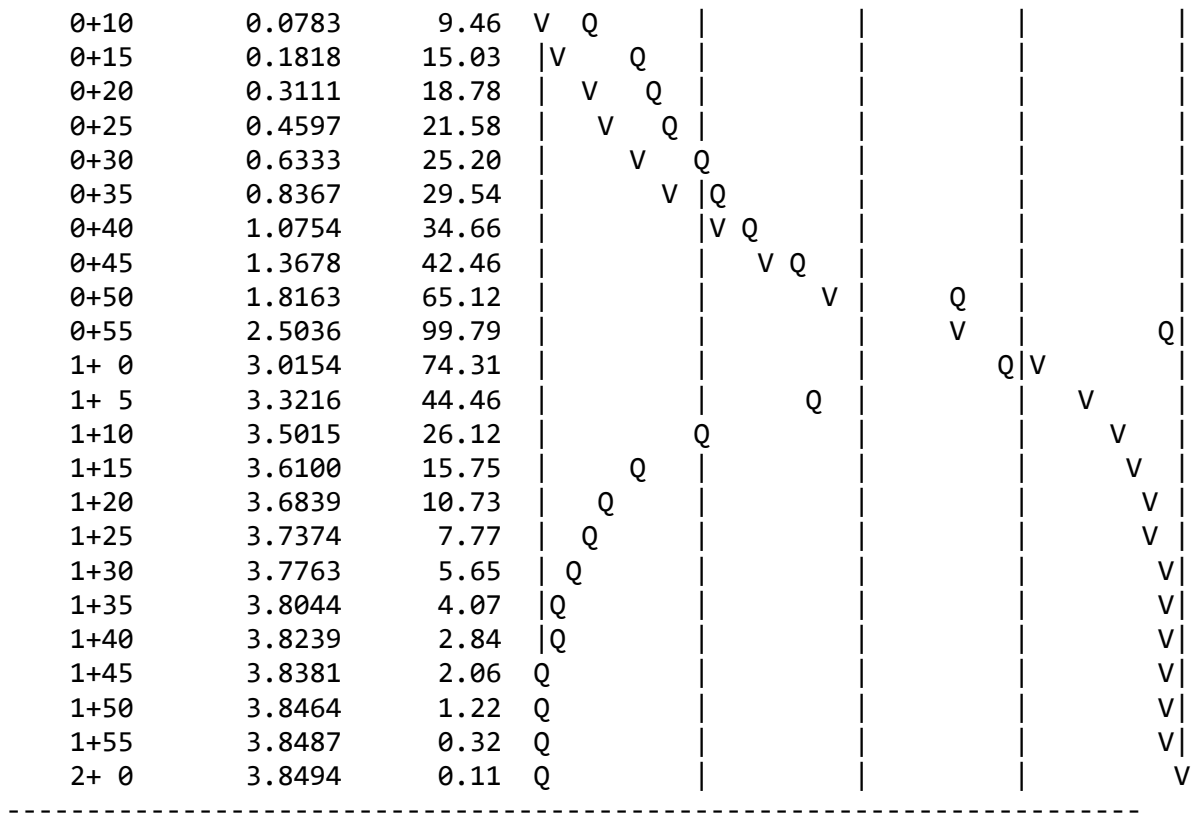
```
           7   0.583        460.547          2.613              1.082
           8   0.667        526.340          1.980              0.820
           9   0.750        592.132          1.488              0.616
          10   0.833        657.925          1.097              0.455
          11   0.917        723.717          0.762              0.315
          12   1.000        789.509          0.658              0.273
          13   1.083        855.302          0.434              0.180
                                    Sum = 100.000   Sum=      41.421
-----------------------------------------------------------------------
```

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	4.20	0.655	0.176	(0.589)	0.479
2 0.17	4.30	0.671	0.176	(0.603)	0.495
3 0.25	5.00	0.780	0.176	(0.702)	0.604
4 0.33	5.00	0.780	0.176	(0.702)	0.604
5 0.42	5.80	0.904	0.176	(0.814)	0.729
6 0.50	6.50	1.014	0.176	(0.912)	0.838
7 0.58	7.40	1.154	0.176	(1.039)	0.978
8 0.67	8.60	1.341	0.176	(1.207)	1.166
9 0.75	12.30	1.918	0.176	(1.726)	1.742
10 0.83	29.10	4.538	0.176	(4.084)	4.362
11 0.92	6.80	1.060	0.176	(0.954)	0.885
12 1.00	5.00	0.780	0.176	(0.702)	0.604
(Loss Rate Not Used)					
Sum =	100.0			Sum =	13.5

```
   Flood volume = Effective rainfall      1.12(In)
    times area      41.1(Ac.)/[(In)/(Ft.)] =       3.8(Ac.Ft)
   Total soil loss =      0.18(In)
   Total soil loss =     0.601(Ac.Ft)
   Total rainfall =      1.30(In)
   Flood volume =      167680.4 Cubic Feet
   Total soil loss =       26198.3 Cubic Feet
   ---------------------------------------------------------------------
    Peak flow rate of this hydrograph =     99.791(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       25.0      50.0      75.0     100.0
 ---------------------------------------------------------------------
   0+ 5       0.0131      1.90  Q         |         |         |         |
```


0+10 0.0783 9.46
0+15 0.1818 15.03
0+20 0.3111 18.78
0+25 0.4597 21.58
0+30 0.6333 25.20
0+35 0.8367 29.54
0+40 1.0754 34.66
0+45 1.3678 42.46
0+50 1.8163 65.12
0+55 2.5036 99.79
1+ 0 3.0154 74.31
1+ 5 3.3216 44.46
1+10 3.5015 26.12
1+15 3.6100 15.75
1+20 3.6839 10.73
1+25 3.7374 7.77
1+30 3.7763 5.65
1+35 3.8044 4.07
1+40 3.8239 2.84
1+45 3.8381 2.06
1+50 3.8464 1.22
1+55 3.8487 0.32
2+ 0 3.8494 0.11

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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/06/24 File: ONSITEPRE3100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - CAJALCO COMMERCE CENTER
INDUSTRIAL UNIT HYDROGRAPH ANALYSIS
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPRE.OUT- RSB

Drainage Area = 41.10(Ac.) = 0.064 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 41.10(Ac.) = 0.064 Sq. Mi.
Length along longest watercourse = 3070.00(Ft.)
Length along longest watercourse measured to centroid = 1205.00(Ft.)
Length along longest watercourse = 0.581 Mi.
Length along longest watercourse measured to centroid = 0.228 Mi.
Difference in elevation = 96.00(Ft.)
Slope along watercourse = 165.1075 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.127 Hr.
Lag time = 7.60 Min.
25% of lag time = 1.90 Min.
40% of lag time = 3.04 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]
       41.10            0.80                  32.88

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       41.10            2.00                  82.20

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =   99.98 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    41.100           86.00         0.000
 Total Area Entered =     41.10(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
86.0  86.0      0.176     0.000        0.176       1.000      0.176
                                                 Sum (F) =   0.176
Area averaged mean soil loss (F) (In/Hr) =  0.176
Minimum soil loss rate ((In/Hr)) =  0.088
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         65.792          9.576              3.967
    2   0.167        131.585         37.753             15.638
    3   0.250        197.377         24.597             10.188
    4   0.333        263.170          9.467              3.921
    5   0.417        328.962          5.729              2.373
    6   0.500        394.755          3.845              1.593
    7   0.583        460.547          2.613              1.082
    8   0.667        526.340          1.980              0.820
```

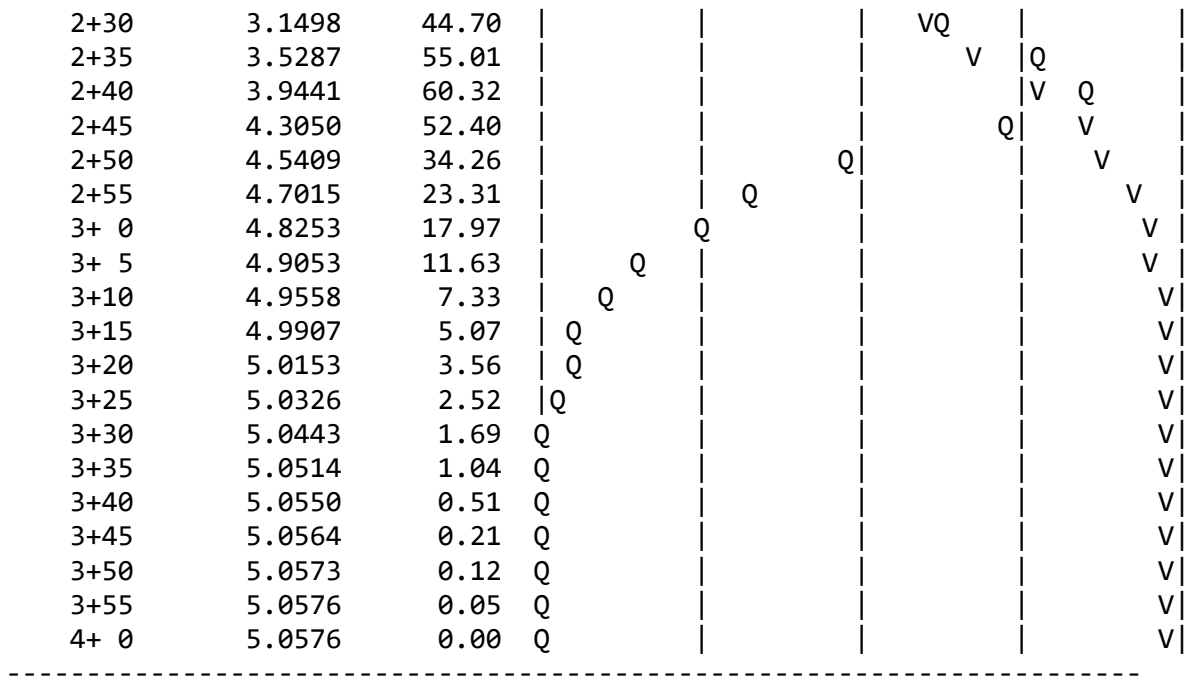
9	0.750	592.132	1.488	0.616
10	0.833	657.925	1.097	0.455
11	0.917	723.717	0.762	0.315
12	1.000	789.509	0.658	0.273
13	1.083	855.302	0.434	0.180
			Sum = 100.000	Sum= 41.421

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	0.312	0.176	(0.281)	0.136
2	0.17	1.30	0.312	0.176	(0.281)	0.136
3	0.25	1.10	0.264	0.176	(0.238)	0.088
4	0.33	1.50	0.360	0.176	(0.324)	0.184
5	0.42	1.50	0.360	0.176	(0.324)	0.184
6	0.50	1.80	0.432	0.176	(0.389)	0.256
7	0.58	1.50	0.360	0.176	(0.324)	0.184
8	0.67	1.80	0.432	0.176	(0.389)	0.256
9	0.75	1.80	0.432	0.176	(0.389)	0.256
10	0.83	1.50	0.360	0.176	(0.324)	0.184
11	0.92	1.60	0.384	0.176	(0.346)	0.208
12	1.00	1.80	0.432	0.176	(0.389)	0.256
13	1.08	2.20	0.528	0.176	(0.475)	0.352
14	1.17	2.20	0.528	0.176	(0.475)	0.352
15	1.25	2.20	0.528	0.176	(0.475)	0.352
16	1.33	2.00	0.480	0.176	(0.432)	0.304
17	1.42	2.60	0.624	0.176	(0.561)	0.448
18	1.50	2.70	0.648	0.176	(0.583)	0.472
19	1.58	2.40	0.576	0.176	(0.518)	0.400
20	1.67	2.70	0.648	0.176	(0.583)	0.472
21	1.75	3.30	0.792	0.176	(0.713)	0.616
22	1.83	3.10	0.744	0.176	(0.669)	0.568
23	1.92	2.90	0.696	0.176	(0.626)	0.520
24	2.00	3.00	0.720	0.176	(0.648)	0.544
25	2.08	3.10	0.744	0.176	(0.669)	0.568
26	2.17	4.20	1.008	0.176	(0.907)	0.832
27	2.25	5.00	1.200	0.176	(1.080)	1.024
28	2.33	3.50	0.840	0.176	(0.756)	0.664
29	2.42	6.80	1.632	0.176	(1.469)	1.456
30	2.50	7.30	1.752	0.176	(1.577)	1.576
31	2.58	8.20	1.968	0.176	(1.771)	1.792
32	2.67	5.90	1.416	0.176	(1.274)	1.240
33	2.75	2.00	0.480	0.176	(0.432)	0.304
34	2.83	1.80	0.432	0.176	(0.389)	0.256
35	2.92	1.80	0.432	0.176	(0.389)	0.256
36	3.00	0.60	0.144	(0.176)	0.130	0.014

```
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    17.7
      Flood volume = Effective rainfall      1.48(In)
       times area      41.1(Ac.)/[(In)/(Ft.)] =       5.1(Ac.Ft)
      Total soil loss =      0.52(In)
      Total soil loss =     1.791(Ac.Ft)
      Total rainfall =      2.00(In)
      Flood volume =      220309.7 Cubic Feet
      Total soil loss =       78022.7 Cubic Feet
      ------------------------------------------------------------------
       Peak flow rate of this hydrograph =     60.320(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       17.5      35.0      52.5      70.0
-------------------------------------------------------------------------
  0+ 5       0.0037      0.54  Q         |         |         |         |
  0+10       0.0221      2.67  VQ        |         |         |         |
  0+15       0.0488      3.87  V Q       |         |         |         |
  0+20       0.0766      4.04  V Q       |         |         |         |
  0+25       0.1137      5.37  V  Q      |         |         |         |
  0+30       0.1596      6.67  |V Q      |         |         |         |
  0+35       0.2141      7.92  |V  Q     |         |         |         |
  0+40       0.2697      8.08  | V Q     |         |         |         |
  0+45       0.3313      8.94  | V  Q    |         |         |         |
  0+50       0.3960      9.40  |  V Q    |         |         |         |
  0+55       0.4558      8.69  |  VQ     |         |         |         |
  1+ 0       0.5159      8.73  |   Q     |         |         |         |
  1+ 5       0.5846      9.97  |   VQ    |         |         |         |
  1+10       0.6670     11.96  |    VQ   |         |         |         |
  1+15       0.7575     13.14  |    V Q  |         |         |         |
  1+20       0.8501     13.45  |     VQ  |         |         |         |
  1+25       0.9436     13.57  |      Q  |         |         |         |
  1+30       1.0512     15.63  |       Q |         |         |         |
  1+35       1.1691     17.13  |        Q|         |         |         |
  1+40       1.2869     17.09  |        QV         |         |         |
  1+45       1.4142     18.48  |         QV        |         |         |
  1+50       1.5607     21.28  |         | Q       |         |         |
  1+55       1.7131     22.12  |         | QV      |         |         |
  2+ 0       1.8629     21.75  |         | Q V     |         |         |
  2+ 5       2.0146     22.03  |         | Q  V    |         |         |
  2+10       2.1779     23.70  |         |  Q   V  |         |         |
  2+15       2.3773     28.96  |         |     Q V |         |         |
  2+20       2.6074     33.42  |         |        QV         |         |
  2+25       2.8420     34.05  |         |        Q| V       |         |
```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2+35 3.5287 55.01
2+40 3.9441 60.32
2+45 4.3050 52.40
2+50 4.5409 34.26
2+55 4.7015 23.31
3+ 0 4.8253 17.97
3+ 5 4.9053 11.63
3+10 4.9558 7.33
3+15 4.9907 5.07
3+20 5.0153 3.56
3+25 5.0326 2.52
3+30 5.0443 1.69
3+35 5.0514 1.04
3+40 5.0550 0.51
3+45 5.0564 0.21
3+50 5.0573 0.12
3+55 5.0576 0.05
4+ 0 5.0576 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 03/06/24 File: ONSITEPRE6100.out

++

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - CAJALCO COMMERCE CENTER
INDUSTRIAL UNIT HYDROGRAPH ANALYSIS
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPRE.OUT- RSB

Drainage Area = 41.10(Ac.) = 0.064 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 41.10(Ac.) = 0.064 Sq. Mi.
Length along longest watercourse = 3070.00(Ft.)
Length along longest watercourse measured to centroid = 1205.00(Ft.)
Length along longest watercourse = 0.581 Mi.
Length along longest watercourse measured to centroid = 0.228 Mi.
Difference in elevation = 96.00(Ft.)
Slope along watercourse = 165.1075 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.127 Hr.
Lag time = 7.60 Min.
25% of lag time = 1.90 Min.
40% of lag time = 3.04 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]
       41.10            1.20                  49.32

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       41.10            2.80                 115.08

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    41.100           86.00         0.000
 Total Area Entered =     41.10(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
86.0  86.0      0.176     0.000        0.176       1.000      0.176
                                                 Sum (F) =   0.176
Area averaged mean soil loss (F) (In/Hr) =  0.176
Minimum soil loss rate ((In/Hr)) =  0.088
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         65.792          9.576              3.967
    2   0.167        131.585         37.753             15.638
    3   0.250        197.377         24.597             10.188
    4   0.333        263.170          9.467              3.921
    5   0.417        328.962          5.729              2.373
    6   0.500        394.755          3.845              1.593
    7   0.583        460.547          2.613              1.082
    8   0.667        526.340          1.980              0.820
```

9	0.750	592.132	1.488	0.616
10	0.833	657.925	1.097	0.455
11	0.917	723.717	0.762	0.315
12	1.000	789.509	0.658	0.273
13	1.083	855.302	0.434	0.180
			Sum = 100.000	Sum= 41.421

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	0.168	(0.176)	0.151	0.017
2	0.17	0.60	0.202	0.176	(0.181)	0.026
3	0.25	0.60	0.202	0.176	(0.181)	0.026
4	0.33	0.60	0.202	0.176	(0.181)	0.026
5	0.42	0.60	0.202	0.176	(0.181)	0.026
6	0.50	0.70	0.235	0.176	(0.212)	0.060
7	0.58	0.70	0.235	0.176	(0.212)	0.060
8	0.67	0.70	0.235	0.176	(0.212)	0.060
9	0.75	0.70	0.235	0.176	(0.212)	0.060
10	0.83	0.70	0.235	0.176	(0.212)	0.060
11	0.92	0.70	0.235	0.176	(0.212)	0.060
12	1.00	0.80	0.269	0.176	(0.242)	0.093
13	1.08	0.80	0.269	0.176	(0.242)	0.093
14	1.17	0.80	0.269	0.176	(0.242)	0.093
15	1.25	0.80	0.269	0.176	(0.242)	0.093
16	1.33	0.80	0.269	0.176	(0.242)	0.093
17	1.42	0.80	0.269	0.176	(0.242)	0.093
18	1.50	0.80	0.269	0.176	(0.242)	0.093
19	1.58	0.80	0.269	0.176	(0.242)	0.093
20	1.67	0.80	0.269	0.176	(0.242)	0.093
21	1.75	0.80	0.269	0.176	(0.242)	0.093
22	1.83	0.80	0.269	0.176	(0.242)	0.093
23	1.92	0.80	0.269	0.176	(0.242)	0.093
24	2.00	0.90	0.302	0.176	(0.272)	0.127
25	2.08	0.80	0.269	0.176	(0.242)	0.093
26	2.17	0.90	0.302	0.176	(0.272)	0.127
27	2.25	0.90	0.302	0.176	(0.272)	0.127
28	2.33	0.90	0.302	0.176	(0.272)	0.127
29	2.42	0.90	0.302	0.176	(0.272)	0.127
30	2.50	0.90	0.302	0.176	(0.272)	0.127
31	2.58	0.90	0.302	0.176	(0.272)	0.127
32	2.67	0.90	0.302	0.176	(0.272)	0.127
33	2.75	1.00	0.336	0.176	(0.302)	0.160
34	2.83	1.00	0.336	0.176	(0.302)	0.160
35	2.92	1.00	0.336	0.176	(0.302)	0.160
36	3.00	1.00	0.336	0.176	(0.302)	0.160

37	3.08	1.00	0.336	0.176	(0.302)		0.160
38	3.17	1.10	0.370	0.176	(0.333)		0.194
39	3.25	1.10	0.370	0.176	(0.333)		0.194
40	3.33	1.10	0.370	0.176	(0.333)		0.194
41	3.42	1.20	0.403	0.176	(0.363)		0.228
42	3.50	1.30	0.437	0.176	(0.393)		0.261
43	3.58	1.40	0.470	0.176	(0.423)		0.295
44	3.67	1.40	0.470	0.176	(0.423)		0.295
45	3.75	1.50	0.504	0.176	(0.454)		0.328
46	3.83	1.50	0.504	0.176	(0.454)		0.328
47	3.92	1.60	0.538	0.176	(0.484)		0.362
48	4.00	1.60	0.538	0.176	(0.484)		0.362
49	4.08	1.70	0.571	0.176	(0.514)		0.396
50	4.17	1.80	0.605	0.176	(0.544)		0.429
51	4.25	1.90	0.638	0.176	(0.574)		0.463
52	4.33	2.00	0.672	0.176	(0.605)		0.496
53	4.42	2.10	0.706	0.176	(0.635)		0.530
54	4.50	2.10	0.706	0.176	(0.635)		0.530
55	4.58	2.20	0.739	0.176	(0.665)		0.563
56	4.67	2.30	0.773	0.176	(0.695)		0.597
57	4.75	2.40	0.806	0.176	(0.726)		0.631
58	4.83	2.40	0.806	0.176	(0.726)		0.631
59	4.92	2.50	0.840	0.176	(0.756)		0.664
60	5.00	2.60	0.873	0.176	(0.786)		0.698
61	5.08	3.10	1.041	0.176	(0.937)		0.866
62	5.17	3.60	1.209	0.176	(1.088)		1.034
63	5.25	3.90	1.310	0.176	(1.179)		1.135
64	5.33	4.20	1.411	0.176	(1.270)		1.235
65	5.42	4.70	1.579	0.176	(1.421)		1.403
66	5.50	5.60	1.881	0.176	(1.693)		1.706
67	5.58	1.90	0.638	0.176	(0.574)		0.463
68	5.67	0.90	0.302	0.176	(0.272)		0.127
69	5.75	0.60	0.202	0.176	(0.181)		0.026
70	5.83	0.50	0.168	(0.176)	0.151		0.017
71	5.92	0.30	0.101	(0.176)	0.091		0.010
72	6.00	0.20	0.067	(0.176)	0.060		0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 21.2

Flood volume = Effective rainfall 1.77(In)
times area 41.1(Ac.)/[(In)/(Ft.)] = 6.1(Ac.Ft)
Total soil loss = 1.03(In)
Total soil loss = 3.538(Ac.Ft)
Total rainfall = 2.80(In)
Flood volume = 263585.7 Cubic Feet
Total soil loss = 154095.7 Cubic Feet

Peak flow rate of this hydrograph = 54.688(CFS)

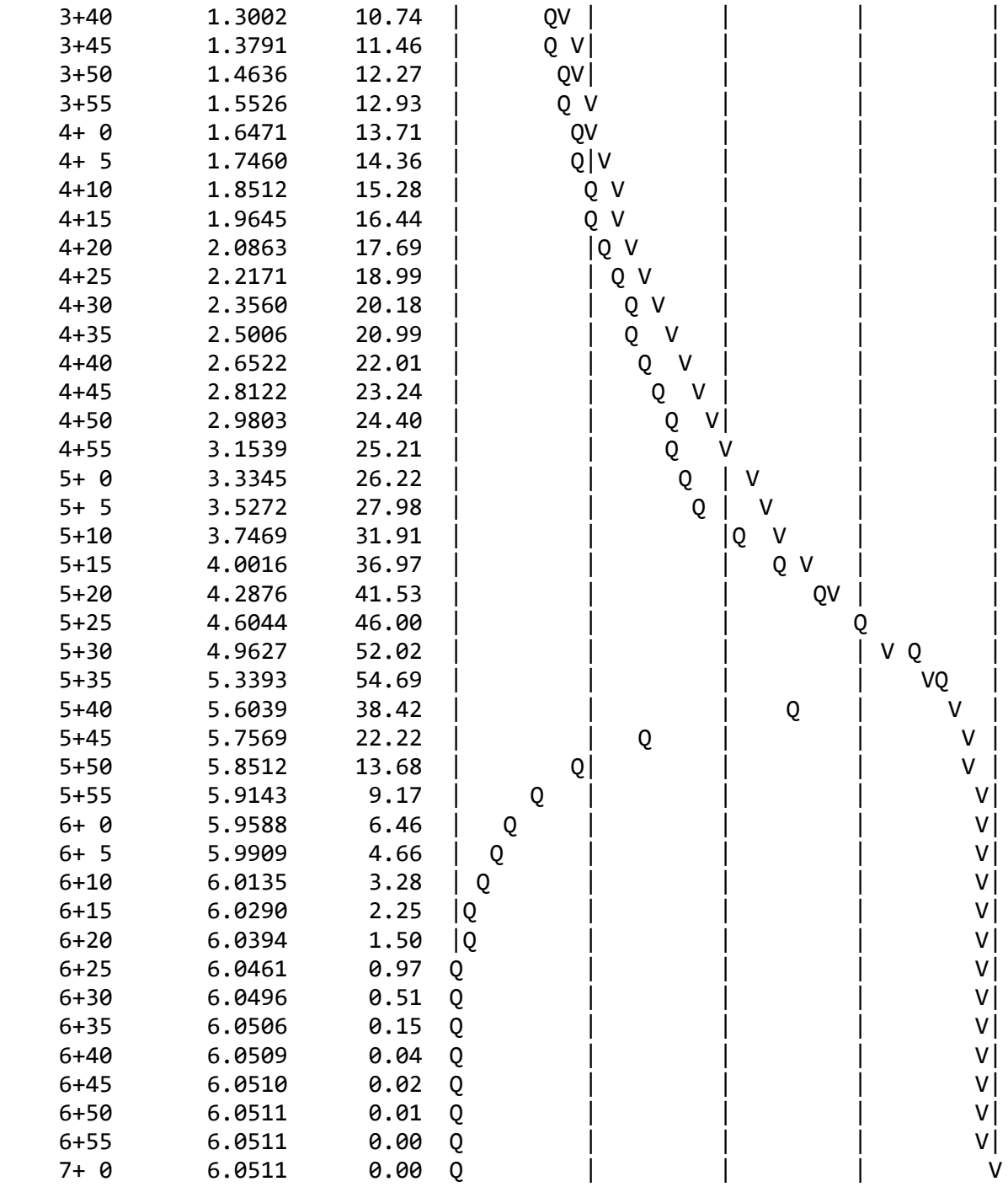
++

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	15.0	30.0	45.0	60.0
0+ 5	0.0005	0.07	Q				
0+10	0.0030	0.37	Q				
0+15	0.0077	0.68	Q				
0+20	0.0135	0.84	Q				
0+25	0.0198	0.92	Q				
0+30	0.0273	1.10	Q				
0+35	0.0387	1.66	VQ				
0+40	0.0527	2.02	VQ				
0+45	0.0676	2.17	VQ				
0+50	0.0832	2.27	VQ				
0+55	0.0993	2.33	VQ				
1+ 0	0.1165	2.51	VQ				
1+ 5	0.1376	3.06	V Q				
1+10	0.1612	3.43	|VQ				
1+15	0.1859	3.58	|VQ				
1+20	0.2111	3.67	|VQ				
1+25	0.2368	3.73	|VQ				
1+30	0.2628	3.77	|VQ				
1+35	0.2889	3.80	|VQ				
1+40	0.3152	3.82	| Q				
1+45	0.3416	3.84	| Q				
1+50	0.3681	3.85	| Q				
1+55	0.3947	3.85	| Q				
2+ 0	0.4222	3.99	| Q				
2+ 5	0.4524	4.39	| Q				
2+10	0.4823	4.34	| QV				
2+15	0.5143	4.65	| Q				
2+20	0.5483	4.94	| Q				
2+25	0.5831	5.05	| Q				
2+30	0.6183	5.11	| QV				
2+35	0.6538	5.15	| QV				
2+40	0.6895	5.18	| QV				
2+45	0.7263	5.34	| QV				
2+50	0.7668	5.88	| Q V				
2+55	0.8097	6.24	| QV				
3+ 0	0.8537	6.38	| QV				
3+ 5	0.8982	6.46	| QV				
3+10	0.9440	6.65	| Q V				
3+15	0.9937	7.21	| Q V				
3+20	1.0459	7.59	| QV				
3+25	1.1001	7.87	| Q V				
3+30	1.1595	8.62	| Q V				
3+35	1.2262	9.69	| Q V				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3+45 1.3791 11.46
3+50 1.4636 12.27
3+55 1.5526 12.93
4+ 0 1.6471 13.71
4+ 5 1.7460 14.36
4+10 1.8512 15.28
4+15 1.9645 16.44
4+20 2.0863 17.69
4+25 2.2171 18.99
4+30 2.3560 20.18
4+35 2.5006 20.99
4+40 2.6522 22.01
4+45 2.8122 23.24
4+50 2.9803 24.40
4+55 3.1539 25.21
5+ 0 3.3345 26.22
5+ 5 3.5272 27.98
5+10 3.7469 31.91
5+15 4.0016 36.97
5+20 4.2876 41.53
5+25 4.6044 46.00
5+30 4.9627 52.02
5+35 5.3393 54.69
5+40 5.6039 38.42
5+45 5.7569 22.22
5+50 5.8512 13.68
5+55 5.9143 9.17
6+ 0 5.9588 6.46
6+ 5 5.9909 4.66
6+10 6.0135 3.28
6+15 6.0290 2.25
6+20 6.0394 1.50
6+25 6.0461 0.97
6+30 6.0496 0.51
6+35 6.0506 0.15
6+40 6.0509 0.04
6+45 6.0510 0.02
6+50 6.0511 0.01
6+55 6.0511 0.00
7+ 0 6.0511 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 03/06/24 File: ONSITEPRE24100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - CAJALCO COMMERCE CENTER
INDUSTRIAL UNIT HYDROGRAPH ANALYSIS
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPRE.OUT- RSB

Drainage Area = 41.10(Ac.) = 0.064 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 41.10(Ac.) = 0.064 Sq. Mi.
Length along longest watercourse = 3070.00(Ft.)
Length along longest watercourse measured to centroid = 1205.00(Ft.)
Length along longest watercourse = 0.581 Mi.
Length along longest watercourse measured to centroid = 0.228 Mi.
Difference in elevation = 96.00(Ft.)
Slope along watercourse = 165.1075 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.127 Hr.
Lag time = 7.60 Min.
25% of lag time = 1.90 Min.
40% of lag time = 3.04 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]
       41.10            2.00                  82.20

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       41.10            5.40                 221.94

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    41.100           86.00         0.000
 Total Area Entered =     41.10(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
86.0  86.0      0.176     0.000        0.176       1.000      0.176
                                                 Sum (F) =   0.176
Area averaged mean soil loss (F) (In/Hr) =  0.176
Minimum soil loss rate ((In/Hr)) =  0.088
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         65.792          9.576              3.967
    2   0.167        131.585         37.753             15.638
    3   0.250        197.377         24.597             10.188
    4   0.333        263.170          9.467              3.921
    5   0.417        328.962          5.729              2.373
    6   0.500        394.755          3.845              1.593
    7   0.583        460.547          2.613              1.082
    8   0.667        526.340          1.980              0.820
```

9	0.750	592.132	1.488	0.616
10	0.833	657.925	1.097	0.455
11	0.917	723.717	0.762	0.315
12	1.000	789.509	0.658	0.273
13	1.083	855.302	0.434	0.180
			Sum = 100.000	Sum= 41.421

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	0.043	(0.311)	0.039	0.004
2	0.17	0.07	0.043	(0.310)	0.039	0.004
3	0.25	0.07	0.043	(0.309)	0.039	0.004
4	0.33	0.10	0.065	(0.308)	0.058	0.006
5	0.42	0.10	0.065	(0.306)	0.058	0.006
6	0.50	0.10	0.065	(0.305)	0.058	0.006
7	0.58	0.10	0.065	(0.304)	0.058	0.006
8	0.67	0.10	0.065	(0.303)	0.058	0.006
9	0.75	0.10	0.065	(0.302)	0.058	0.006
10	0.83	0.13	0.086	(0.301)	0.078	0.009
11	0.92	0.13	0.086	(0.299)	0.078	0.009
12	1.00	0.13	0.086	(0.298)	0.078	0.009
13	1.08	0.10	0.065	(0.297)	0.058	0.006
14	1.17	0.10	0.065	(0.296)	0.058	0.006
15	1.25	0.10	0.065	(0.295)	0.058	0.006
16	1.33	0.10	0.065	(0.293)	0.058	0.006
17	1.42	0.10	0.065	(0.292)	0.058	0.006
18	1.50	0.10	0.065	(0.291)	0.058	0.006
19	1.58	0.10	0.065	(0.290)	0.058	0.006
20	1.67	0.10	0.065	(0.289)	0.058	0.006
21	1.75	0.10	0.065	(0.288)	0.058	0.006
22	1.83	0.13	0.086	(0.287)	0.078	0.009
23	1.92	0.13	0.086	(0.285)	0.078	0.009
24	2.00	0.13	0.086	(0.284)	0.078	0.009
25	2.08	0.13	0.086	(0.283)	0.078	0.009
26	2.17	0.13	0.086	(0.282)	0.078	0.009
27	2.25	0.13	0.086	(0.281)	0.078	0.009
28	2.33	0.13	0.086	(0.280)	0.078	0.009
29	2.42	0.13	0.086	(0.278)	0.078	0.009
30	2.50	0.13	0.086	(0.277)	0.078	0.009
31	2.58	0.17	0.108	(0.276)	0.097	0.011
32	2.67	0.17	0.108	(0.275)	0.097	0.011
33	2.75	0.17	0.108	(0.274)	0.097	0.011
34	2.83	0.17	0.108	(0.273)	0.097	0.011
35	2.92	0.17	0.108	(0.272)	0.097	0.011
36	3.00	0.17	0.108	(0.271)	0.097	0.011

37	3.08	0.17	0.108	(0.269)	0.097	0.011
38	3.17	0.17	0.108	(0.268)	0.097	0.011
39	3.25	0.17	0.108	(0.267)	0.097	0.011
40	3.33	0.17	0.108	(0.266)	0.097	0.011
41	3.42	0.17	0.108	(0.265)	0.097	0.011
42	3.50	0.17	0.108	(0.264)	0.097	0.011
43	3.58	0.17	0.108	(0.263)	0.097	0.011
44	3.67	0.17	0.108	(0.262)	0.097	0.011
45	3.75	0.17	0.108	(0.261)	0.097	0.011
46	3.83	0.20	0.130	(0.259)	0.117	0.013
47	3.92	0.20	0.130	(0.258)	0.117	0.013
48	4.00	0.20	0.130	(0.257)	0.117	0.013
49	4.08	0.20	0.130	(0.256)	0.117	0.013
50	4.17	0.20	0.130	(0.255)	0.117	0.013
51	4.25	0.20	0.130	(0.254)	0.117	0.013
52	4.33	0.23	0.151	(0.253)	0.136	0.015
53	4.42	0.23	0.151	(0.252)	0.136	0.015
54	4.50	0.23	0.151	(0.251)	0.136	0.015
55	4.58	0.23	0.151	(0.250)	0.136	0.015
56	4.67	0.23	0.151	(0.249)	0.136	0.015
57	4.75	0.23	0.151	(0.248)	0.136	0.015
58	4.83	0.27	0.173	(0.246)	0.156	0.017
59	4.92	0.27	0.173	(0.245)	0.156	0.017
60	5.00	0.27	0.173	(0.244)	0.156	0.017
61	5.08	0.20	0.130	(0.243)	0.117	0.013
62	5.17	0.20	0.130	(0.242)	0.117	0.013
63	5.25	0.20	0.130	(0.241)	0.117	0.013
64	5.33	0.23	0.151	(0.240)	0.136	0.015
65	5.42	0.23	0.151	(0.239)	0.136	0.015
66	5.50	0.23	0.151	(0.238)	0.136	0.015
67	5.58	0.27	0.173	(0.237)	0.156	0.017
68	5.67	0.27	0.173	(0.236)	0.156	0.017
69	5.75	0.27	0.173	(0.235)	0.156	0.017
70	5.83	0.27	0.173	(0.234)	0.156	0.017
71	5.92	0.27	0.173	(0.233)	0.156	0.017
72	6.00	0.27	0.173	(0.232)	0.156	0.017
73	6.08	0.30	0.194	(0.231)	0.175	0.019
74	6.17	0.30	0.194	(0.230)	0.175	0.019
75	6.25	0.30	0.194	(0.229)	0.175	0.019
76	6.33	0.30	0.194	(0.228)	0.175	0.019
77	6.42	0.30	0.194	(0.227)	0.175	0.019
78	6.50	0.30	0.194	(0.226)	0.175	0.019
79	6.58	0.33	0.216	(0.225)	0.194	0.022
80	6.67	0.33	0.216	(0.224)	0.194	0.022
81	6.75	0.33	0.216	(0.223)	0.194	0.022
82	6.83	0.33	0.216	(0.222)	0.194	0.022
83	6.92	0.33	0.216	(0.221)	0.194	0.022
84	7.00	0.33	0.216	(0.220)	0.194	0.022
85	7.08	0.33	0.216	(0.219)	0.194	0.022
86	7.17	0.33	0.216	(0.218)	0.194	0.022

87	7.25	0.33	0.216	(	0.217)	0.194		0.022
88	7.33	0.37	0.238	(	0.216)	0.214		0.024
89	7.42	0.37	0.238	(	0.215)	0.214		0.024
90	7.50	0.37	0.238		0.214	(0.214)		0.024
91	7.58	0.40	0.259		0.213	(0.233)		0.046
92	7.67	0.40	0.259		0.212	(0.233)		0.047
93	7.75	0.40	0.259		0.211	(0.233)		0.048
94	7.83	0.43	0.281		0.210	(0.253)		0.071
95	7.92	0.43	0.281		0.209	(0.253)		0.072
96	8.00	0.43	0.281		0.208	(0.253)		0.073
97	8.08	0.50	0.324		0.207	(0.292)		0.117
98	8.17	0.50	0.324		0.206	(0.292)		0.118
99	8.25	0.50	0.324		0.205	(0.292)		0.119
100	8.33	0.50	0.324		0.204	(0.292)		0.120
101	8.42	0.50	0.324		0.203	(0.292)		0.121
102	8.50	0.50	0.324		0.202	(0.292)		0.122
103	8.58	0.53	0.346		0.201	(0.311)		0.144
104	8.67	0.53	0.346		0.200	(0.311)		0.145
105	8.75	0.53	0.346		0.199	(0.311)		0.146
106	8.83	0.57	0.367		0.198	(0.330)		0.169
107	8.92	0.57	0.367		0.197	(0.330)		0.170
108	9.00	0.57	0.367		0.196	(0.330)		0.171
109	9.08	0.63	0.410		0.195	(0.369)		0.215
110	9.17	0.63	0.410		0.195	(0.369)		0.216
111	9.25	0.63	0.410		0.194	(0.369)		0.217
112	9.33	0.67	0.432		0.193	(0.389)		0.239
113	9.42	0.67	0.432		0.192	(0.389)		0.240
114	9.50	0.67	0.432		0.191	(0.389)		0.241
115	9.58	0.70	0.454		0.190	(0.408)		0.264
116	9.67	0.70	0.454		0.189	(0.408)		0.265
117	9.75	0.70	0.454		0.188	(0.408)		0.265
118	9.83	0.73	0.475		0.187	(0.428)		0.288
119	9.92	0.73	0.475		0.186	(0.428)		0.289
120	10.00	0.73	0.475		0.185	(0.428)		0.290
121	10.08	0.50	0.324		0.185	(0.292)		0.139
122	10.17	0.50	0.324		0.184	(0.292)		0.140
123	10.25	0.50	0.324		0.183	(0.292)		0.141
124	10.33	0.50	0.324		0.182	(0.292)		0.142
125	10.42	0.50	0.324		0.181	(0.292)		0.143
126	10.50	0.50	0.324		0.180	(0.292)		0.144
127	10.58	0.67	0.432		0.179	(0.389)		0.253
128	10.67	0.67	0.432		0.178	(0.389)		0.254
129	10.75	0.67	0.432		0.177	(0.389)		0.254
130	10.83	0.67	0.432		0.177	(0.389)		0.255
131	10.92	0.67	0.432		0.176	(0.389)		0.256
132	11.00	0.67	0.432		0.175	(0.389)		0.257
133	11.08	0.63	0.410		0.174	(0.369)		0.236
134	11.17	0.63	0.410		0.173	(0.369)		0.237
135	11.25	0.63	0.410		0.172	(0.369)		0.238
136	11.33	0.63	0.410		0.171	(0.369)		0.239

137	11.42	0.63	0.410	0.171	(	0.369)	0.240
138	11.50	0.63	0.410	0.170	(	0.369)	0.241
139	11.58	0.57	0.367	0.169	(	0.330)	0.198
140	11.67	0.57	0.367	0.168	(	0.330)	0.199
141	11.75	0.57	0.367	0.167	(	0.330)	0.200
142	11.83	0.60	0.389	0.166	(	0.350)	0.222
143	11.92	0.60	0.389	0.166	(	0.350)	0.223
144	12.00	0.60	0.389	0.165	(	0.350)	0.224
145	12.08	0.83	0.540	0.164	(	0.486)	0.376
146	12.17	0.83	0.540	0.163	(	0.486)	0.377
147	12.25	0.83	0.540	0.162	(	0.486)	0.378
148	12.33	0.87	0.562	0.161	(	0.505)	0.400
149	12.42	0.87	0.562	0.161	(	0.505)	0.401
150	12.50	0.87	0.562	0.160	(	0.505)	0.402
151	12.58	0.93	0.605	0.159	(	0.544)	0.446
152	12.67	0.93	0.605	0.158	(	0.544)	0.447
153	12.75	0.93	0.605	0.157	(	0.544)	0.447
154	12.83	0.97	0.626	0.157	(	0.564)	0.470
155	12.92	0.97	0.626	0.156	(	0.564)	0.470
156	13.00	0.97	0.626	0.155	(	0.564)	0.471
157	13.08	1.13	0.734	0.154	(	0.661)	0.580
158	13.17	1.13	0.734	0.154	(	0.661)	0.581
159	13.25	1.13	0.734	0.153	(	0.661)	0.582
160	13.33	1.13	0.734	0.152	(	0.661)	0.582
161	13.42	1.13	0.734	0.151	(	0.661)	0.583
162	13.50	1.13	0.734	0.150	(	0.661)	0.584
163	13.58	0.77	0.497	0.150	(	0.447)	0.347
164	13.67	0.77	0.497	0.149	(	0.447)	0.348
165	13.75	0.77	0.497	0.148	(	0.447)	0.349
166	13.83	0.77	0.497	0.147	(	0.447)	0.349
167	13.92	0.77	0.497	0.147	(	0.447)	0.350
168	14.00	0.77	0.497	0.146	(	0.447)	0.351
169	14.08	0.90	0.583	0.145	(	0.525)	0.438
170	14.17	0.90	0.583	0.144	(	0.525)	0.439
171	14.25	0.90	0.583	0.144	(	0.525)	0.440
172	14.33	0.87	0.562	0.143	(	0.505)	0.419
173	14.42	0.87	0.562	0.142	(	0.505)	0.419
174	14.50	0.87	0.562	0.141	(	0.505)	0.420
175	14.58	0.87	0.562	0.141	(	0.505)	0.421
176	14.67	0.87	0.562	0.140	(	0.505)	0.422
177	14.75	0.87	0.562	0.139	(	0.505)	0.422
178	14.83	0.83	0.540	0.139	(	0.486)	0.401
179	14.92	0.83	0.540	0.138	(	0.486)	0.402
180	15.00	0.83	0.540	0.137	(	0.486)	0.403
181	15.08	0.80	0.518	0.136	(	0.467)	0.382
182	15.17	0.80	0.518	0.136	(	0.467)	0.383
183	15.25	0.80	0.518	0.135	(	0.467)	0.383
184	15.33	0.77	0.497	0.134	(	0.447)	0.362
185	15.42	0.77	0.497	0.134	(	0.447)	0.363
186	15.50	0.77	0.497	0.133	(	0.447)	0.364

187	15.58	0.63	0.410		0.132	(0.369)		0.278
188	15.67	0.63	0.410		0.132	(0.369)		0.279
189	15.75	0.63	0.410		0.131	(0.369)		0.279
190	15.83	0.63	0.410		0.130	(0.369)		0.280
191	15.92	0.63	0.410		0.130	(0.369)		0.281
192	16.00	0.63	0.410		0.129	(0.369)		0.281
193	16.08	0.13	0.086	(0.128)		0.078		0.009
194	16.17	0.13	0.086	(0.128)		0.078		0.009
195	16.25	0.13	0.086	(0.127)		0.078		0.009
196	16.33	0.13	0.086	(0.126)		0.078		0.009
197	16.42	0.13	0.086	(0.126)		0.078		0.009
198	16.50	0.13	0.086	(0.125)		0.078		0.009
199	16.58	0.10	0.065	(0.124)		0.058		0.006
200	16.67	0.10	0.065	(0.124)		0.058		0.006
201	16.75	0.10	0.065	(0.123)		0.058		0.006
202	16.83	0.10	0.065	(0.123)		0.058		0.006
203	16.92	0.10	0.065	(0.122)		0.058		0.006
204	17.00	0.10	0.065	(0.121)		0.058		0.006
205	17.08	0.17	0.108	(0.121)		0.097		0.011
206	17.17	0.17	0.108	(0.120)		0.097		0.011
207	17.25	0.17	0.108	(0.119)		0.097		0.011
208	17.33	0.17	0.108	(0.119)		0.097		0.011
209	17.42	0.17	0.108	(0.118)		0.097		0.011
210	17.50	0.17	0.108	(0.118)		0.097		0.011
211	17.58	0.17	0.108	(0.117)		0.097		0.011
212	17.67	0.17	0.108	(0.117)		0.097		0.011
213	17.75	0.17	0.108	(0.116)		0.097		0.011
214	17.83	0.13	0.086	(0.115)		0.078		0.009
215	17.92	0.13	0.086	(0.115)		0.078		0.009
216	18.00	0.13	0.086	(0.114)		0.078		0.009
217	18.08	0.13	0.086	(0.114)		0.078		0.009
218	18.17	0.13	0.086	(0.113)		0.078		0.009
219	18.25	0.13	0.086	(0.113)		0.078		0.009
220	18.33	0.13	0.086	(0.112)		0.078		0.009
221	18.42	0.13	0.086	(0.111)		0.078		0.009
222	18.50	0.13	0.086	(0.111)		0.078		0.009
223	18.58	0.10	0.065	(0.110)		0.058		0.006
224	18.67	0.10	0.065	(0.110)		0.058		0.006
225	18.75	0.10	0.065	(0.109)		0.058		0.006
226	18.83	0.07	0.043	(0.109)		0.039		0.004
227	18.92	0.07	0.043	(0.108)		0.039		0.004
228	19.00	0.07	0.043	(0.108)		0.039		0.004
229	19.08	0.10	0.065	(0.107)		0.058		0.006
230	19.17	0.10	0.065	(0.107)		0.058		0.006
231	19.25	0.10	0.065	(0.106)		0.058		0.006
232	19.33	0.13	0.086	(0.106)		0.078		0.009
233	19.42	0.13	0.086	(0.105)		0.078		0.009
234	19.50	0.13	0.086	(0.105)		0.078		0.009
235	19.58	0.10	0.065	(0.104)		0.058		0.006
236	19.67	0.10	0.065	(0.104)		0.058		0.006

237	19.75	0.10	0.065	(0.103)	0.058	0.006
238	19.83	0.07	0.043	(0.103)	0.039	0.004
239	19.92	0.07	0.043	(0.102)	0.039	0.004
240	20.00	0.07	0.043	(0.102)	0.039	0.004
241	20.08	0.10	0.065	(0.102)	0.058	0.006
242	20.17	0.10	0.065	(0.101)	0.058	0.006
243	20.25	0.10	0.065	(0.101)	0.058	0.006
244	20.33	0.10	0.065	(0.100)	0.058	0.006
245	20.42	0.10	0.065	(0.100)	0.058	0.006
246	20.50	0.10	0.065	(0.099)	0.058	0.006
247	20.58	0.10	0.065	(0.099)	0.058	0.006
248	20.67	0.10	0.065	(0.099)	0.058	0.006
249	20.75	0.10	0.065	(0.098)	0.058	0.006
250	20.83	0.07	0.043	(0.098)	0.039	0.004
251	20.92	0.07	0.043	(0.097)	0.039	0.004
252	21.00	0.07	0.043	(0.097)	0.039	0.004
253	21.08	0.10	0.065	(0.097)	0.058	0.006
254	21.17	0.10	0.065	(0.096)	0.058	0.006
255	21.25	0.10	0.065	(0.096)	0.058	0.006
256	21.33	0.07	0.043	(0.095)	0.039	0.004
257	21.42	0.07	0.043	(0.095)	0.039	0.004
258	21.50	0.07	0.043	(0.095)	0.039	0.004
259	21.58	0.10	0.065	(0.094)	0.058	0.006
260	21.67	0.10	0.065	(0.094)	0.058	0.006
261	21.75	0.10	0.065	(0.094)	0.058	0.006
262	21.83	0.07	0.043	(0.093)	0.039	0.004
263	21.92	0.07	0.043	(0.093)	0.039	0.004
264	22.00	0.07	0.043	(0.093)	0.039	0.004
265	22.08	0.10	0.065	(0.092)	0.058	0.006
266	22.17	0.10	0.065	(0.092)	0.058	0.006
267	22.25	0.10	0.065	(0.092)	0.058	0.006
268	22.33	0.07	0.043	(0.092)	0.039	0.004
269	22.42	0.07	0.043	(0.091)	0.039	0.004
270	22.50	0.07	0.043	(0.091)	0.039	0.004
271	22.58	0.07	0.043	(0.091)	0.039	0.004
272	22.67	0.07	0.043	(0.090)	0.039	0.004
273	22.75	0.07	0.043	(0.090)	0.039	0.004
274	22.83	0.07	0.043	(0.090)	0.039	0.004
275	22.92	0.07	0.043	(0.090)	0.039	0.004
276	23.00	0.07	0.043	(0.090)	0.039	0.004
277	23.08	0.07	0.043	(0.089)	0.039	0.004
278	23.17	0.07	0.043	(0.089)	0.039	0.004
279	23.25	0.07	0.043	(0.089)	0.039	0.004
280	23.33	0.07	0.043	(0.089)	0.039	0.004
281	23.42	0.07	0.043	(0.089)	0.039	0.004
282	23.50	0.07	0.043	(0.088)	0.039	0.004
283	23.58	0.07	0.043	(0.088)	0.039	0.004
284	23.67	0.07	0.043	(0.088)	0.039	0.004
285	23.75	0.07	0.043	(0.088)	0.039	0.004
286	23.83	0.07	0.043	(0.088)	0.039	0.004

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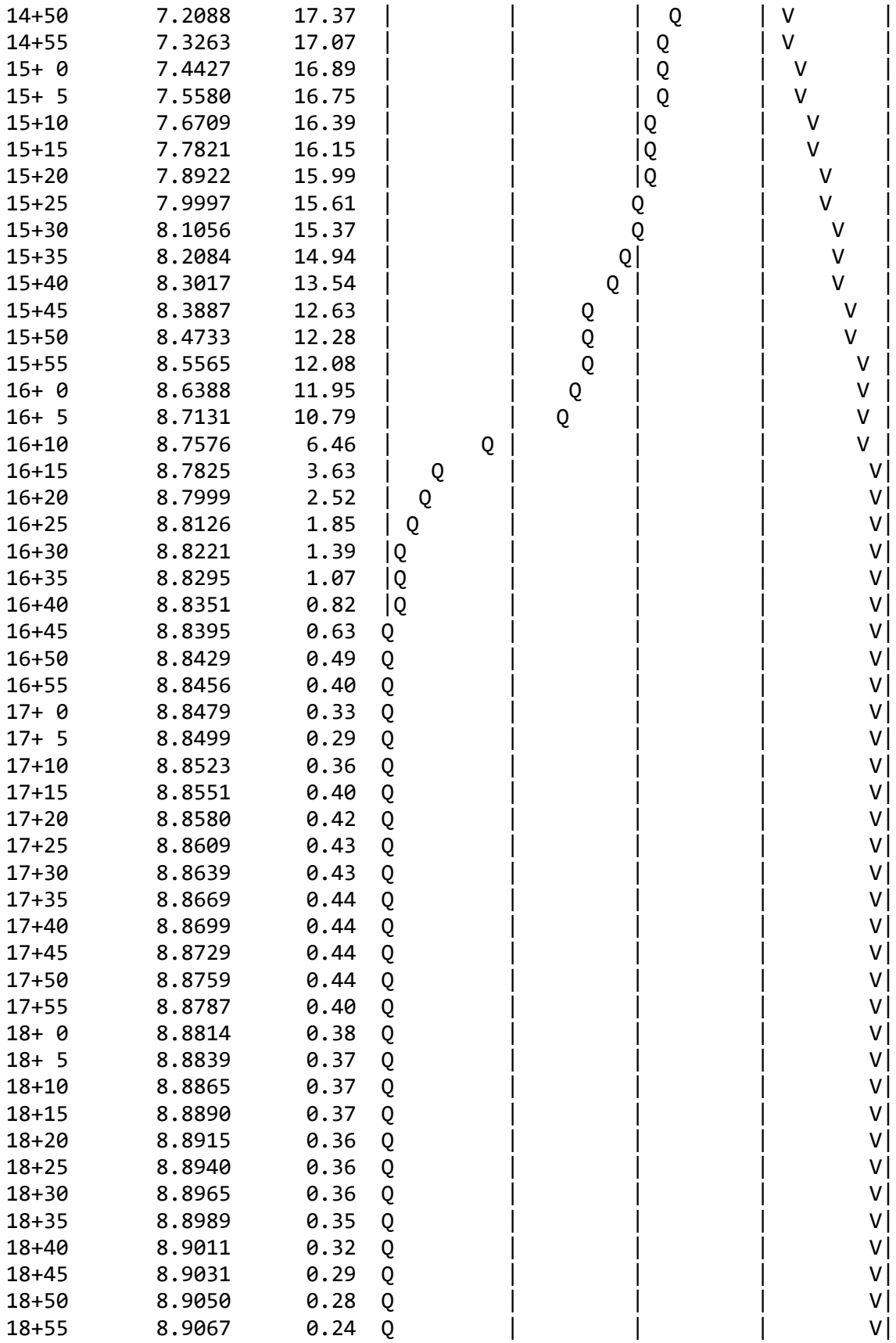
287  23.92     0.07      0.043       (  0.088)       0.039        0.004
288  24.00     0.07      0.043       (  0.088)       0.039        0.004
               (Loss Rate Not Used)
    Sum =     100.0                                   Sum =    31.5
       Flood volume = Effective rainfall      2.63(In)
        times area      41.1(Ac.)/[(In)/(Ft.)] =       9.0(Ac.Ft)
       Total soil loss =      2.77(In)
       Total soil loss =     9.490(Ac.Ft)
       Total rainfall =      5.40(In)
       Flood volume =      392208.3 Cubic Feet
       Total soil loss =      413369.2 Cubic Feet
       ---------------------------------------------------------------------
        Peak flow rate of this hydrograph =     23.688(CFS)
       ---------------------------------------------------------------------
       +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           24 - H O U R    S T O R M
                      R u n o f f      H y d r o g r a p h
       ---------------------------------------------------------------------
                   Hydrograph in   5   Minute intervals ((CFS))

       ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        7.5      15.0      22.5      30.0
 ----------------------------------------------------------------------------
   0+ 5       0.0001      0.02  Q         |         |         |         |
   0+10       0.0007      0.08  Q         |         |         |         |
   0+15       0.0016      0.13  Q         |         |         |         |
   0+20       0.0027      0.15  Q         |         |         |         |
   0+25       0.0040      0.20  Q         |         |         |         |
   0+30       0.0056      0.23  Q         |         |         |         |
   0+35       0.0072      0.24  Q         |         |         |         |
   0+40       0.0090      0.25  Q         |         |         |         |
   0+45       0.0107      0.26  Q         |         |         |         |
   0+50       0.0126      0.27  Q         |         |         |         |
   0+55       0.0147      0.30  Q         |         |         |         |
   1+ 0       0.0169      0.33  Q         |         |         |         |
   1+ 5       0.0192      0.33  Q         |         |         |         |
   1+10       0.0213      0.30  Q         |         |         |         |
   1+15       0.0233      0.29  Q         |         |         |         |
   1+20       0.0252      0.28  Q         |         |         |         |
   1+25       0.0271      0.28  Q         |         |         |         |
   1+30       0.0290      0.27  Q         |         |         |         |
   1+35       0.0308      0.27  Q         |         |         |         |
   1+40       0.0327      0.27  Q         |         |         |         |
   1+45       0.0346      0.27  Q         |         |         |         |
   1+50       0.0365      0.28  Q         |         |         |         |
   1+55       0.0387      0.31  Q         |         |         |         |
   2+ 0       0.0409      0.33  Q         |         |         |         |
   2+ 5       0.0433      0.34  Q         |         |         |         |
   2+10       0.0457      0.35  Q         |         |         |         |
   2+15       0.0481      0.35  Q         |         |         |         |
```

2+20	0.0505	0.35	Q	|	|	|	|
2+25	0.0530	0.35	Q	|	|	|	|
2+30	0.0554	0.36	Q	|	|	|	|
2+35	0.0579	0.36	Q	|	|	|	|
2+40	0.0607	0.40	Q	|	|	|	|
2+45	0.0636	0.42	Q	|	|	|	|
2+50	0.0665	0.43	Q	|	|	|	|
2+55	0.0695	0.44	Q	|	|	|	|
3+ 0	0.0726	0.44	Q	|	|	|	|
3+ 5	0.0756	0.44	Q	|	|	|	|
3+10	0.0787	0.44	Q	|	|	|	|
3+15	0.0817	0.44	Q	|	|	|	|
3+20	0.0848	0.45	Q	|	|	|	|
3+25	0.0879	0.45	Q	|	|	|	|
3+30	0.0910	0.45	Q	|	|	|	|
3+35	0.0940	0.45	Q	|	|	|	|
3+40	0.0971	0.45	Q	|	|	|	|
3+45	0.1002	0.45	Q	|	|	|	|
3+50	0.1033	0.46	Q	|	|	|	|
3+55	0.1067	0.49	Q	|	|	|	|
4+ 0	0.1102	0.51	Q	|	|	|	|
4+ 5	0.1138	0.52	Q	|	|	|	|
4+10	0.1175	0.53	Q	|	|	|	|
4+15	0.1211	0.53	Q	|	|	|	|
4+20	0.1248	0.54	Q	|	|	|	|
4+25	0.1288	0.58	Q	|	|	|	|
4+30	0.1329	0.60	Q	|	|	|	|
4+35	0.1371	0.61	Q	|	|	|	|
4+40	0.1413	0.61	Q	|	|	|	|
4+45	0.1456	0.62	Q	|	|	|	|
4+50	0.1499	0.63	Q	|	|	|	|
4+55	0.1545	0.66	Q	|	|	|	|
5+ 0	0.1592	0.69	Q	|	|	|	|
5+ 5	0.1639	0.68	Q	|	|	|	|
5+10	0.1682	0.62	Q	|	|	|	|
5+15	0.1722	0.58	Q	|	|	|	|
5+20	0.1761	0.57	Q	|	|	|	|
5+25	0.1802	0.60	Q	|	|	|	|
5+30	0.1845	0.61	Q	|	|	|	|
5+35	0.1888	0.63	Q	|	|	|	|
5+40	0.1934	0.66	Q	|	|	|	|
5+45	0.1981	0.69	Q	|	|	|	|
5+50	0.2029	0.70	Q	|	|	|	|
5+55	0.2077	0.70	Q	|	|	|	|
6+ 0	0.2126	0.71	Q	|	|	|	|
6+ 5	0.2176	0.72	Q	|	|	|	|
6+10	0.2227	0.75	VQ	|	|	|	|
6+15	0.2281	0.78	|Q	|	|	|	|
6+20	0.2335	0.79	|Q	|	|	|	|
6+25	0.2390	0.79	|Q	|	|	|	|

6+30	0.2445	0.80	Q				
6+35	0.2500	0.81	Q				
6+40	0.2558	0.84	Q				
6+45	0.2618	0.87	Q				
6+50	0.2679	0.88	Q				
6+55	0.2739	0.88	Q				
7+ 0	0.2800	0.89	Q				
7+ 5	0.2862	0.89	Q				
7+10	0.2923	0.89	Q				
7+15	0.2985	0.89	Q				
7+20	0.3047	0.90	Q				
7+25	0.3111	0.94	Q				
7+30	0.3177	0.96	Q				
7+35	0.3250	1.06	Q				
7+40	0.3348	1.42	Q				
7+45	0.3464	1.68	VQ				
7+50	0.3594	1.88	VQ				
7+55	0.3753	2.31	V Q				
8+ 0	0.3932	2.60	V Q				
8+ 5	0.4133	2.92	V Q				
8+10	0.4389	3.71	V Q				
8+15	0.4680	4.23	V Q				
8+20	0.4988	4.48	V Q				
8+25	0.5308	4.64	V Q				
8+30	0.5637	4.77	V Q				
8+35	0.5978	4.96	V Q				
8+40	0.6348	5.37	V Q				
8+45	0.6738	5.67	V Q				
8+50	0.7145	5.90	V Q				
8+55	0.7581	6.34	V Q				
9+ 0	0.8039	6.65	V Q				
9+ 5	0.8519	6.97	V Q				
9+10	0.9054	7.76	V Q				
9+15	0.9624	8.28	V Q				
9+20	1.0217	8.61	V Q				
9+25	1.0845	9.11	V Q				
9+30	1.1496	9.46	V Q				
9+35	1.2167	9.73	V Q				
9+40	1.2869	10.20	V Q				
9+45	1.3594	10.52	V Q				
9+50	1.4336	10.78	V Q				
9+55	1.5110	11.24	V Q				
10+ 0	1.5906	11.55	V Q				
10+ 5	1.6672	11.12	V Q				
10+10	1.7282	8.87	V Q				
10+15	1.7793	7.42	V Q				
10+20	1.8268	6.90	VQ				
10+25	1.8722	6.60	Q				
10+30	1.9164	6.41	Q				
10+35	1.9628	6.73	Q				

10+40	2.0202	8.34	V	Q			
10+45	2.0848	9.39	V	Q			
10+50	2.1522	9.78	V	Q			
10+55	2.2213	10.03	V	Q			
11+ 0	2.2915	10.20	V	Q			
11+ 5	2.3620	10.24	V	Q			
11+10	2.4310	10.02	V	Q			
11+15	2.4992	9.90	V	Q			
11+20	2.5674	9.90	V	Q			
11+25	2.6358	9.92	V	Q			
11+30	2.7043	9.95	V	Q			
11+35	2.7719	9.81	V	Q			
11+40	2.8349	9.15	Q				
11+45	2.8951	8.74	Q	V			
11+50	2.9548	8.68	Q	V			
11+55	3.0164	8.94	Q	V			
12+ 0	3.0792	9.12	Q	V			
12+ 5	3.1466	9.79	Q				
12+10	3.2307	12.20	V	Q			
12+15	3.3256	13.79	V	Q			
12+20	3.4255	14.50	V	Q			
12+25	3.5305	15.24	V	Q			
12+30	3.6388	15.73	V	Q			
12+35	3.7503	16.19	V	Q			
12+40	3.8680	17.08	V	Q			
12+45	3.9898	17.69	V	Q			
12+50	4.1143	18.07	V	Q			
12+55	4.2425	18.61	V	Q			
13+ 0	4.3732	18.99	V	Q			
13+ 5	4.5084	19.62	V	Q			
13+10	4.6560	21.44	V	Q			
13+15	4.8119	22.64	V	Q			
13+20	4.9712	23.14	V	Q			
13+25	5.1328	23.46	V	Q			
13+30	5.2959	23.69	V	Q			
13+35	5.4537	22.91	V	Q			
13+40	5.5868	19.32	V	Q			
13+45	5.7039	17.00	V	Q			
13+50	5.8152	16.16	V	Q			
13+55	5.9230	15.66	V	Q			
14+ 0	6.0287	15.34	V	Q			
14+ 5	6.1353	15.48	V	Q			
14+10	6.2500	16.66	V	Q			
14+15	6.3701	17.43	V	Q			
14+20	6.4913	17.61	V	Q			
14+25	6.6113	17.43	V	Q			
14+30	6.7306	17.31	V	Q			
14+35	6.8498	17.31	V	Q			
14+40	6.9693	17.36	V	Q			
14+45	7.0892	17.41	V	Q			



19+ 0	8.9081	0.21	Q	|	|	|	V|
19+ 5	8.9096	0.21	Q	|	|	|	V|
19+10	8.9112	0.24	Q	|	|	|	V|
19+15	8.9129	0.25	Q	|	|	|	V|
19+20	8.9148	0.27	Q	|	|	|	V|
19+25	8.9169	0.30	Q	|	|	|	V|
19+30	8.9191	0.33	Q	|	|	|	V|
19+35	8.9214	0.33	Q	|	|	|	V|
19+40	8.9235	0.30	Q	|	|	|	V|
19+45	8.9254	0.28	Q	|	|	|	V|
19+50	8.9273	0.27	Q	|	|	|	V|
19+55	8.9289	0.23	Q	|	|	|	V|
20+ 0	8.9303	0.21	Q	|	|	|	V|
20+ 5	8.9318	0.21	Q	|	|	|	V|
20+10	8.9334	0.24	Q	|	|	|	V|
20+15	8.9351	0.25	Q	|	|	|	V|
20+20	8.9369	0.26	Q	|	|	|	V|
20+25	8.9387	0.26	Q	|	|	|	V|
20+30	8.9405	0.26	Q	|	|	|	V|
20+35	8.9424	0.26	Q	|	|	|	V|
20+40	8.9442	0.27	Q	|	|	|	V|
20+45	8.9460	0.27	Q	|	|	|	V|
20+50	8.9478	0.26	Q	|	|	|	V|
20+55	8.9494	0.23	Q	|	|	|	V|
21+ 0	8.9508	0.20	Q	|	|	|	V|
21+ 5	8.9522	0.20	Q	|	|	|	V|
21+10	8.9538	0.23	Q	|	|	|	V|
21+15	8.9555	0.25	Q	|	|	|	V|
21+20	8.9572	0.25	Q	|	|	|	V|
21+25	8.9587	0.22	Q	|	|	|	V|
21+30	8.9601	0.20	Q	|	|	|	V|
21+35	8.9615	0.20	Q	|	|	|	V|
21+40	8.9630	0.23	Q	|	|	|	V|
21+45	8.9648	0.25	Q	|	|	|	V|
21+50	8.9665	0.25	Q	|	|	|	V|
21+55	8.9680	0.22	Q	|	|	|	V|
22+ 0	8.9693	0.20	Q	|	|	|	V|
22+ 5	8.9707	0.20	Q	|	|	|	V|
22+10	8.9723	0.23	Q	|	|	|	V|
22+15	8.9740	0.25	Q	|	|	|	V|
22+20	8.9757	0.25	Q	|	|	|	V|
22+25	8.9772	0.22	Q	|	|	|	V|
22+30	8.9786	0.20	Q	|	|	|	V|
22+35	8.9799	0.19	Q	|	|	|	V|
22+40	8.9812	0.19	Q	|	|	|	V|
22+45	8.9825	0.18	Q	|	|	|	V|
22+50	8.9837	0.18	Q	|	|	|	V|
22+55	8.9850	0.18	Q	|	|	|	V|
23+ 0	8.9862	0.18	Q	|	|	|	V|
23+ 5	8.9875	0.18	Q	|	|	|	V|

23+10	8.9887	0.18	Q	|	|	|	V|
23+15	8.9899	0.18	Q	|	|	|	V|
23+20	8.9912	0.18	Q	|	|	|	V|
23+25	8.9924	0.18	Q	|	|	|	V|
23+30	8.9936	0.18	Q	|	|	|	V|
23+35	8.9949	0.18	Q	|	|	|	V|
23+40	8.9961	0.18	Q	|	|	|	V|
23+45	8.9973	0.18	Q	|	|	|	V|
23+50	8.9986	0.18	Q	|	|	|	V|
23+55	8.9998	0.18	Q	|	|	|	V|
24+ 0	9.0010	0.18	Q	|	|	|	V|
24+ 5	9.0022	0.16	Q	|	|	|	V|
24+10	9.0028	0.09	Q	|	|	|	V|
24+15	9.0032	0.05	Q	|	|	|	V|
24+20	9.0034	0.03	Q	|	|	|	V|
24+25	9.0035	0.02	Q	|	|	|	V|
24+30	9.0037	0.02	Q	|	|	|	V|
24+35	9.0037	0.01	Q	|	|	|	V|
24+40	9.0038	0.01	Q	|	|	|	V|
24+45	9.0038	0.01	Q	|	|	|	V|
24+50	9.0038	0.00	Q	|	|	|	V|
24+55	9.0039	0.00	Q	|	|	|	V|
25+ 0	9.0039	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 05/10/24 File: ONSITEPREW1242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  79.8      0.246     0.000        0.246       1.000      0.246
                                                 Sum (F) =   0.246
Area averaged mean soil loss (F) (In/Hr) =  0.246
Minimum soil loss rate ((In/Hr)) =  0.123
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004
46	3.83	0.20	0.048	(0.364)	0.043	0.005
47	3.92	0.20	0.048	(0.362)	0.043	0.005

48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005
50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010
96	8.00	0.43	0.104	(0.292)	0.094	0.010
97	8.08	0.50	0.120	(0.290)	0.108	0.012

98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012
125	10.42	0.50	0.120	(0.254)	0.108	0.012
126	10.50	0.50	0.120	(0.253)	0.108	0.012
127	10.58	0.67	0.160	(0.251)	0.144	0.016
128	10.67	0.67	0.160	(0.250)	0.144	0.016
129	10.75	0.67	0.160	(0.249)	0.144	0.016
130	10.83	0.67	0.160	(0.248)	0.144	0.016
131	10.92	0.67	0.160	(0.247)	0.144	0.016
132	11.00	0.67	0.160	(0.245)	0.144	0.016
133	11.08	0.63	0.152	(0.244)	0.137	0.015
134	11.17	0.63	0.152	(0.243)	0.137	0.015
135	11.25	0.63	0.152	(0.242)	0.137	0.015
136	11.33	0.63	0.152	(0.241)	0.137	0.015
137	11.42	0.63	0.152	(0.239)	0.137	0.015
138	11.50	0.63	0.152	(0.238)	0.137	0.015
139	11.58	0.57	0.136	(0.237)	0.122	0.014
140	11.67	0.57	0.136	(0.236)	0.122	0.014
141	11.75	0.57	0.136	(0.235)	0.122	0.014
142	11.83	0.60	0.144	(0.233)	0.130	0.014
143	11.92	0.60	0.144	(0.232)	0.130	0.014
144	12.00	0.60	0.144	(0.231)	0.130	0.014
145	12.08	0.83	0.200	(0.230)	0.180	0.020
146	12.17	0.83	0.200	(0.229)	0.180	0.020
147	12.25	0.83	0.200	(0.228)	0.180	0.020

148	12.33	0.87	0.208	(	0.227)	0.187	0.021
149	12.42	0.87	0.208	(	0.225)	0.187	0.021
150	12.50	0.87	0.208	(	0.224)	0.187	0.021
151	12.58	0.93	0.224	(	0.223)	0.202	0.022
152	12.67	0.93	0.224	(	0.222)	0.202	0.022
153	12.75	0.93	0.224	(	0.221)	0.202	0.022
154	12.83	0.97	0.232	(	0.220)	0.209	0.023
155	12.92	0.97	0.232	(	0.219)	0.209	0.023
156	13.00	0.97	0.232	(	0.218)	0.209	0.023
157	13.08	1.13	0.272		0.216	(0.245)	0.056
158	13.17	1.13	0.272		0.215	(0.245)	0.057
159	13.25	1.13	0.272		0.214	(0.245)	0.058
160	13.33	1.13	0.272		0.213	(0.245)	0.059
161	13.42	1.13	0.272		0.212	(0.245)	0.060
162	13.50	1.13	0.272		0.211	(0.245)	0.061
163	13.58	0.77	0.184	(	0.210)	0.166	0.018
164	13.67	0.77	0.184	(	0.209)	0.166	0.018
165	13.75	0.77	0.184	(	0.208)	0.166	0.018
166	13.83	0.77	0.184	(	0.207)	0.166	0.018
167	13.92	0.77	0.184	(	0.206)	0.166	0.018
168	14.00	0.77	0.184	(	0.205)	0.166	0.018
169	14.08	0.90	0.216	(	0.204)	0.194	0.022
170	14.17	0.90	0.216	(	0.203)	0.194	0.022
171	14.25	0.90	0.216	(	0.202)	0.194	0.022
172	14.33	0.87	0.208	(	0.200)	0.187	0.021
173	14.42	0.87	0.208	(	0.199)	0.187	0.021
174	14.50	0.87	0.208	(	0.198)	0.187	0.021
175	14.58	0.87	0.208	(	0.197)	0.187	0.021
176	14.67	0.87	0.208	(	0.196)	0.187	0.021
177	14.75	0.87	0.208	(	0.195)	0.187	0.021
178	14.83	0.83	0.200	(	0.194)	0.180	0.020
179	14.92	0.83	0.200	(	0.193)	0.180	0.020
180	15.00	0.83	0.200	(	0.192)	0.180	0.020
181	15.08	0.80	0.192	(	0.191)	0.173	0.019
182	15.17	0.80	0.192	(	0.190)	0.173	0.019
183	15.25	0.80	0.192	(	0.189)	0.173	0.019
184	15.33	0.77	0.184	(	0.188)	0.166	0.018
185	15.42	0.77	0.184	(	0.188)	0.166	0.018
186	15.50	0.77	0.184	(	0.187)	0.166	0.018
187	15.58	0.63	0.152	(	0.186)	0.137	0.015
188	15.67	0.63	0.152	(	0.185)	0.137	0.015
189	15.75	0.63	0.152	(	0.184)	0.137	0.015
190	15.83	0.63	0.152	(	0.183)	0.137	0.015
191	15.92	0.63	0.152	(	0.182)	0.137	0.015
192	16.00	0.63	0.152	(	0.181)	0.137	0.015
193	16.08	0.13	0.032	(	0.180)	0.029	0.003
194	16.17	0.13	0.032	(	0.179)	0.029	0.003
195	16.25	0.13	0.032	(	0.178)	0.029	0.003
196	16.33	0.13	0.032	(	0.177)	0.029	0.003
197	16.42	0.13	0.032	(	0.176)	0.029	0.003

198	16.50	0.13	0.032	(0.175)	0.029	0.003
199	16.58	0.10	0.024	(0.175)	0.022	0.002
200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002
246	20.50	0.10	0.024	(0.139)	0.022	0.002
247	20.58	0.10	0.024	(0.139)	0.022	0.002

248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002
275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.6

Flood volume = Effective rainfall 0.22(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.729(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 3833.7 Cubic Feet
Total soil loss = 31739.9 Cubic Feet

Peak flow rate of this hydrograph = 0.300(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0004	0.01	Q				
0+35	0.0005	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0006	0.01	Q				
0+50	0.0007	0.01	Q				
0+55	0.0008	0.02	Q				
1+ 0	0.0009	0.02	Q				
1+ 5	0.0010	0.01	Q				
1+10	0.0011	0.01	Q				
1+15	0.0012	0.01	Q				
1+20	0.0013	0.01	Q				
1+25	0.0014	0.01	Q				
1+30	0.0014	0.01	Q				
1+35	0.0015	0.01	Q				
1+40	0.0016	0.01	Q				
1+45	0.0017	0.01	Q				
1+50	0.0018	0.01	Q				
1+55	0.0019	0.02	Q				
2+ 0	0.0020	0.02	Q				
2+ 5	0.0021	0.02	Q				
2+10	0.0022	0.02	QV				
2+15	0.0023	0.02	QV				
2+20	0.0024	0.02	QV				
2+25	0.0026	0.02	QV				
2+30	0.0027	0.02	QV				
2+35	0.0028	0.02	QV				
2+40	0.0029	0.02	QV				
2+45	0.0031	0.02	QV				
2+50	0.0032	0.02	QV				
2+55	0.0033	0.02	QV				
3+ 0	0.0035	0.02	QV				
3+ 5	0.0036	0.02	QV				
3+10	0.0037	0.02	QV				

3+15	0.0039	0.02	QV	|	|	|	|
3+20	0.0040	0.02	QV	|	|	|	|
3+25	0.0042	0.02	QV	|	|	|	|
3+30	0.0043	0.02	QV	|	|	|	|
3+35	0.0044	0.02	Q V	|	|	|	|
3+40	0.0046	0.02	Q V	|	|	|	|
3+45	0.0047	0.02	Q V	|	|	|	|
3+50	0.0049	0.02	Q V	|	|	|	|
3+55	0.0050	0.02	Q V	|	|	|	|
4+ 0	0.0052	0.02	Q V	|	|	|	|
4+ 5	0.0053	0.02	Q V	|	|	|	|
4+10	0.0055	0.02	Q V	|	|	|	|
4+15	0.0057	0.02	Q V	|	|	|	|
4+20	0.0059	0.03	Q V	|	|	|	|
4+25	0.0060	0.03	Q V	|	|	|	|
4+30	0.0062	0.03	Q V	|	|	|	|
4+35	0.0064	0.03	Q V	|	|	|	|
4+40	0.0066	0.03	Q V	|	|	|	|
4+45	0.0068	0.03	Q V	|	|	|	|
4+50	0.0070	0.03	Q V	|	|	|	|
4+55	0.0072	0.03	Q V	|	|	|	|
5+ 0	0.0074	0.03	Q V	|	|	|	|
5+ 5	0.0076	0.03	Q V	|	|	|	|
5+10	0.0078	0.02	Q V	|	|	|	|
5+15	0.0080	0.02	Q V	|	|	|	|
5+20	0.0081	0.03	Q V	|	|	|	|
5+25	0.0083	0.03	Q V	|	|	|	|
5+30	0.0085	0.03	Q V	|	|	|	|
5+35	0.0087	0.03	Q V	|	|	|	|
5+40	0.0089	0.03	Q V	|	|	|	|
5+45	0.0092	0.03	Q V	|	|	|	|
5+50	0.0094	0.03	Q V	|	|	|	|
5+55	0.0096	0.03	Q V	|	|	|	|
6+ 0	0.0098	0.03	Q V	|	|	|	|
6+ 5	0.0101	0.03	Q V	|	|	|	|
6+10	0.0103	0.04	Q V	|	|	|	|
6+15	0.0105	0.04	Q V	|	|	|	|
6+20	0.0108	0.04	Q V	|	|	|	|
6+25	0.0110	0.04	Q V	|	|	|	|
6+30	0.0113	0.04	Q V	|	|	|	|
6+35	0.0115	0.04	Q V	|	|	|	|
6+40	0.0118	0.04	Q V	|	|	|	|
6+45	0.0121	0.04	Q V	|	|	|	|
6+50	0.0124	0.04	Q V	|	|	|	|
6+55	0.0126	0.04	Q V	|	|	|	|
7+ 0	0.0129	0.04	Q V	|	|	|	|
7+ 5	0.0132	0.04	Q V	|	|	|	|
7+10	0.0134	0.04	Q V	|	|	|	|
7+15	0.0137	0.04	Q V	|	|	|	|
7+20	0.0140	0.04	Q V	|	|	|	|

7+25	0.0143	0.04	Q	V	|	|	|	|
7+30	0.0146	0.04	Q	V	|	|	|	|
7+35	0.0149	0.05	Q	V	|	|	|	|
7+40	0.0153	0.05	Q	V	|	|	|	|
7+45	0.0156	0.05	Q	V	|	|	|	|
7+50	0.0159	0.05	Q	V	|	|	|	|
7+55	0.0163	0.05	Q	V	|	|	|	|
8+ 0	0.0166	0.05	Q	V	|	|	|	|
8+ 5	0.0170	0.06	Q	V	|	|	|	|
8+10	0.0174	0.06	Q	V	|	|	|	|
8+15	0.0178	0.06	Q	V	|	|	|	|
8+20	0.0183	0.06	Q	V	|	|	|	|
8+25	0.0187	0.06	Q	V	|	|	|	|
8+30	0.0191	0.06	Q	V	|	|	|	|
8+35	0.0195	0.06	Q	V	|	|	|	|
8+40	0.0199	0.06	Q	V	|	|	|	|
8+45	0.0204	0.06	Q	V	|	|	|	|
8+50	0.0208	0.07	Q	V	|	|	|	|
8+55	0.0213	0.07	Q	V	|	|	|	|
9+ 0	0.0217	0.07	Q	V	|	|	|	|
9+ 5	0.0223	0.07	Q	V	|	|	|	|
9+10	0.0228	0.08	Q	V	|	|	|	|
9+15	0.0233	0.08	Q	V	|	|	|	|
9+20	0.0238	0.08	Q	V	|	|	|	|
9+25	0.0244	0.08	Q	|	V	|	|	|
9+30	0.0249	0.08	Q	|	V	|	|	|
9+35	0.0255	0.08	Q	|	V	|	|	|
9+40	0.0260	0.08	Q	|	V	|	|	|
9+45	0.0266	0.08	Q	|	| V	|	|	|
9+50	0.0272	0.09	Q	|	| V	|	|	|
9+55	0.0278	0.09	Q	|	| V	|	|	|
10+ 0	0.0284	0.09	Q	|	| V	|	|	|
10+ 5	0.0289	0.07	Q	|	| V	|	|	|
10+10	0.0293	0.06	Q	|	| V	|	|	|
10+15	0.0297	0.06	Q	|	| V	|	|	|
10+20	0.0301	0.06	Q	|	| V	|	|	|
10+25	0.0305	0.06	Q	|	| V	|	|	|
10+30	0.0309	0.06	Q	|	| V	|	|	|
10+35	0.0314	0.07	Q	|	| V	|	|	|
10+40	0.0320	0.08	Q	|	| V	|	|	|
10+45	0.0325	0.08	Q	|	| V	|	|	|
10+50	0.0331	0.08	Q	|	| V	|	|	|
10+55	0.0336	0.08	Q	|	| V	|	|	|
11+ 0	0.0341	0.08	Q	|	| V	|	|	|
11+ 5	0.0347	0.08	Q	|	| V	|	|	|
11+10	0.0352	0.08	Q	|	| V	|	|	|
11+15	0.0357	0.08	Q	|	| V	|	|	|
11+20	0.0362	0.08	Q	|	| V	|	|	|
11+25	0.0367	0.08	Q	|	| V	|	|	|
11+30	0.0373	0.08	Q	|	| V	|	|	|

```
11+35       0.0377      0.07  Q         |      V  |         |         |
11+40       0.0382      0.07  Q         |      V  |         |         |
11+45       0.0387      0.07  Q         |      V  |         |         |
11+50       0.0391      0.07  Q         |      V  |         |         |
11+55       0.0396      0.07  Q         |       V |         |         |
12+ 0       0.0401      0.07  Q         |       V |         |         |
12+ 5       0.0407      0.09  Q         |       V |         |         |
12+10       0.0414      0.10  Q         |       V |         |         |
12+15       0.0421      0.10  Q         |        V|         |         |
12+20       0.0428      0.10  Q         |        V|         |         |
12+25       0.0435      0.10  Q         |        V|         |         |
12+30       0.0442      0.10  Q         |         V         |         |
12+35       0.0450      0.11  Q         |         V         |         |
12+40       0.0457      0.11  Q         |         V         |         |
12+45       0.0465      0.11  Q         |         |V        |         |
12+50       0.0473      0.11  Q         |         |V        |         |
12+55       0.0481      0.11  Q         |         |V        |         |
13+ 0       0.0488      0.11  Q         |         | V       |         |
13+ 5       0.0504      0.23  Q         |         | V       |         |
13+10       0.0523      0.28  |Q        |         |  V      |         |
13+15       0.0543      0.28  |Q        |         |   V     |         |
13+20       0.0563      0.29  |Q        |         |    V    |         |
13+25       0.0583      0.29  |Q        |         |     V   |         |
13+30       0.0604      0.30  |Q        |         |      V  |         |
13+35       0.0614      0.15  Q         |         |      V  |         |
13+40       0.0620      0.09  Q         |         |       V |         |
13+45       0.0627      0.09  Q         |         |       V |         |
13+50       0.0633      0.09  Q         |         |       V |         |
13+55       0.0639      0.09  Q         |         |        V|         |
14+ 0       0.0646      0.09  Q         |         |        V|         |
14+ 5       0.0653      0.10  Q         |         |        V|         |
14+10       0.0660      0.11  Q         |         |        V|         |
14+15       0.0667      0.11  Q         |         |         V         |
14+20       0.0674      0.10  Q         |         |         V         |
14+25       0.0681      0.10  Q         |         |         V         |
14+30       0.0689      0.10  Q         |         |         |V        |
14+35       0.0696      0.10  Q         |         |         |V        |
14+40       0.0703      0.10  Q         |         |         |V        |
14+45       0.0710      0.10  Q         |         |         | V       |
14+50       0.0717      0.10  Q         |         |         | V       |
14+55       0.0723      0.10  Q         |         |         | V       |
15+ 0       0.0730      0.10  Q         |         |         |  V      |
15+ 5       0.0737      0.10  Q         |         |         |  V      |
15+10       0.0743      0.09  Q         |         |         |  V      |
15+15       0.0750      0.09  Q         |         |         |   V     |
15+20       0.0756      0.09  Q         |         |         |   V     |
15+25       0.0763      0.09  Q         |         |         |   V     |
15+30       0.0769      0.09  Q         |         |         |   V     |
15+35       0.0774      0.08  Q         |         |         |    V    |
15+40       0.0779      0.08  Q         |         |         |    V    |
```

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15+45       0.0785      0.08  Q         |          |          |    V     |
15+50       0.0790      0.08  Q         |          |          |    V     |
15+55       0.0795      0.08  Q         |          |          |     V    |
16+ 0       0.0800      0.08  Q         |          |          |     V    |
16+ 5       0.0802      0.03  Q         |          |          |     V    |
16+10       0.0804      0.02  Q         |          |          |     V    |
16+15       0.0805      0.02  Q         |          |          |     V    |
16+20       0.0806      0.02  Q         |          |          |     V    |
16+25       0.0807      0.02  Q         |          |          |     V    |
16+30       0.0808      0.02  Q         |          |          |     V    |
16+35       0.0809      0.01  Q         |          |          |     V    |
16+40       0.0810      0.01  Q         |          |          |     V    |
16+45       0.0810      0.01  Q         |          |          |     V    |
16+50       0.0811      0.01  Q         |          |          |     V    |
16+55       0.0812      0.01  Q         |          |          |     V    |
17+ 0       0.0813      0.01  Q         |          |          |     V    |
17+ 5       0.0814      0.02  Q         |          |          |      V   |
17+10       0.0815      0.02  Q         |          |          |      V   |
17+15       0.0817      0.02  Q         |          |          |      V   |
17+20       0.0818      0.02  Q         |          |          |      V   |
17+25       0.0820      0.02  Q         |          |          |      V   |
17+30       0.0821      0.02  Q         |          |          |      V   |
17+35       0.0822      0.02  Q         |          |          |      V   |
17+40       0.0824      0.02  Q         |          |          |      V   |
17+45       0.0825      0.02  Q         |          |          |      V   |
17+50       0.0826      0.02  Q         |          |          |      V   |
17+55       0.0827      0.02  Q         |          |          |      V   |
18+ 0       0.0828      0.02  Q         |          |          |      V   |
18+ 5       0.0829      0.02  Q         |          |          |      V   |
18+10       0.0831      0.02  Q         |          |          |      V   |
18+15       0.0832      0.02  Q         |          |          |      V   |
18+20       0.0833      0.02  Q         |          |          |      V   |
18+25       0.0834      0.02  Q         |          |          |      V   |
18+30       0.0835      0.02  Q         |          |          |      V   |
18+35       0.0836      0.01  Q         |          |          |      V   |
18+40       0.0837      0.01  Q         |          |          |       V  |
18+45       0.0837      0.01  Q         |          |          |       V  |
18+50       0.0838      0.01  Q         |          |          |       V  |
18+55       0.0839      0.01  Q         |          |          |       V  |
19+ 0       0.0839      0.01  Q         |          |          |       V  |
19+ 5       0.0840      0.01  Q         |          |          |       V  |
19+10       0.0841      0.01  Q         |          |          |       V  |
19+15       0.0841      0.01  Q         |          |          |       V  |
19+20       0.0842      0.01  Q         |          |          |       V  |
19+25       0.0844      0.02  Q         |          |          |       V  |
19+30       0.0845      0.02  Q         |          |          |       V  |
19+35       0.0846      0.01  Q         |          |          |       V  |
19+40       0.0846      0.01  Q         |          |          |       V  |
19+45       0.0847      0.01  Q         |          |          |       V  |
19+50       0.0848      0.01  Q         |          |          |       V  |
```

19+55	0.0848	0.01	Q	|	|	|	V |
20+ 0	0.0849	0.01	Q	|	|	|	V |
20+ 5	0.0850	0.01	Q	|	|	|	V |
20+10	0.0850	0.01	Q	|	|	|	V |
20+15	0.0851	0.01	Q	|	|	|	V |
20+20	0.0852	0.01	Q	|	|	|	V |
20+25	0.0853	0.01	Q	|	|	|	V |
20+30	0.0854	0.01	Q	|	|	|	V |
20+35	0.0855	0.01	Q	|	|	|	V |
20+40	0.0855	0.01	Q	|	|	|	V |
20+45	0.0856	0.01	Q	|	|	|	V |
20+50	0.0857	0.01	Q	|	|	|	V |
20+55	0.0857	0.01	Q	|	|	|	V |
21+ 0	0.0858	0.01	Q	|	|	|	V |
21+ 5	0.0859	0.01	Q	|	|	|	V|
21+10	0.0859	0.01	Q	|	|	|	V|
21+15	0.0860	0.01	Q	|	|	|	V|
21+20	0.0861	0.01	Q	|	|	|	V|
21+25	0.0861	0.01	Q	|	|	|	V|
21+30	0.0862	0.01	Q	|	|	|	V|
21+35	0.0863	0.01	Q	|	|	|	V|
21+40	0.0864	0.01	Q	|	|	|	V|
21+45	0.0864	0.01	Q	|	|	|	V|
21+50	0.0865	0.01	Q	|	|	|	V|
21+55	0.0866	0.01	Q	|	|	|	V|
22+ 0	0.0866	0.01	Q	|	|	|	V|
22+ 5	0.0867	0.01	Q	|	|	|	V|
22+10	0.0868	0.01	Q	|	|	|	V|
22+15	0.0868	0.01	Q	|	|	|	V|
22+20	0.0869	0.01	Q	|	|	|	V|
22+25	0.0870	0.01	Q	|	|	|	V|
22+30	0.0870	0.01	Q	|	|	|	V|
22+35	0.0871	0.01	Q	|	|	|	V|
22+40	0.0871	0.01	Q	|	|	|	V|
22+45	0.0872	0.01	Q	|	|	|	V|
22+50	0.0872	0.01	Q	|	|	|	V|
22+55	0.0873	0.01	Q	|	|	|	V|
23+ 0	0.0873	0.01	Q	|	|	|	V|
23+ 5	0.0874	0.01	Q	|	|	|	V|
23+10	0.0874	0.01	Q	|	|	|	V|
23+15	0.0875	0.01	Q	|	|	|	V|
23+20	0.0876	0.01	Q	|	|	|	V|
23+25	0.0876	0.01	Q	|	|	|	V|
23+30	0.0877	0.01	Q	|	|	|	V|
23+35	0.0877	0.01	Q	|	|	|	V|
23+40	0.0878	0.01	Q	|	|	|	V|
23+45	0.0878	0.01	Q	|	|	|	V|
23+50	0.0879	0.01	Q	|	|	|	V|
23+55	0.0879	0.01	Q	|	|	|	V|
24+ 0	0.0880	0.01	Q	|	|	|	V|

```
   24+ 5       0.0880      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 05/10/24 File: ONSITEPREW1110.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            0.50                  2.45

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            1.30                  6.37

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                               Sum = 100.000   Sum=       4.938
-----------------------------------------------------------------
```

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	3.30	0.328	0.117	(0.295)	0.211
2	0.17	4.20	0.418	0.117	(0.376)	0.301
3	0.25	4.40	0.438	0.117	(0.394)	0.321
4	0.33	4.80	0.478	0.117	(0.430)	0.361
5	0.42	5.20	0.517	0.117	(0.466)	0.400
6	0.50	6.20	0.617	0.117	(0.555)	0.500
7	0.58	6.80	0.677	0.117	(0.609)	0.560
8	0.67	8.80	0.876	0.117	(0.788)	0.759
9	0.75	13.90	1.383	0.117	(1.245)	1.266
10	0.83	31.40	3.124	0.117	(2.812)	3.007
11	0.92	7.20	0.716	0.117	(0.645)	0.599
12	1.00	3.80	0.378	0.117	(0.340)	0.261
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.71(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.048(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 12665.9 Cubic Feet
Total soil loss = 2081.1 Cubic Feet

Peak flow rate of this hydrograph = 12.319(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	0.0051	0.74	VQ | | | |
0+10	0.0144	1.36	|VQ | | | |
0+15	0.0251	1.56	| Q | | | |
0+20	0.0370	1.72	| Q V | | | |
0+25	0.0502	1.92	| Q V | | | |
0+30	0.0662	2.32	| Q V| | | |
0+35	0.0847	2.68	| Q |V | | |
0+40	0.1085	3.46	| Q | V | | |
0+45	0.1465	5.52	| |Q V | |
0+50	0.2313	12.32	| | | Q |V |
0+55	0.2759	6.47	| | Q | | V |
1+ 0	0.2881	1.78	| Q | | | V|

```
    1+ 5       0.2908      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 05/10/24 File: ONSITEPREW1310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            0.80                    3.92

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.00                    9.80

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

Flood volume = Effective rainfall 0.95(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.142(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 16816.3 Cubic Feet
Total soil loss = 6194.1 Cubic Feet

Peak flow rate of this hydrograph = 5.508(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	0.0020	0.30	VQ				
0+10	0.0049	0.42	VQ				
0+15	0.0071	0.31	VQ				
0+20	0.0104	0.48	|Q				
0+25	0.0143	0.57	|VQ				
0+30	0.0194	0.73	| Q				
0+35	0.0238	0.64	| Q				
0+40	0.0289	0.73	| Q				
0+45	0.0344	0.80	| Q				
0+50	0.0388	0.64	| Q V				
0+55	0.0431	0.63	| Q V				
1+ 0	0.0483	0.76	| Q V				
1+ 5	0.0553	1.02	| QV				
1+10	0.0630	1.11	| Q V				
1+15	0.0706	1.11	| Q V				
1+20	0.0775	1.00	| Q V				
1+25	0.0863	1.28	| Q V				
1+30	0.0965	1.47	| Q V				
1+35	0.1056	1.33	| Q V				
1+40	0.1154	1.42	| Q |V				
1+45	0.1279	1.82	| Q | V				
1+50	0.1407	1.84	| Q | V				
1+55	0.1523	1.69	| Q | V				
2+ 0	0.1640	1.70	| Q | V				
2+ 5	0.1763	1.78	| Q | V				
2+10	0.1927	2.39	| Q| V				
2+15	0.2139	3.08	| | Q | V				
2+20	0.2308	2.45	| Q| | V				
2+25	0.2576	3.89	| | Q | V				
2+30	0.2914	4.91	| | Q| V				
2+35	0.3293	5.51	| | | Q | V				
2+40	0.3601	4.47	| | Q | | V				
2+45	0.3727	1.84	| Q | | V				
2+50	0.3786	0.85	| Q | | V				
2+55	0.3841	0.80	| Q | | V				
3+ 0	0.3860	0.27	|Q | | V				
3+ 5	0.3860	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 05/10/24 File: ONSITEPREW1610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            1.20                  5.88

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.80                 13.72

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

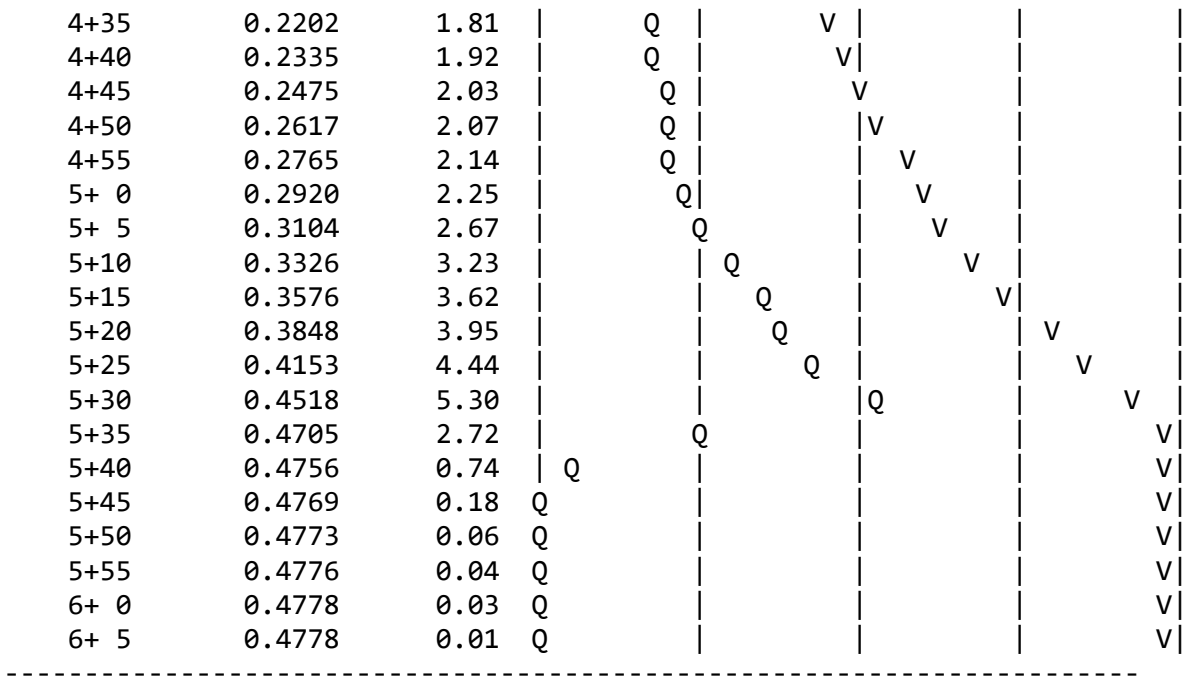
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217
46	3.83	1.50	0.334	0.117	(0.301)	0.217
47	3.92	1.60	0.357	0.117	(0.321)	0.240

```
48   4.00     1.60      0.357          0.117    (  0.321)        0.240
49   4.08     1.70      0.379          0.117    (  0.341)        0.262
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       4.9(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.281(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =       20813.2 Cubic Feet
      Total soil loss =       12239.0 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      5.299(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       0.0003      0.04  Q         |         |         |         |
  0+10       0.0008      0.07  Q         |         |         |         |
  0+15       0.0014      0.08  Q         |         |         |         |
  0+20       0.0019      0.08  Q         |         |         |         |
```

```
0+25       0.0025      0.08  Q         |         |         |         |
0+30       0.0036      0.16  Q         |         |         |         |
0+35       0.0049      0.19  Q         |         |         |         |
0+40       0.0063      0.19  Q         |         |         |         |
0+45       0.0076      0.19  Q         |         |         |         |
0+50       0.0089      0.19  Q         |         |         |         |
0+55       0.0103      0.19  Q         |         |         |         |
1+ 0       0.0121      0.27  |Q        |         |         |         |
1+ 5       0.0142      0.30  |Q        |         |         |         |
1+10       0.0163      0.30  |Q        |         |         |         |
1+15       0.0184      0.30  |Q        |         |         |         |
1+20       0.0205      0.30  |Q        |         |         |         |
1+25       0.0226      0.30  |Q        |         |         |         |
1+30       0.0247      0.30  |QV       |         |         |         |
1+35       0.0267      0.30  |QV       |         |         |         |
1+40       0.0288      0.30  |QV       |         |         |         |
1+45       0.0309      0.30  |QV       |         |         |         |
1+50       0.0330      0.30  |QV       |         |         |         |
1+55       0.0351      0.30  |QV       |         |         |         |
2+ 0       0.0377      0.38  |Q V      |         |         |         |
2+ 5       0.0400      0.34  |Q V      |         |         |         |
2+10       0.0427      0.38  |Q V      |         |         |         |
2+15       0.0455      0.41  |Q V      |         |         |         |
2+20       0.0484      0.41  |Q  V     |         |         |         |
2+25       0.0512      0.41  |Q  V     |         |         |         |
2+30       0.0540      0.41  |Q  V     |         |         |         |
2+35       0.0569      0.41  |Q  V     |         |         |         |
2+40       0.0597      0.41  |Q   V    |         |         |         |
2+45       0.0631      0.49  |Q   V    |         |         |         |
2+50       0.0667      0.52  | Q  V    |         |         |         |
2+55       0.0703      0.52  | Q  V    |         |         |         |
3+ 0       0.0739      0.52  | Q   V   |         |         |         |
3+ 5       0.0776      0.52  | Q   V   |         |         |         |
3+10       0.0817      0.60  | Q   V   |         |         |         |
3+15       0.0861      0.63  | Q    V  |         |         |         |
3+20       0.0904      0.63  | Q    V  |         |         |         |
3+25       0.0953      0.71  | Q    V  |         |         |         |
3+30       0.1010      0.82  |  Q    V |         |         |         |
3+35       0.1074      0.93  |  Q    V |         |         |         |
3+40       0.1140      0.96  |  Q     V|         |         |         |
3+45       0.1212      1.04  |   Q     V         |         |         |
3+50       0.1286      1.07  |   Q     V         |         |         |
3+55       0.1366      1.15  |   Q     |V        |         |         |
4+ 0       0.1447      1.18  |   Q     | V       |         |         |
4+ 5       0.1534      1.26  |    Q    | V       |         |         |
4+10       0.1629      1.37  |    Q    |  V      |         |         |
4+15       0.1731      1.48  |    Q    |   V     |         |         |
4+20       0.1840      1.59  |     Q   |    V    |         |         |
4+25       0.1958      1.70  |     Q   |     V   |         |         |
4+30       0.2077      1.74  |     Q   |      V  |         |         |
```


4+35 0.2202 1.81
4+40 0.2335 1.92
4+45 0.2475 2.03
4+50 0.2617 2.07
4+55 0.2765 2.14
5+ 0 0.2920 2.25
5+ 5 0.3104 2.67
5+10 0.3326 3.23
5+15 0.3576 3.62
5+20 0.3848 3.95
5+25 0.4153 4.44
5+30 0.4518 5.30
5+35 0.4705 2.72
5+40 0.4756 0.74
5+45 0.4769 0.18
5+50 0.4773 0.06
5+55 0.4776 0.04
6+ 0 0.4778 0.03
6+ 5 0.4778 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 05/10/24 File: ONSITEPREW12410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007
46	3.83	0.20	0.082	(0.173)	0.073	0.008
47	3.92	0.20	0.082	(0.172)	0.073	0.008

48	4.00	0.20	0.082	(0.171)	0.073	0.008
49	4.08	0.20	0.082	(0.171)	0.073	0.008
50	4.17	0.20	0.082	(0.170)	0.073	0.008
51	4.25	0.20	0.082	(0.169)	0.073	0.008
52	4.33	0.23	0.095	(0.169)	0.086	0.010
53	4.42	0.23	0.095	(0.168)	0.086	0.010
54	4.50	0.23	0.095	(0.167)	0.086	0.010
55	4.58	0.23	0.095	(0.166)	0.086	0.010
56	4.67	0.23	0.095	(0.166)	0.086	0.010
57	4.75	0.23	0.095	(0.165)	0.086	0.010
58	4.83	0.27	0.109	(0.164)	0.098	0.011
59	4.92	0.27	0.109	(0.164)	0.098	0.011
60	5.00	0.27	0.109	(0.163)	0.098	0.011
61	5.08	0.20	0.082	(0.162)	0.073	0.008
62	5.17	0.20	0.082	(0.161)	0.073	0.008
63	5.25	0.20	0.082	(0.161)	0.073	0.008
64	5.33	0.23	0.095	(0.160)	0.086	0.010
65	5.42	0.23	0.095	(0.159)	0.086	0.010
66	5.50	0.23	0.095	(0.159)	0.086	0.010
67	5.58	0.27	0.109	(0.158)	0.098	0.011
68	5.67	0.27	0.109	(0.157)	0.098	0.011
69	5.75	0.27	0.109	(0.157)	0.098	0.011
70	5.83	0.27	0.109	(0.156)	0.098	0.011
71	5.92	0.27	0.109	(0.155)	0.098	0.011
72	6.00	0.27	0.109	(0.154)	0.098	0.011
73	6.08	0.30	0.122	(0.154)	0.110	0.012
74	6.17	0.30	0.122	(0.153)	0.110	0.012
75	6.25	0.30	0.122	(0.152)	0.110	0.012
76	6.33	0.30	0.122	(0.152)	0.110	0.012
77	6.42	0.30	0.122	(0.151)	0.110	0.012
78	6.50	0.30	0.122	(0.150)	0.110	0.012
79	6.58	0.33	0.136	(0.150)	0.122	0.014
80	6.67	0.33	0.136	(0.149)	0.122	0.014
81	6.75	0.33	0.136	(0.148)	0.122	0.014
82	6.83	0.33	0.136	(0.148)	0.122	0.014
83	6.92	0.33	0.136	(0.147)	0.122	0.014
84	7.00	0.33	0.136	(0.146)	0.122	0.014
85	7.08	0.33	0.136	(0.146)	0.122	0.014
86	7.17	0.33	0.136	(0.145)	0.122	0.014
87	7.25	0.33	0.136	(0.144)	0.122	0.014
88	7.33	0.37	0.150	(0.144)	0.135	0.015
89	7.42	0.37	0.150	(0.143)	0.135	0.015
90	7.50	0.37	0.150	(0.142)	0.135	0.015
91	7.58	0.40	0.163	0.142	(0.147)	0.021
92	7.67	0.40	0.163	0.141	(0.147)	0.022
93	7.75	0.40	0.163	0.140	(0.147)	0.023
94	7.83	0.43	0.177	0.140	(0.159)	0.037
95	7.92	0.43	0.177	0.139	(0.159)	0.038
96	8.00	0.43	0.177	0.138	(0.159)	0.038
97	8.08	0.50	0.204	0.138	(0.184)	0.066

98	8.17	0.50	0.204	0.137	(	0.184)	0.067
99	8.25	0.50	0.204	0.137	(	0.184)	0.067
100	8.33	0.50	0.204	0.136	(	0.184)	0.068
101	8.42	0.50	0.204	0.135	(	0.184)	0.069
102	8.50	0.50	0.204	0.135	(	0.184)	0.069
103	8.58	0.53	0.218	0.134	(	0.196)	0.084
104	8.67	0.53	0.218	0.133	(	0.196)	0.084
105	8.75	0.53	0.218	0.133	(	0.196)	0.085
106	8.83	0.57	0.231	0.132	(	0.208)	0.099
107	8.92	0.57	0.231	0.131	(	0.208)	0.100
108	9.00	0.57	0.231	0.131	(	0.208)	0.100
109	9.08	0.63	0.258	0.130	(	0.232)	0.128
110	9.17	0.63	0.258	0.130	(	0.232)	0.129
111	9.25	0.63	0.258	0.129	(	0.232)	0.129
112	9.33	0.67	0.272	0.128	(	0.245)	0.143
113	9.42	0.67	0.272	0.128	(	0.245)	0.144
114	9.50	0.67	0.272	0.127	(	0.245)	0.145
115	9.58	0.70	0.285	0.127	(	0.257)	0.159
116	9.67	0.70	0.285	0.126	(	0.257)	0.160
117	9.75	0.70	0.285	0.125	(	0.257)	0.160
118	9.83	0.73	0.299	0.125	(	0.269)	0.174
119	9.92	0.73	0.299	0.124	(	0.269)	0.175
120	10.00	0.73	0.299	0.124	(	0.269)	0.176
121	10.08	0.50	0.204	0.123	(	0.184)	0.081
122	10.17	0.50	0.204	0.122	(	0.184)	0.082
123	10.25	0.50	0.204	0.122	(	0.184)	0.082
124	10.33	0.50	0.204	0.121	(	0.184)	0.083
125	10.42	0.50	0.204	0.121	(	0.184)	0.083
126	10.50	0.50	0.204	0.120	(	0.184)	0.084
127	10.58	0.67	0.272	0.119	(	0.245)	0.152
128	10.67	0.67	0.272	0.119	(	0.245)	0.153
129	10.75	0.67	0.272	0.118	(	0.245)	0.154
130	10.83	0.67	0.272	0.118	(	0.245)	0.154
131	10.92	0.67	0.272	0.117	(	0.245)	0.155
132	11.00	0.67	0.272	0.117	(	0.245)	0.155
133	11.08	0.63	0.258	0.116	(	0.232)	0.142
134	11.17	0.63	0.258	0.115	(	0.232)	0.143
135	11.25	0.63	0.258	0.115	(	0.232)	0.144
136	11.33	0.63	0.258	0.114	(	0.232)	0.144
137	11.42	0.63	0.258	0.114	(	0.232)	0.145
138	11.50	0.63	0.258	0.113	(	0.232)	0.145
139	11.58	0.57	0.231	0.113	(	0.208)	0.119
140	11.67	0.57	0.231	0.112	(	0.208)	0.119
141	11.75	0.57	0.231	0.111	(	0.208)	0.120
142	11.83	0.60	0.245	0.111	(	0.220)	0.134
143	11.92	0.60	0.245	0.110	(	0.220)	0.134
144	12.00	0.60	0.245	0.110	(	0.220)	0.135
145	12.08	0.83	0.340	0.109	(	0.306)	0.231
146	12.17	0.83	0.340	0.109	(	0.306)	0.231
147	12.25	0.83	0.340	0.108	(	0.306)	0.232

148	12.33	0.87	0.353	0.108	(0.318)	0.246
149	12.42	0.87	0.353	0.107	(0.318)	0.246
150	12.50	0.87	0.353	0.107	(0.318)	0.247
151	12.58	0.93	0.381	0.106	(0.343)	0.275
152	12.67	0.93	0.381	0.105	(0.343)	0.275
153	12.75	0.93	0.381	0.105	(0.343)	0.276
154	12.83	0.97	0.394	0.104	(0.355)	0.290
155	12.92	0.97	0.394	0.104	(0.355)	0.290
156	13.00	0.97	0.394	0.103	(0.355)	0.291
157	13.08	1.13	0.462	0.103	(0.416)	0.359
158	13.17	1.13	0.462	0.102	(0.416)	0.360
159	13.25	1.13	0.462	0.102	(0.416)	0.360
160	13.33	1.13	0.462	0.101	(0.416)	0.361
161	13.42	1.13	0.462	0.101	(0.416)	0.362
162	13.50	1.13	0.462	0.100	(0.416)	0.362
163	13.58	0.77	0.313	0.100	(0.281)	0.213
164	13.67	0.77	0.313	0.099	(0.281)	0.213
165	13.75	0.77	0.313	0.099	(0.281)	0.214
166	13.83	0.77	0.313	0.098	(0.281)	0.214
167	13.92	0.77	0.313	0.098	(0.281)	0.215
168	14.00	0.77	0.313	0.097	(0.281)	0.215
169	14.08	0.90	0.367	0.097	(0.330)	0.270
170	14.17	0.90	0.367	0.096	(0.330)	0.271
171	14.25	0.90	0.367	0.096	(0.330)	0.271
172	14.33	0.87	0.353	0.095	(0.318)	0.258
173	14.42	0.87	0.353	0.095	(0.318)	0.259
174	14.50	0.87	0.353	0.094	(0.318)	0.259
175	14.58	0.87	0.353	0.094	(0.318)	0.260
176	14.67	0.87	0.353	0.093	(0.318)	0.260
177	14.75	0.87	0.353	0.093	(0.318)	0.261
178	14.83	0.83	0.340	0.092	(0.306)	0.248
179	14.92	0.83	0.340	0.092	(0.306)	0.248
180	15.00	0.83	0.340	0.091	(0.306)	0.248
181	15.08	0.80	0.326	0.091	(0.294)	0.235
182	15.17	0.80	0.326	0.090	(0.294)	0.236
183	15.25	0.80	0.326	0.090	(0.294)	0.236
184	15.33	0.77	0.313	0.090	(0.281)	0.223
185	15.42	0.77	0.313	0.089	(0.281)	0.224
186	15.50	0.77	0.313	0.089	(0.281)	0.224
187	15.58	0.63	0.258	0.088	(0.232)	0.170
188	15.67	0.63	0.258	0.088	(0.232)	0.171
189	15.75	0.63	0.258	0.087	(0.232)	0.171
190	15.83	0.63	0.258	0.087	(0.232)	0.172
191	15.92	0.63	0.258	0.086	(0.232)	0.172
192	16.00	0.63	0.258	0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049	0.005
194	16.17	0.13	0.054	(0.085)	0.049	0.005
195	16.25	0.13	0.054	(0.085)	0.049	0.005
196	16.33	0.13	0.054	(0.084)	0.049	0.005
197	16.42	0.13	0.054	(0.084)	0.049	0.005

198	16.50	0.13	0.054	(0.083)	0.049	0.005
199	16.58	0.10	0.041	(0.083)	0.037	0.004
200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004
246	20.50	0.10	0.041	(0.066)	0.037	0.004
247	20.58	0.10	0.041	(0.066)	0.037	0.004

248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003
275	22.92	0.07	0.027	(0.060)	0.024	0.003
276	23.00	0.07	0.027	(0.060)	0.024	0.003
277	23.08	0.07	0.027	(0.060)	0.024	0.003
278	23.17	0.07	0.027	(0.059)	0.024	0.003
279	23.25	0.07	0.027	(0.059)	0.024	0.003
280	23.33	0.07	0.027	(0.059)	0.024	0.003
281	23.42	0.07	0.027	(0.059)	0.024	0.003
282	23.50	0.07	0.027	(0.059)	0.024	0.003
283	23.58	0.07	0.027	(0.059)	0.024	0.003
284	23.67	0.07	0.027	(0.059)	0.024	0.003
285	23.75	0.07	0.027	(0.059)	0.024	0.003
286	23.83	0.07	0.027	(0.059)	0.024	0.003
287	23.92	0.07	0.027	(0.059)	0.024	0.003
288	24.00	0.07	0.027	(0.059)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 0.734(Ac.Ft)
Total rainfall = 3.40(In)
Flood volume = 28496.1 Cubic Feet
Total soil loss = 31957.6 Cubic Feet

Peak flow rate of this hydrograph = 1.788(CFS)

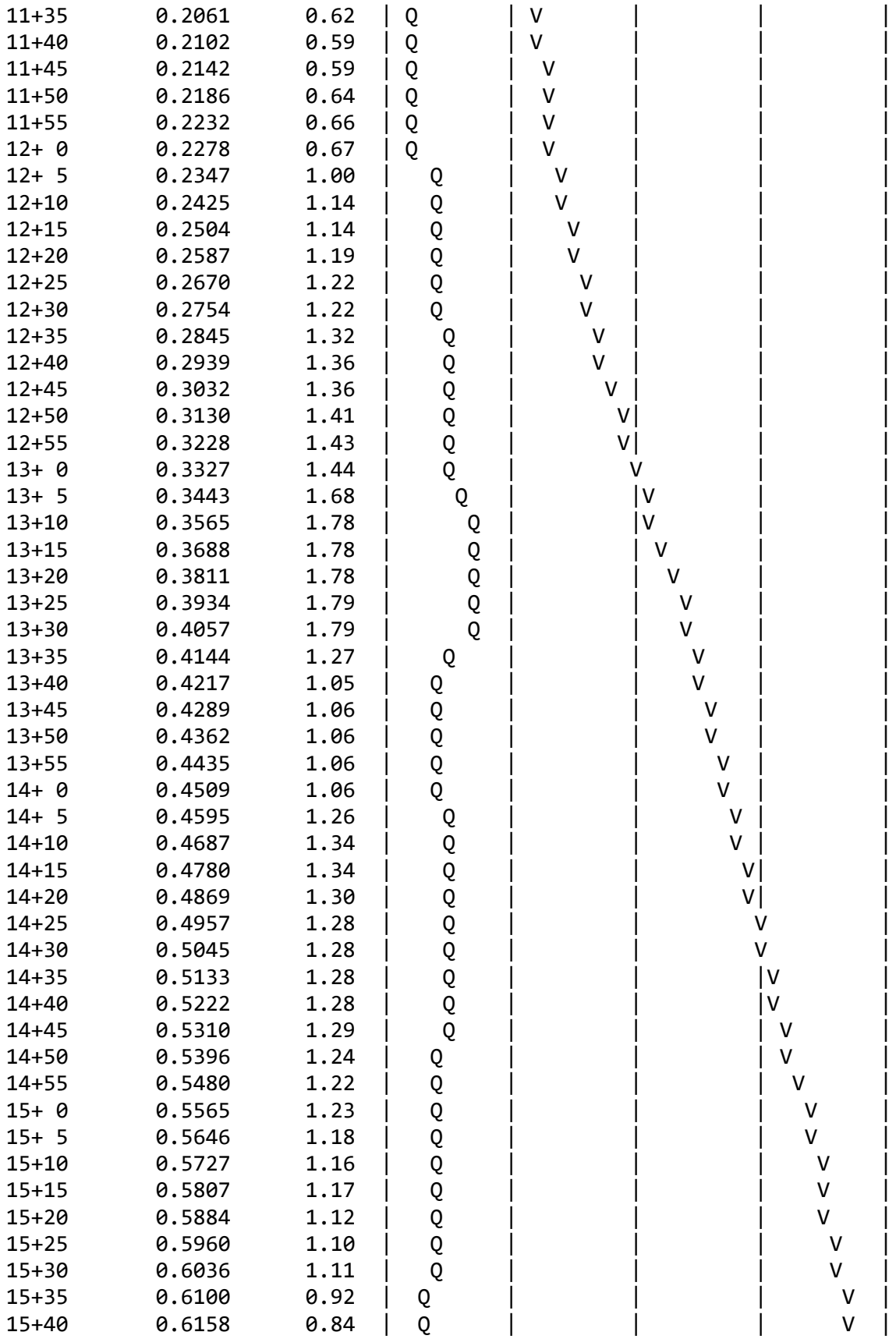
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q				
0+10	0.0002	0.01	Q				
0+15	0.0003	0.01	Q				
0+20	0.0004	0.02	Q				
0+25	0.0005	0.02	Q				
0+30	0.0007	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	0.0012	0.02	Q				
0+55	0.0014	0.03	Q				
1+ 0	0.0016	0.03	Q				
1+ 5	0.0018	0.02	Q				
1+10	0.0019	0.02	Q				
1+15	0.0020	0.02	Q				
1+20	0.0022	0.02	Q				
1+25	0.0023	0.02	Q				
1+30	0.0025	0.02	Q				
1+35	0.0026	0.02	Q				
1+40	0.0027	0.02	Q				
1+45	0.0029	0.02	Q				
1+50	0.0030	0.02	Q				
1+55	0.0032	0.03	Q				
2+ 0	0.0034	0.03	Q				
2+ 5	0.0036	0.03	Q				
2+10	0.0038	0.03	Q				
2+15	0.0040	0.03	Q				
2+20	0.0042	0.03	Q				
2+25	0.0043	0.03	Q				
2+30	0.0045	0.03	Q				
2+35	0.0047	0.03	Q				
2+40	0.0050	0.03	Q				
2+45	0.0052	0.03	Q				
2+50	0.0054	0.03	Q				
2+55	0.0057	0.03	Q				
3+ 0	0.0059	0.03	Q				
3+ 5	0.0061	0.03	Q				
3+10	0.0064	0.03	Q				

3+15	0.0066	0.03	Q				
3+20	0.0068	0.03	Q				
3+25	0.0071	0.03	Q				
3+30	0.0073	0.03	Q				
3+35	0.0075	0.03	Q				
3+40	0.0077	0.03	Q				
3+45	0.0080	0.03	Q				
3+50	0.0082	0.04	Q				
3+55	0.0085	0.04	Q				
4+ 0	0.0088	0.04	Q				
4+ 5	0.0091	0.04	Q				
4+10	0.0094	0.04	Q				
4+15	0.0096	0.04	Q				
4+20	0.0099	0.05	Q				
4+25	0.0103	0.05	Q				
4+30	0.0106	0.05	Q				
4+35	0.0109	0.05	Q				
4+40	0.0112	0.05	Q				
4+45	0.0116	0.05	Q				
4+50	0.0119	0.05	Q				
4+55	0.0123	0.05	Q				
5+ 0	0.0127	0.05	Q				
5+ 5	0.0130	0.04	Q				
5+10	0.0132	0.04	Q				
5+15	0.0135	0.04	Q				
5+20	0.0138	0.05	Q				
5+25	0.0142	0.05	Q				
5+30	0.0145	0.05	Q				
5+35	0.0148	0.05	Q				
5+40	0.0152	0.05	Q				
5+45	0.0156	0.05	Q				
5+50	0.0159	0.05	Q				
5+55	0.0163	0.05	Q				
6+ 0	0.0167	0.05	QV				
6+ 5	0.0171	0.06	QV				
6+10	0.0175	0.06	QV				
6+15	0.0179	0.06	QV				
6+20	0.0183	0.06	QV				
6+25	0.0188	0.06	QV				
6+30	0.0192	0.06	QV				
6+35	0.0196	0.07	QV				
6+40	0.0201	0.07	QV				
6+45	0.0205	0.07	QV				
6+50	0.0210	0.07	QV				
6+55	0.0215	0.07	QV				
7+ 0	0.0219	0.07	QV				
7+ 5	0.0224	0.07	QV				
7+10	0.0229	0.07	QV				
7+15	0.0233	0.07	QV				
7+20	0.0238	0.07	QV				

```
 7+25       0.0243      0.07  QV        |         |         |         |
 7+30       0.0248      0.07  QV        |         |         |         |
 7+35       0.0255      0.10  QV        |         |         |         |
 7+40       0.0262      0.11  QV        |         |         |         |
 7+45       0.0270      0.11  QV        |         |         |         |
 7+50       0.0281      0.16  QV        |         |         |         |
 7+55       0.0294      0.18  QV        |         |         |         |
 8+ 0       0.0307      0.19  QV        |         |         |         |
 8+ 5       0.0327      0.29  |Q        |         |         |         |
 8+10       0.0349      0.33  |QV       |         |         |         |
 8+15       0.0372      0.33  |QV       |         |         |         |
 8+20       0.0395      0.34  |QV       |         |         |         |
 8+25       0.0419      0.34  |QV       |         |         |         |
 8+30       0.0442      0.34  |QV       |         |         |         |
 8+35       0.0469      0.39  |QV       |         |         |         |
 8+40       0.0498      0.41  |Q V      |         |         |         |
 8+45       0.0526      0.42  |Q V      |         |         |         |
 8+50       0.0559      0.47  |Q V      |         |         |         |
 8+55       0.0592      0.49  |Q V      |         |         |         |
 9+ 0       0.0627      0.49  |Q V      |         |         |         |
 9+ 5       0.0667      0.59  | Q V     |         |         |         |
 9+10       0.0711      0.63  | Q V     |         |         |         |
 9+15       0.0755      0.64  | Q V     |         |         |         |
 9+20       0.0802      0.69  | Q V     |         |         |         |
 9+25       0.0851      0.71  | Q  V    |         |         |         |
 9+30       0.0901      0.71  | Q  V    |         |         |         |
 9+35       0.0953      0.76  |  Q V    |         |         |         |
 9+40       0.1007      0.79  |  Q  V   |         |         |         |
 9+45       0.1062      0.79  |  Q  V   |         |         |         |
 9+50       0.1120      0.84  |  Q  V   |         |         |         |
 9+55       0.1179      0.86  |  Q   V  |         |         |         |
10+ 0       0.1239      0.87  |  Q   V  |         |         |         |
10+ 5       0.1276      0.54  | Q    V  |         |         |         |
10+10       0.1304      0.40  |Q     V  |         |         |         |
10+15       0.1332      0.41  |Q      V |         |         |         |
10+20       0.1360      0.41  |Q      V |         |         |         |
10+25       0.1388      0.41  |Q      V |         |         |         |
10+30       0.1416      0.41  |Q      V |         |         |         |
10+35       0.1461      0.65  | Q     V |         |         |         |
10+40       0.1513      0.76  |  Q     V|         |         |         |
10+45       0.1566      0.76  |  Q     V|         |         |         |
10+50       0.1618      0.76  |  Q     V|         |         |         |
10+55       0.1671      0.76  |  Q      V         |         |         |
11+ 0       0.1724      0.77  |  Q      V         |         |         |
11+ 5       0.1773      0.72  | Q       V         |         |         |
11+10       0.1822      0.71  | Q       |V        |         |         |
11+15       0.1871      0.71  | Q       |V        |         |         |
11+20       0.1920      0.71  | Q       |V        |         |         |
11+25       0.1969      0.71  | Q       | V       |         |         |
11+30       0.2018      0.72  | Q       | V       |         |         |
```



15+45	0.6216	0.84	| Q	|	|	|	V |
15+50	0.6274	0.85	| Q	|	|	|	V |
15+55	0.6333	0.85	| Q	|	|	|	V |
16+ 0	0.6391	0.85	| Q	|	|	|	V|
16+ 5	0.6410	0.27	|Q	|	|	|	V|
16+10	0.6412	0.03	Q	|	|	|	V|
16+15	0.6414	0.03	Q	|	|	|	V|
16+20	0.6415	0.03	Q	|	|	|	V|
16+25	0.6417	0.03	Q	|	|	|	V|
16+30	0.6419	0.03	Q	|	|	|	V|
16+35	0.6421	0.02	Q	|	|	|	V|
16+40	0.6422	0.02	Q	|	|	|	V|
16+45	0.6423	0.02	Q	|	|	|	V|
16+50	0.6425	0.02	Q	|	|	|	V|
16+55	0.6426	0.02	Q	|	|	|	V|
17+ 0	0.6428	0.02	Q	|	|	|	V|
17+ 5	0.6430	0.03	Q	|	|	|	V|
17+10	0.6432	0.03	Q	|	|	|	V|
17+15	0.6434	0.03	Q	|	|	|	V|
17+20	0.6437	0.03	Q	|	|	|	V|
17+25	0.6439	0.03	Q	|	|	|	V|
17+30	0.6441	0.03	Q	|	|	|	V|
17+35	0.6444	0.03	Q	|	|	|	V|
17+40	0.6446	0.03	Q	|	|	|	V|
17+45	0.6448	0.03	Q	|	|	|	V|
17+50	0.6450	0.03	Q	|	|	|	V|
17+55	0.6452	0.03	Q	|	|	|	V|
18+ 0	0.6454	0.03	Q	|	|	|	V|
18+ 5	0.6456	0.03	Q	|	|	|	V|
18+10	0.6458	0.03	Q	|	|	|	V|
18+15	0.6459	0.03	Q	|	|	|	V|
18+20	0.6461	0.03	Q	|	|	|	V|
18+25	0.6463	0.03	Q	|	|	|	V|
18+30	0.6465	0.03	Q	|	|	|	V|
18+35	0.6466	0.02	Q	|	|	|	V|
18+40	0.6468	0.02	Q	|	|	|	V|
18+45	0.6469	0.02	Q	|	|	|	V|
18+50	0.6470	0.02	Q	|	|	|	V|
18+55	0.6471	0.01	Q	|	|	|	V|
19+ 0	0.6472	0.01	Q	|	|	|	V|
19+ 5	0.6473	0.02	Q	|	|	|	V|
19+10	0.6475	0.02	Q	|	|	|	V|
19+15	0.6476	0.02	Q	|	|	|	V|
19+20	0.6478	0.02	Q	|	|	|	V|
19+25	0.6480	0.03	Q	|	|	|	V|
19+30	0.6482	0.03	Q	|	|	|	V|
19+35	0.6483	0.02	Q	|	|	|	V|
19+40	0.6484	0.02	Q	|	|	|	V|
19+45	0.6486	0.02	Q	|	|	|	V|
19+50	0.6487	0.02	Q	|	|	|	V|

19+55	0.6488	0.01	Q	|	|	|	V|
20+ 0	0.6489	0.01	Q	|	|	|	V|
20+ 5	0.6490	0.02	Q	|	|	|	V|
20+10	0.6491	0.02	Q	|	|	|	V|
20+15	0.6493	0.02	Q	|	|	|	V|
20+20	0.6494	0.02	Q	|	|	|	V|
20+25	0.6496	0.02	Q	|	|	|	V|
20+30	0.6497	0.02	Q	|	|	|	V|
20+35	0.6498	0.02	Q	|	|	|	V|
20+40	0.6500	0.02	Q	|	|	|	V|
20+45	0.6501	0.02	Q	|	|	|	V|
20+50	0.6502	0.02	Q	|	|	|	V|
20+55	0.6503	0.01	Q	|	|	|	V|
21+ 0	0.6504	0.01	Q	|	|	|	V|
21+ 5	0.6505	0.02	Q	|	|	|	V|
21+10	0.6507	0.02	Q	|	|	|	V|
21+15	0.6508	0.02	Q	|	|	|	V|
21+20	0.6509	0.02	Q	|	|	|	V|
21+25	0.6510	0.01	Q	|	|	|	V|
21+30	0.6511	0.01	Q	|	|	|	V|
21+35	0.6512	0.02	Q	|	|	|	V|
21+40	0.6514	0.02	Q	|	|	|	V|
21+45	0.6515	0.02	Q	|	|	|	V|
21+50	0.6516	0.02	Q	|	|	|	V|
21+55	0.6517	0.01	Q	|	|	|	V|
22+ 0	0.6518	0.01	Q	|	|	|	V|
22+ 5	0.6519	0.02	Q	|	|	|	V|
22+10	0.6521	0.02	Q	|	|	|	V|
22+15	0.6522	0.02	Q	|	|	|	V|
22+20	0.6523	0.02	Q	|	|	|	V|
22+25	0.6524	0.01	Q	|	|	|	V|
22+30	0.6525	0.01	Q	|	|	|	V|
22+35	0.6526	0.01	Q	|	|	|	V|
22+40	0.6527	0.01	Q	|	|	|	V|
22+45	0.6528	0.01	Q	|	|	|	V|
22+50	0.6529	0.01	Q	|	|	|	V|
22+55	0.6529	0.01	Q	|	|	|	V|
23+ 0	0.6530	0.01	Q	|	|	|	V|
23+ 5	0.6531	0.01	Q	|	|	|	V|
23+10	0.6532	0.01	Q	|	|	|	V|
23+15	0.6533	0.01	Q	|	|	|	V|
23+20	0.6534	0.01	Q	|	|	|	V|
23+25	0.6535	0.01	Q	|	|	|	V|
23+30	0.6536	0.01	Q	|	|	|	V|
23+35	0.6537	0.01	Q	|	|	|	V|
23+40	0.6538	0.01	Q	|	|	|	V|
23+45	0.6539	0.01	Q	|	|	|	V|
23+50	0.6540	0.01	Q	|	|	|	V|
23+55	0.6541	0.01	Q	|	|	|	V|
24+ 0	0.6542	0.01	Q	|	|	|	V|

```
   24+ 5       0.6542      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 05/10/24 File: ONSITEPREW11100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            0.50                  2.45

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            1.30                  6.37

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                               Sum = 100.000   Sum=       4.938
-----------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.235)	1.256
9	0.75	13.90	2.168	0.117	(1.951)	2.051
10	0.83	31.40	4.898	0.117	(4.408)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.533)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

Flood volume = Effective rainfall 1.18(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.048(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 21041.0 Cubic Feet
Total soil loss = 2081.1 Cubic Feet

Peak flow rate of this hydrograph = 19.643(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	0.0095	1.39	V Q
0+10	0.0264	2.45	| V Q
0+15	0.0455	2.77	| V Q
0+20	0.0664	3.03	| VQ
0+25	0.0894	3.34	| QV
0+30	0.1167	3.97	| Q V
0+35	0.1479	4.53	| Q| V
0+40	0.1875	5.75	| |Q V
0+45	0.2493	8.98	| | Q V
0+50	0.3846	19.64	| | | |V Q|
0+55	0.4567	10.47	| | Q | V |
1+ 0	0.4783	3.12	| Q | | | V|

```
    1+ 5       0.4830      0.69  |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 05/10/24 File: ONSITEPREW13100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            0.80                    3.92

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.00                    9.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	19.8

Flood volume = Effective rainfall 1.65(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.143(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 29330.0 Cubic Feet
Total soil loss = 6243.2 Cubic Feet

Peak flow rate of this hydrograph = 8.830(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	0.0047	0.68	V Q				
0+10	0.0113	0.96	V Q				
0+15	0.0168	0.80	V Q				
0+20	0.0241	1.06	V Q				
0+25	0.0324	1.20	V Q				
0+30	0.0424	1.45	V Q				
0+35	0.0514	1.31	V Q				
0+40	0.0614	1.45	V Q				
0+45	0.0721	1.56	V Q				
0+50	0.0811	1.31	VQ				
0+55	0.0899	1.28	Q				
1+ 0	0.1001	1.49	Q				
1+ 5	0.1132	1.89	VQ				
1+10	0.1271	2.03	VQ				
1+15	0.1411	2.03	Q				
1+20	0.1540	1.86	Q V				
1+25	0.1698	2.30	QV				
1+30	0.1876	2.59	QV				
1+35	0.2039	2.37	Q V				
1+40	0.2213	2.52	Q V				
1+45	0.2428	3.13	Q V				
1+50	0.2646	3.17	Q V				
1+55	0.2848	2.93	Q V				
2+ 0	0.3051	2.94	Q V				
2+ 5	0.3262	3.06	Q V				
2+10	0.3538	4.02	Q V				
2+15	0.3888	5.07	Q V				
2+20	0.4170	4.10	Q V				
2+25	0.4606	6.33	Q V				
2+30	0.5150	7.90	VQ				
2+35	0.5758	8.83	VQ				
2+40	0.6256	7.22	Q V				
2+45	0.6473	3.16	Q V				
2+50	0.6585	1.63	Q V				
2+55	0.6692	1.56	Q V				
3+ 0	0.6731	0.55	Q V				
3+ 5	0.6733	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 05/10/24 File: ONSITEPREW16100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            1.20                  5.88

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.80                 13.72

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                              Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

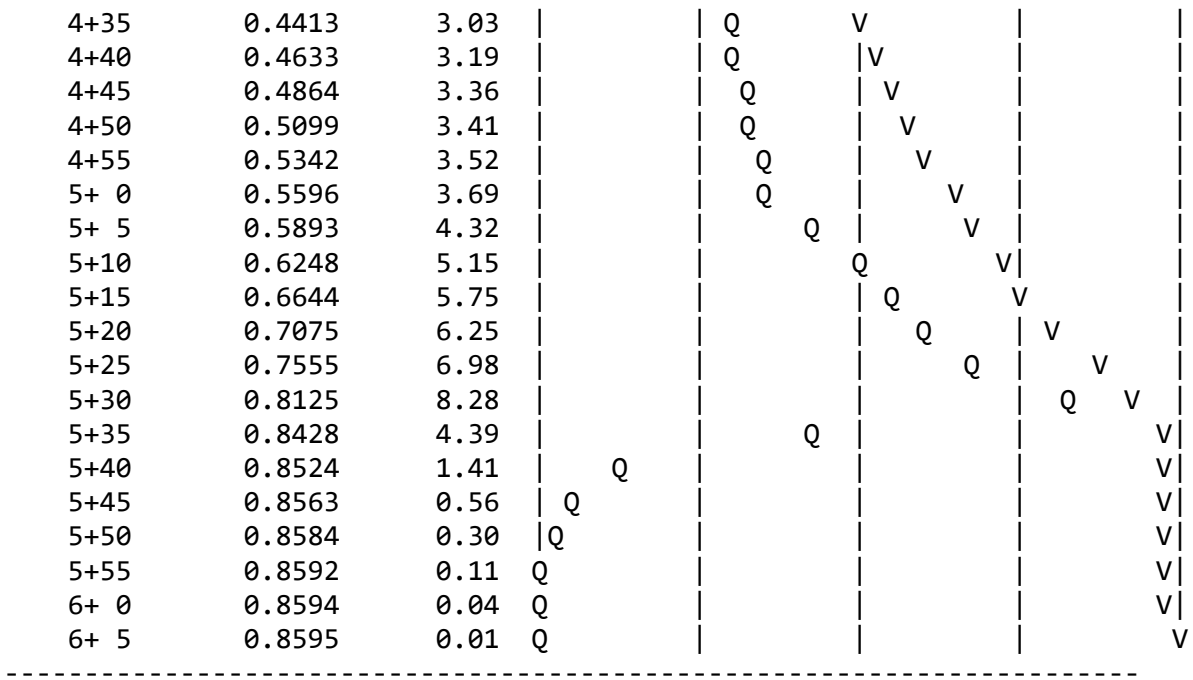
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387
46	3.83	1.50	0.504	0.117	(0.454)	0.387
47	3.92	1.60	0.538	0.117	(0.484)	0.421

```
48   4.00     1.60      0.538          0.117    (  0.484)        0.421
49   4.08     1.70      0.571          0.117    (  0.514)        0.454
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
      Flood volume = Effective rainfall      2.10(In)
       times area       4.9(Ac.)/[(In)/(Ft.)] =       0.9(Ac.Ft)
      Total soil loss =      0.70(In)
      Total soil loss =     0.284(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       37439.0 Cubic Feet
      Total soil loss =       12363.7 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      8.278(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      0.18  Q         |         |         |         |
  0+10       0.0038      0.37  VQ        |         |         |         |
  0+15       0.0066      0.42  VQ        |         |         |         |
  0+20       0.0095      0.42  VQ        |         |         |         |
```

```
0+25       0.0124      0.42  VQ        |         |         |         |
0+30       0.0161      0.54  V Q       |         |         |         |
0+35       0.0201      0.58  V Q       |         |         |         |
0+40       0.0241      0.58  |VQ       |         |         |         |
0+45       0.0282      0.58  |VQ       |         |         |         |
0+50       0.0322      0.58  |VQ       |         |         |         |
0+55       0.0362      0.58  |VQ       |         |         |         |
1+ 0       0.0410      0.70  |VQ       |         |         |         |
1+ 5       0.0462      0.75  | Q       |         |         |         |
1+10       0.0514      0.75  | Q       |         |         |         |
1+15       0.0565      0.75  | Q       |         |         |         |
1+20       0.0617      0.75  | Q       |         |         |         |
1+25       0.0668      0.75  | QV      |         |         |         |
1+30       0.0720      0.75  | QV      |         |         |         |
1+35       0.0772      0.75  | QV      |         |         |         |
1+40       0.0823      0.75  | QV      |         |         |         |
1+45       0.0875      0.75  | Q V     |         |         |         |
1+50       0.0927      0.75  | Q V     |         |         |         |
1+55       0.0978      0.75  | Q V     |         |         |         |
2+ 0       0.1038      0.87  |  QV     |         |         |         |
2+ 5       0.1093      0.80  |  Q V    |         |         |         |
2+10       0.1153      0.87  |  Q V    |         |         |         |
2+15       0.1216      0.92  |  Q V    |         |         |         |
2+20       0.1279      0.92  |  Q V    |         |         |         |
2+25       0.1342      0.92  |  Q  V   |         |         |         |
2+30       0.1405      0.92  |  Q  V   |         |         |         |
2+35       0.1468      0.92  |  Q  V   |         |         |         |
2+40       0.1531      0.92  |  Q   V  |         |         |         |
2+45       0.1603      1.03  |   Q  V  |         |         |         |
2+50       0.1677      1.08  |   Q  V  |         |         |         |
2+55       0.1752      1.08  |   Q   V |         |         |         |
3+ 0       0.1826      1.08  |   Q   V |         |         |         |
3+ 5       0.1901      1.08  |   Q   V |         |         |         |
3+10       0.1983      1.20  |   Q    V|         |         |         |
3+15       0.2069      1.25  |   Q    V|         |         |         |
3+20       0.2155      1.25  |   Q     V         |         |         |
3+25       0.2249      1.37  |    Q    V         |         |         |
3+30       0.2355      1.53  |     Q   V         |         |         |
3+35       0.2471      1.70  |     Q   |V        |         |         |
3+40       0.2592      1.75  |     Q   | V       |         |         |
3+45       0.2720      1.86  |      Q  | V       |         |         |
3+50       0.2852      1.91  |      Q  |  V      |         |         |
3+55       0.2991      2.03  |       Q |  V      |         |         |
4+ 0       0.3135      2.08  |       Q |   V     |         |         |
4+ 5       0.3286      2.20  |       Q |    V    |         |         |
4+10       0.3448      2.36  |        Q|     V   |         |         |
4+15       0.3622      2.53  |         Q     V   |         |         |
4+20       0.3808      2.69  |         Q      V  |         |         |
4+25       0.4005      2.86  |         |Q      V |         |         |
4+30       0.4205      2.91  |         |Q       V|         |         |
```


4+35 0.4413 3.03
4+40 0.4633 3.19
4+45 0.4864 3.36
4+50 0.5099 3.41
4+55 0.5342 3.52
5+ 0 0.5596 3.69
5+ 5 0.5893 4.32
5+10 0.6248 5.15
5+15 0.6644 5.75
5+20 0.7075 6.25
5+25 0.7555 6.98
5+30 0.8125 8.28
5+35 0.8428 4.39
5+40 0.8524 1.41
5+45 0.8563 0.56
5+50 0.8584 0.30
5+55 0.8592 0.11
6+ 0 0.8594 0.04
6+ 5 0.8595 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 05/10/24 File: ONSITEPREW124100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 206.00(Ft.)
Length along longest watercourse measured to centroid = 195.00(Ft.)
Length along longest watercourse = 0.039 Mi.
Length along longest watercourse measured to centroid = 0.037 Mi.
Difference in elevation = 30.00(Ft.)
Slope along watercourse = 768.9320 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.017 Hr.
Lag time = 1.02 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.41 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           91.00         0.000
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        491.501         70.495              3.481
    2   0.167        983.001         29.505              1.457
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011
46	3.83	0.20	0.130	(0.173)	0.117	0.013
47	3.92	0.20	0.130	(0.172)	0.117	0.013

48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013
50	4.17	0.20	0.130	(0.170)	0.117	0.013
51	4.25	0.20	0.130	(0.169)	0.117	0.013
52	4.33	0.23	0.151	(0.169)	0.136	0.015
53	4.42	0.23	0.151	(0.168)	0.136	0.015
54	4.50	0.23	0.151	(0.167)	0.136	0.015
55	4.58	0.23	0.151	(0.166)	0.136	0.015
56	4.67	0.23	0.151	(0.166)	0.136	0.015
57	4.75	0.23	0.151	(0.165)	0.136	0.015
58	4.83	0.27	0.173	(0.164)	0.156	0.017
59	4.92	0.27	0.173	(0.164)	0.156	0.017
60	5.00	0.27	0.173	(0.163)	0.156	0.017
61	5.08	0.20	0.130	(0.162)	0.117	0.013
62	5.17	0.20	0.130	(0.161)	0.117	0.013
63	5.25	0.20	0.130	(0.161)	0.117	0.013
64	5.33	0.23	0.151	(0.160)	0.136	0.015
65	5.42	0.23	0.151	(0.159)	0.136	0.015
66	5.50	0.23	0.151	(0.159)	0.136	0.015
67	5.58	0.27	0.173	(0.158)	0.156	0.017
68	5.67	0.27	0.173	(0.157)	0.156	0.017
69	5.75	0.27	0.173	(0.157)	0.156	0.017
70	5.83	0.27	0.173	(0.156)	0.156	0.017
71	5.92	0.27	0.173	0.155	(0.156)	0.018
72	6.00	0.27	0.173	0.154	(0.156)	0.018
73	6.08	0.30	0.194	0.154	(0.175)	0.041
74	6.17	0.30	0.194	0.153	(0.175)	0.041
75	6.25	0.30	0.194	0.152	(0.175)	0.042
76	6.33	0.30	0.194	0.152	(0.175)	0.043
77	6.42	0.30	0.194	0.151	(0.175)	0.043
78	6.50	0.30	0.194	0.150	(0.175)	0.044
79	6.58	0.33	0.216	0.150	(0.194)	0.066
80	6.67	0.33	0.216	0.149	(0.194)	0.067
81	6.75	0.33	0.216	0.148	(0.194)	0.068
82	6.83	0.33	0.216	0.148	(0.194)	0.068
83	6.92	0.33	0.216	0.147	(0.194)	0.069
84	7.00	0.33	0.216	0.146	(0.194)	0.070
85	7.08	0.33	0.216	0.146	(0.194)	0.070
86	7.17	0.33	0.216	0.145	(0.194)	0.071
87	7.25	0.33	0.216	0.144	(0.194)	0.072
88	7.33	0.37	0.238	0.144	(0.214)	0.094
89	7.42	0.37	0.238	0.143	(0.214)	0.095
90	7.50	0.37	0.238	0.142	(0.214)	0.095
91	7.58	0.40	0.259	0.142	(0.233)	0.117
92	7.67	0.40	0.259	0.141	(0.233)	0.118
93	7.75	0.40	0.259	0.140	(0.233)	0.119
94	7.83	0.43	0.281	0.140	(0.253)	0.141
95	7.92	0.43	0.281	0.139	(0.253)	0.142
96	8.00	0.43	0.281	0.138	(0.253)	0.142
97	8.08	0.50	0.324	0.138	(0.292)	0.186

98	8.17	0.50	0.324	0.137	(	0.292)	0.187
99	8.25	0.50	0.324	0.137	(	0.292)	0.187
100	8.33	0.50	0.324	0.136	(	0.292)	0.188
101	8.42	0.50	0.324	0.135	(	0.292)	0.189
102	8.50	0.50	0.324	0.135	(	0.292)	0.189
103	8.58	0.53	0.346	0.134	(	0.311)	0.212
104	8.67	0.53	0.346	0.133	(	0.311)	0.212
105	8.75	0.53	0.346	0.133	(	0.311)	0.213
106	8.83	0.57	0.367	0.132	(	0.330)	0.235
107	8.92	0.57	0.367	0.131	(	0.330)	0.236
108	9.00	0.57	0.367	0.131	(	0.330)	0.236
109	9.08	0.63	0.410	0.130	(	0.369)	0.280
110	9.17	0.63	0.410	0.130	(	0.369)	0.281
111	9.25	0.63	0.410	0.129	(	0.369)	0.281
112	9.33	0.67	0.432	0.128	(	0.389)	0.304
113	9.42	0.67	0.432	0.128	(	0.389)	0.304
114	9.50	0.67	0.432	0.127	(	0.389)	0.305
115	9.58	0.70	0.454	0.127	(	0.408)	0.327
116	9.67	0.70	0.454	0.126	(	0.408)	0.328
117	9.75	0.70	0.454	0.125	(	0.408)	0.328
118	9.83	0.73	0.475	0.125	(	0.428)	0.350
119	9.92	0.73	0.475	0.124	(	0.428)	0.351
120	10.00	0.73	0.475	0.124	(	0.428)	0.352
121	10.08	0.50	0.324	0.123	(	0.292)	0.201
122	10.17	0.50	0.324	0.122	(	0.292)	0.202
123	10.25	0.50	0.324	0.122	(	0.292)	0.202
124	10.33	0.50	0.324	0.121	(	0.292)	0.203
125	10.42	0.50	0.324	0.121	(	0.292)	0.203
126	10.50	0.50	0.324	0.120	(	0.292)	0.204
127	10.58	0.67	0.432	0.119	(	0.389)	0.313
128	10.67	0.67	0.432	0.119	(	0.389)	0.313
129	10.75	0.67	0.432	0.118	(	0.389)	0.314
130	10.83	0.67	0.432	0.118	(	0.389)	0.314
131	10.92	0.67	0.432	0.117	(	0.389)	0.315
132	11.00	0.67	0.432	0.117	(	0.389)	0.315
133	11.08	0.63	0.410	0.116	(	0.369)	0.294
134	11.17	0.63	0.410	0.115	(	0.369)	0.295
135	11.25	0.63	0.410	0.115	(	0.369)	0.296
136	11.33	0.63	0.410	0.114	(	0.369)	0.296
137	11.42	0.63	0.410	0.114	(	0.369)	0.297
138	11.50	0.63	0.410	0.113	(	0.369)	0.297
139	11.58	0.57	0.367	0.113	(	0.330)	0.255
140	11.67	0.57	0.367	0.112	(	0.330)	0.255
141	11.75	0.57	0.367	0.111	(	0.330)	0.256
142	11.83	0.60	0.389	0.111	(	0.350)	0.278
143	11.92	0.60	0.389	0.110	(	0.350)	0.278
144	12.00	0.60	0.389	0.110	(	0.350)	0.279
145	12.08	0.83	0.540	0.109	(	0.486)	0.431
146	12.17	0.83	0.540	0.109	(	0.486)	0.431
147	12.25	0.83	0.540	0.108	(	0.486)	0.432

148	12.33	0.87	0.562	0.108	(0.505)	0.454
149	12.42	0.87	0.562	0.107	(0.505)	0.455
150	12.50	0.87	0.562	0.107	(0.505)	0.455
151	12.58	0.93	0.605	0.106	(0.544)	0.499
152	12.67	0.93	0.605	0.105	(0.544)	0.499
153	12.75	0.93	0.605	0.105	(0.544)	0.500
154	12.83	0.97	0.626	0.104	(0.564)	0.522
155	12.92	0.97	0.626	0.104	(0.564)	0.523
156	13.00	0.97	0.626	0.103	(0.564)	0.523
157	13.08	1.13	0.734	0.103	(0.661)	0.632
158	13.17	1.13	0.734	0.102	(0.661)	0.632
159	13.25	1.13	0.734	0.102	(0.661)	0.633
160	13.33	1.13	0.734	0.101	(0.661)	0.633
161	13.42	1.13	0.734	0.101	(0.661)	0.634
162	13.50	1.13	0.734	0.100	(0.661)	0.634
163	13.58	0.77	0.497	0.100	(0.447)	0.397
164	13.67	0.77	0.497	0.099	(0.447)	0.398
165	13.75	0.77	0.497	0.099	(0.447)	0.398
166	13.83	0.77	0.497	0.098	(0.447)	0.399
167	13.92	0.77	0.497	0.098	(0.447)	0.399
168	14.00	0.77	0.497	0.097	(0.447)	0.400
169	14.08	0.90	0.583	0.097	(0.525)	0.487
170	14.17	0.90	0.583	0.096	(0.525)	0.487
171	14.25	0.90	0.583	0.096	(0.525)	0.487
172	14.33	0.87	0.562	0.095	(0.505)	0.466
173	14.42	0.87	0.562	0.095	(0.505)	0.467
174	14.50	0.87	0.562	0.094	(0.505)	0.467
175	14.58	0.87	0.562	0.094	(0.505)	0.468
176	14.67	0.87	0.562	0.093	(0.505)	0.468
177	14.75	0.87	0.562	0.093	(0.505)	0.469
178	14.83	0.83	0.540	0.092	(0.486)	0.448
179	14.92	0.83	0.540	0.092	(0.486)	0.448
180	15.00	0.83	0.540	0.091	(0.486)	0.449
181	15.08	0.80	0.518	0.091	(0.467)	0.427
182	15.17	0.80	0.518	0.090	(0.467)	0.428
183	15.25	0.80	0.518	0.090	(0.467)	0.428
184	15.33	0.77	0.497	0.090	(0.447)	0.407
185	15.42	0.77	0.497	0.089	(0.447)	0.408
186	15.50	0.77	0.497	0.089	(0.447)	0.408
187	15.58	0.63	0.410	0.088	(0.369)	0.322
188	15.67	0.63	0.410	0.088	(0.369)	0.323
189	15.75	0.63	0.410	0.087	(0.369)	0.323
190	15.83	0.63	0.410	0.087	(0.369)	0.324
191	15.92	0.63	0.410	0.086	(0.369)	0.324
192	16.00	0.63	0.410	0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078	0.009
194	16.17	0.13	0.086	(0.085)	0.078	0.009
195	16.25	0.13	0.086	(0.085)	0.078	0.009
196	16.33	0.13	0.086	(0.084)	0.078	0.009
197	16.42	0.13	0.086	(0.084)	0.078	0.009

198	16.50	0.13	0.086	(	0.083)	0.078		0.009
199	16.58	0.10	0.065	(	0.083)	0.058		0.006
200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006
246	20.50	0.10	0.065	(	0.066)	0.058		0.006
247	20.58	0.10	0.065	(	0.066)	0.058		0.006

248	20.67	0.10	0.065	(0.066)	0.058	0.006
249	20.75	0.10	0.065	(0.065)	0.058	0.006
250	20.83	0.07	0.043	(0.065)	0.039	0.004
251	20.92	0.07	0.043	(0.065)	0.039	0.004
252	21.00	0.07	0.043	(0.065)	0.039	0.004
253	21.08	0.10	0.065	(0.064)	0.058	0.006
254	21.17	0.10	0.065	(0.064)	0.058	0.006
255	21.25	0.10	0.065	(0.064)	0.058	0.006
256	21.33	0.07	0.043	(0.064)	0.039	0.004
257	21.42	0.07	0.043	(0.063)	0.039	0.004
258	21.50	0.07	0.043	(0.063)	0.039	0.004
259	21.58	0.10	0.065	(0.063)	0.058	0.006
260	21.67	0.10	0.065	(0.063)	0.058	0.006
261	21.75	0.10	0.065	(0.062)	0.058	0.006
262	21.83	0.07	0.043	(0.062)	0.039	0.004
263	21.92	0.07	0.043	(0.062)	0.039	0.004
264	22.00	0.07	0.043	(0.062)	0.039	0.004
265	22.08	0.10	0.065	(0.062)	0.058	0.006
266	22.17	0.10	0.065	(0.061)	0.058	0.006
267	22.25	0.10	0.065	(0.061)	0.058	0.006
268	22.33	0.07	0.043	(0.061)	0.039	0.004
269	22.42	0.07	0.043	(0.061)	0.039	0.004
270	22.50	0.07	0.043	(0.061)	0.039	0.004
271	22.58	0.07	0.043	(0.060)	0.039	0.004
272	22.67	0.07	0.043	(0.060)	0.039	0.004
273	22.75	0.07	0.043	(0.060)	0.039	0.004
274	22.83	0.07	0.043	(0.060)	0.039	0.004
275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	38.3

Flood volume = Effective rainfall 3.19(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 1.3(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.903(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 56713.8 Cubic Feet
Total soil loss = 39335.1 Cubic Feet

Peak flow rate of this hydrograph = 3.133(CFS)

++

24 - H O U R S T O R M

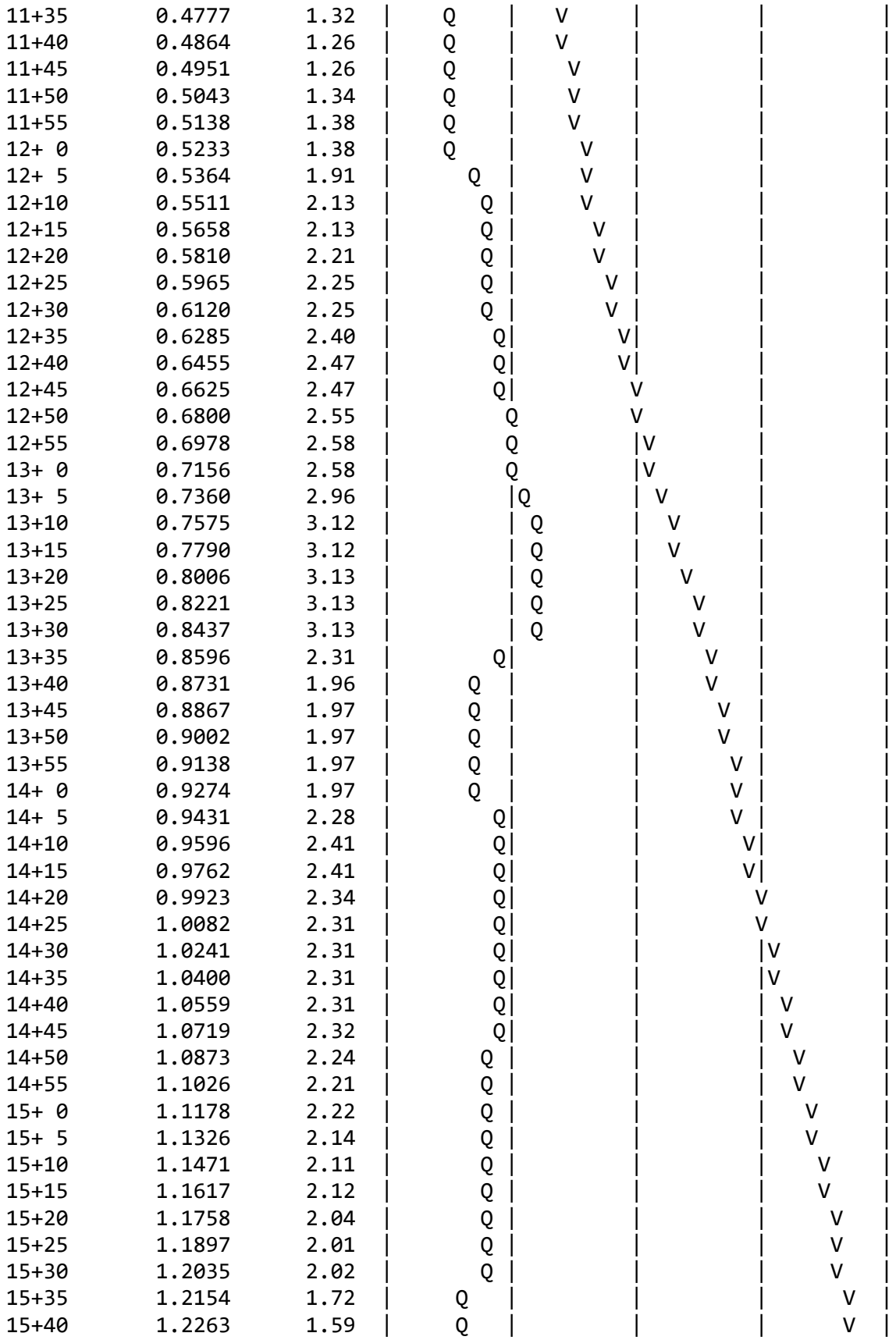
R u n o f f H y d r o g r a p h

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	0.0003	0.02	Q				
0+15	0.0004	0.02	Q				
0+20	0.0006	0.03	Q				
0+25	0.0008	0.03	Q				
0+30	0.0010	0.03	Q				
0+35	0.0013	0.03	Q				
0+40	0.0015	0.03	Q				
0+45	0.0017	0.03	Q				
0+50	0.0020	0.04	Q				
0+55	0.0023	0.04	Q				
1+ 0	0.0026	0.04	Q				
1+ 5	0.0028	0.04	Q				
1+10	0.0030	0.03	Q				
1+15	0.0032	0.03	Q				
1+20	0.0035	0.03	Q				
1+25	0.0037	0.03	Q				
1+30	0.0039	0.03	Q				
1+35	0.0041	0.03	Q				
1+40	0.0043	0.03	Q				
1+45	0.0046	0.03	Q				
1+50	0.0048	0.04	Q				
1+55	0.0051	0.04	Q				
2+ 0	0.0054	0.04	Q				
2+ 5	0.0057	0.04	Q				
2+10	0.0060	0.04	Q				
2+15	0.0063	0.04	Q				
2+20	0.0066	0.04	Q				
2+25	0.0069	0.04	Q				
2+30	0.0072	0.04	Q				
2+35	0.0075	0.05	Q				
2+40	0.0079	0.05	Q				
2+45	0.0083	0.05	Q				
2+50	0.0086	0.05	Q				
2+55	0.0090	0.05	Q				
3+ 0	0.0094	0.05	Q				
3+ 5	0.0097	0.05	Q				
3+10	0.0101	0.05	Q				

3+15	0.0105	0.05	Q				
3+20	0.0108	0.05	Q				
3+25	0.0112	0.05	Q				
3+30	0.0116	0.05	Q				
3+35	0.0119	0.05	Q				
3+40	0.0123	0.05	Q				
3+45	0.0127	0.05	Q				
3+50	0.0131	0.06	Q				
3+55	0.0135	0.06	Q				
4+ 0	0.0140	0.06	Q				
4+ 5	0.0144	0.06	Q				
4+10	0.0149	0.06	Q				
4+15	0.0153	0.06	Q				
4+20	0.0158	0.07	Q				
4+25	0.0163	0.07	Q				
4+30	0.0168	0.07	Q				
4+35	0.0173	0.07	Q				
4+40	0.0179	0.07	Q				
4+45	0.0184	0.07	Q				
4+50	0.0189	0.08	Q				
4+55	0.0195	0.09	Q				
5+ 0	0.0201	0.09	Q				
5+ 5	0.0206	0.07	Q				
5+10	0.0210	0.06	Q				
5+15	0.0215	0.06	Q				
5+20	0.0220	0.07	Q				
5+25	0.0225	0.07	Q				
5+30	0.0230	0.07	Q				
5+35	0.0236	0.08	Q				
5+40	0.0242	0.09	Q				
5+45	0.0247	0.09	Q				
5+50	0.0253	0.09	Q				
5+55	0.0259	0.09	Q				
6+ 0	0.0265	0.09	Q				
6+ 5	0.0277	0.17	Q				
6+10	0.0291	0.20	Q				
6+15	0.0305	0.21	Q				
6+20	0.0320	0.21	Q				
6+25	0.0334	0.21	QV				
6+30	0.0349	0.22	QV				
6+35	0.0370	0.30	|Q				
6+40	0.0392	0.33	|Q				
6+45	0.0415	0.33	|Q				
6+50	0.0439	0.34	|Q				
6+55	0.0462	0.34	|Q				
7+ 0	0.0486	0.34	|Q				
7+ 5	0.0509	0.35	|Q				
7+10	0.0534	0.35	|Q				
7+15	0.0558	0.35	|Q				
7+20	0.0588	0.43	|Q				

```
 7+25       0.0620      0.47  |Q         |          |          |          |
 7+30       0.0652      0.47  |QV        |          |          |          |
 7+35       0.0690      0.55  | Q        |          |          |          |
 7+40       0.0730      0.58  | Q        |          |          |          |
 7+45       0.0770      0.59  | Q        |          |          |          |
 7+50       0.0816      0.66  | Q        |          |          |          |
 7+55       0.0864      0.70  | Q        |          |          |          |
 8+ 0       0.0913      0.70  | Q        |          |          |          |
 8+ 5       0.0972      0.86  | VQ       |          |          |          |
 8+10       0.1035      0.92  |  Q       |          |          |          |
 8+15       0.1099      0.93  |  Q       |          |          |          |
 8+20       0.1163      0.93  |  Q       |          |          |          |
 8+25       0.1227      0.93  |  Q       |          |          |          |
 8+30       0.1291      0.93  |  Q       |          |          |          |
 8+35       0.1361      1.01  |   Q      |          |          |          |
 8+40       0.1433      1.05  |   Q      |          |          |          |
 8+45       0.1506      1.05  |   Q      |          |          |          |
 8+50       0.1583      1.13  |   Q      |          |          |          |
 8+55       0.1663      1.16  |   QV     |          |          |          |
 9+ 0       0.1744      1.17  |   QV     |          |          |          |
 9+ 5       0.1835      1.32  |    Q     |          |          |          |
 9+10       0.1930      1.39  |    Q     |          |          |          |
 9+15       0.2026      1.39  |    QV    |          |          |          |
 9+20       0.2127      1.47  |    QV    |          |          |          |
 9+25       0.2230      1.50  |     Q    |          |          |          |
 9+30       0.2334      1.51  |     QV   |          |          |          |
 9+35       0.2443      1.58  |     QV   |          |          |          |
 9+40       0.2555      1.62  |     QV   |          |          |          |
 9+45       0.2666      1.62  |     Q V  |          |          |          |
 9+50       0.2783      1.70  |     Q V  |          |          |          |
 9+55       0.2903      1.73  |     Q V  |          |          |          |
10+ 0       0.3022      1.74  |     Q  V|          |          |          |
10+ 5       0.3106      1.21  |   Q    V|          |          |          |
10+10       0.3174      1.00  |  Q     V|          |          |          |
10+15       0.3243      1.00  |  Q     V|          |          |          |
10+20       0.3312      1.00  |   Q     V          |          |          |
10+25       0.3381      1.00  |   Q     V          |          |          |
10+30       0.3450      1.01  |   Q     V          |          |          |
10+35       0.3546      1.39  |    Q    V          |          |          |
10+40       0.3652      1.55  |     Q   |V          |          |          |
10+45       0.3759      1.55  |     Q   |V          |          |          |
10+50       0.3866      1.55  |     Q   |V          |          |          |
10+55       0.3973      1.56  |     Q   | V         |          |          |
11+ 0       0.4080      1.56  |     Q   | V         |          |          |
11+ 5       0.4183      1.49  |    Q    | V         |          |          |
11+10       0.4283      1.46  |    Q    |  V        |          |          |
11+15       0.4384      1.46  |    Q    |  V        |          |          |
11+20       0.4484      1.46  |    Q    |  V        |          |          |
11+25       0.4585      1.47  |    Q    |   V       |          |          |
11+30       0.4686      1.47  |    Q    |   V       |          |          |
```



15+45	1.2373	1.60	|	Q	|	|	V |
15+50	1.2483	1.60	|	Q	|	|	V |
15+55	1.2594	1.60	|	Q	|	|	V |
16+ 0	1.2704	1.60	|	Q	|	|	V|
16+ 5	1.2739	0.50	| Q		|	|	V|
16+10	1.2742	0.04	Q		|	|	V|
16+15	1.2745	0.04	Q		|	|	V|
16+20	1.2747	0.04	Q		|	|	V|
16+25	1.2750	0.04	Q		|	|	V|
16+30	1.2753	0.04	Q		|	|	V|
16+35	1.2756	0.04	Q		|	|	V|
16+40	1.2758	0.03	Q		|	|	V|
16+45	1.2760	0.03	Q		|	|	V|
16+50	1.2762	0.03	Q		|	|	V|
16+55	1.2765	0.03	Q		|	|	V|
17+ 0	1.2767	0.03	Q		|	|	V|
17+ 5	1.2774	0.11	Q		|	|	V|
17+10	1.2784	0.14	Q		|	|	V|
17+15	1.2793	0.14	Q		|	|	V|
17+20	1.2803	0.14	Q		|	|	V|
17+25	1.2813	0.14	Q		|	|	V|
17+30	1.2823	0.15	Q		|	|	V|
17+35	1.2833	0.15	Q		|	|	V|
17+40	1.2843	0.15	Q		|	|	V|
17+45	1.2854	0.15	Q		|	|	V|
17+50	1.2859	0.08	Q		|	|	V|
17+55	1.2862	0.05	Q		|	|	V|
18+ 0	1.2866	0.05	Q		|	|	V|
18+ 5	1.2870	0.05	Q		|	|	V|
18+10	1.2873	0.05	Q		|	|	V|
18+15	1.2877	0.06	Q		|	|	V|
18+20	1.2881	0.06	Q		|	|	V|
18+25	1.2885	0.06	Q		|	|	V|
18+30	1.2889	0.06	Q		|	|	V|
18+35	1.2892	0.04	Q		|	|	V|
18+40	1.2894	0.03	Q		|	|	V|
18+45	1.2897	0.03	Q		|	|	V|
18+50	1.2898	0.02	Q		|	|	V|
18+55	1.2900	0.02	Q		|	|	V|
19+ 0	1.2901	0.02	Q		|	|	V|
19+ 5	1.2903	0.03	Q		|	|	V|
19+10	1.2905	0.03	Q		|	|	V|
19+15	1.2908	0.03	Q		|	|	V|
19+20	1.2912	0.06	Q		|	|	V|
19+25	1.2918	0.08	Q		|	|	V|
19+30	1.2923	0.08	Q		|	|	V|
19+35	1.2926	0.05	Q		|	|	V|
19+40	1.2929	0.03	Q		|	|	V|
19+45	1.2931	0.03	Q		|	|	V|
19+50	1.2933	0.02	Q		|	|	V|

19+55	1.2934	0.02	Q	|	|	|	V|
20+ 0	1.2935	0.02	Q	|	|	|	V|
20+ 5	1.2937	0.03	Q	|	|	|	V|
20+10	1.2940	0.03	Q	|	|	|	V|
20+15	1.2942	0.03	Q	|	|	|	V|
20+20	1.2944	0.03	Q	|	|	|	V|
20+25	1.2946	0.03	Q	|	|	|	V|
20+30	1.2948	0.03	Q	|	|	|	V|
20+35	1.2951	0.03	Q	|	|	|	V|
20+40	1.2953	0.03	Q	|	|	|	V|
20+45	1.2955	0.03	Q	|	|	|	V|
20+50	1.2957	0.02	Q	|	|	|	V|
20+55	1.2958	0.02	Q	|	|	|	V|
21+ 0	1.2960	0.02	Q	|	|	|	V|
21+ 5	1.2962	0.03	Q	|	|	|	V|
21+10	1.2964	0.03	Q	|	|	|	V|
21+15	1.2966	0.03	Q	|	|	|	V|
21+20	1.2968	0.02	Q	|	|	|	V|
21+25	1.2969	0.02	Q	|	|	|	V|
21+30	1.2971	0.02	Q	|	|	|	V|
21+35	1.2973	0.03	Q	|	|	|	V|
21+40	1.2975	0.03	Q	|	|	|	V|
21+45	1.2977	0.03	Q	|	|	|	V|
21+50	1.2979	0.02	Q	|	|	|	V|
21+55	1.2980	0.02	Q	|	|	|	V|
22+ 0	1.2982	0.02	Q	|	|	|	V|
22+ 5	1.2984	0.03	Q	|	|	|	V|
22+10	1.2986	0.03	Q	|	|	|	V|
22+15	1.2988	0.03	Q	|	|	|	V|
22+20	1.2990	0.02	Q	|	|	|	V|
22+25	1.2991	0.02	Q	|	|	|	V|
22+30	1.2993	0.02	Q	|	|	|	V|
22+35	1.2994	0.02	Q	|	|	|	V|
22+40	1.2996	0.02	Q	|	|	|	V|
22+45	1.2997	0.02	Q	|	|	|	V|
22+50	1.2999	0.02	Q	|	|	|	V|
22+55	1.3000	0.02	Q	|	|	|	V|
23+ 0	1.3002	0.02	Q	|	|	|	V|
23+ 5	1.3003	0.02	Q	|	|	|	V|
23+10	1.3005	0.02	Q	|	|	|	V|
23+15	1.3006	0.02	Q	|	|	|	V|
23+20	1.3007	0.02	Q	|	|	|	V|
23+25	1.3009	0.02	Q	|	|	|	V|
23+30	1.3010	0.02	Q	|	|	|	V|
23+35	1.3012	0.02	Q	|	|	|	V|
23+40	1.3013	0.02	Q	|	|	|	V|
23+45	1.3015	0.02	Q	|	|	|	V|
23+50	1.3016	0.02	Q	|	|	|	V|
23+55	1.3018	0.02	Q	|	|	|	V|
24+ 0	1.3019	0.02	Q	|	|	|	V|

```
   24+ 5       1.3020      0.01  Q         |         |         |        V|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/04/24 File: ONSITEPREE1242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  79.8      0.246     0.000        0.246       1.000      0.246
                                                 Sum (F) =   0.246
Area averaged mean soil loss (F) (In/Hr) =  0.246
Minimum soil loss rate ((In/Hr)) =  0.123
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004

46	3.83	0.20	0.048	(0.364)	0.043	0.005
47	3.92	0.20	0.048	(0.362)	0.043	0.005
48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005
50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010

96	8.00	0.43	0.104	(0.292)	0.094	0.010
97	8.08	0.50	0.120	(0.290)	0.108	0.012
98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012
125	10.42	0.50	0.120	(0.254)	0.108	0.012
126	10.50	0.50	0.120	(0.253)	0.108	0.012
127	10.58	0.67	0.160	(0.251)	0.144	0.016
128	10.67	0.67	0.160	(0.250)	0.144	0.016
129	10.75	0.67	0.160	(0.249)	0.144	0.016
130	10.83	0.67	0.160	(0.248)	0.144	0.016
131	10.92	0.67	0.160	(0.247)	0.144	0.016
132	11.00	0.67	0.160	(0.245)	0.144	0.016
133	11.08	0.63	0.152	(0.244)	0.137	0.015
134	11.17	0.63	0.152	(0.243)	0.137	0.015
135	11.25	0.63	0.152	(0.242)	0.137	0.015
136	11.33	0.63	0.152	(0.241)	0.137	0.015
137	11.42	0.63	0.152	(0.239)	0.137	0.015
138	11.50	0.63	0.152	(0.238)	0.137	0.015
139	11.58	0.57	0.136	(0.237)	0.122	0.014
140	11.67	0.57	0.136	(0.236)	0.122	0.014
141	11.75	0.57	0.136	(0.235)	0.122	0.014
142	11.83	0.60	0.144	(0.233)	0.130	0.014
143	11.92	0.60	0.144	(0.232)	0.130	0.014
144	12.00	0.60	0.144	(0.231)	0.130	0.014
145	12.08	0.83	0.200	(0.230)	0.180	0.020

146	12.17	0.83	0.200	(	0.229)	0.180	0.020
147	12.25	0.83	0.200	(	0.228)	0.180	0.020
148	12.33	0.87	0.208	(	0.227)	0.187	0.021
149	12.42	0.87	0.208	(	0.225)	0.187	0.021
150	12.50	0.87	0.208	(	0.224)	0.187	0.021
151	12.58	0.93	0.224	(	0.223)	0.202	0.022
152	12.67	0.93	0.224	(	0.222)	0.202	0.022
153	12.75	0.93	0.224	(	0.221)	0.202	0.022
154	12.83	0.97	0.232	(	0.220)	0.209	0.023
155	12.92	0.97	0.232	(	0.219)	0.209	0.023
156	13.00	0.97	0.232	(	0.218)	0.209	0.023
157	13.08	1.13	0.272		0.216	(0.245)	0.056
158	13.17	1.13	0.272		0.215	(0.245)	0.057
159	13.25	1.13	0.272		0.214	(0.245)	0.058
160	13.33	1.13	0.272		0.213	(0.245)	0.059
161	13.42	1.13	0.272		0.212	(0.245)	0.060
162	13.50	1.13	0.272		0.211	(0.245)	0.061
163	13.58	0.77	0.184	(	0.210)	0.166	0.018
164	13.67	0.77	0.184	(	0.209)	0.166	0.018
165	13.75	0.77	0.184	(	0.208)	0.166	0.018
166	13.83	0.77	0.184	(	0.207)	0.166	0.018
167	13.92	0.77	0.184	(	0.206)	0.166	0.018
168	14.00	0.77	0.184	(	0.205)	0.166	0.018
169	14.08	0.90	0.216	(	0.204)	0.194	0.022
170	14.17	0.90	0.216	(	0.203)	0.194	0.022
171	14.25	0.90	0.216	(	0.202)	0.194	0.022
172	14.33	0.87	0.208	(	0.200)	0.187	0.021
173	14.42	0.87	0.208	(	0.199)	0.187	0.021
174	14.50	0.87	0.208	(	0.198)	0.187	0.021
175	14.58	0.87	0.208	(	0.197)	0.187	0.021
176	14.67	0.87	0.208	(	0.196)	0.187	0.021
177	14.75	0.87	0.208	(	0.195)	0.187	0.021
178	14.83	0.83	0.200	(	0.194)	0.180	0.020
179	14.92	0.83	0.200	(	0.193)	0.180	0.020
180	15.00	0.83	0.200	(	0.192)	0.180	0.020
181	15.08	0.80	0.192	(	0.191)	0.173	0.019
182	15.17	0.80	0.192	(	0.190)	0.173	0.019
183	15.25	0.80	0.192	(	0.189)	0.173	0.019
184	15.33	0.77	0.184	(	0.188)	0.166	0.018
185	15.42	0.77	0.184	(	0.188)	0.166	0.018
186	15.50	0.77	0.184	(	0.187)	0.166	0.018
187	15.58	0.63	0.152	(	0.186)	0.137	0.015
188	15.67	0.63	0.152	(	0.185)	0.137	0.015
189	15.75	0.63	0.152	(	0.184)	0.137	0.015
190	15.83	0.63	0.152	(	0.183)	0.137	0.015
191	15.92	0.63	0.152	(	0.182)	0.137	0.015
192	16.00	0.63	0.152	(	0.181)	0.137	0.015
193	16.08	0.13	0.032	(	0.180)	0.029	0.003
194	16.17	0.13	0.032	(	0.179)	0.029	0.003
195	16.25	0.13	0.032	(	0.178)	0.029	0.003

196	16.33	0.13	0.032	(0.177)	0.029	0.003
197	16.42	0.13	0.032	(0.176)	0.029	0.003
198	16.50	0.13	0.032	(0.175)	0.029	0.003
199	16.58	0.10	0.024	(0.175)	0.022	0.002
200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002

246	20.50	0.10	0.024	(0.139)	0.022	0.002
247	20.58	0.10	0.024	(0.139)	0.022	0.002
248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002
275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.6

Flood volume = Effective rainfall 0.22(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.699(Ac.Ft)
Total rainfall = 2.00(In)

Flood volume = 3677.2 Cubic Feet
Total soil loss = 30444.4 Cubic Feet

Peak flow rate of this hydrograph = 0.285(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0003	0.01	Q				
0+35	0.0004	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0006	0.01	Q				
0+50	0.0007	0.01	Q				
0+55	0.0008	0.01	Q				
1+ 0	0.0009	0.02	Q				
1+ 5	0.0010	0.01	Q				
1+10	0.0010	0.01	Q				
1+15	0.0011	0.01	Q				
1+20	0.0012	0.01	Q				
1+25	0.0013	0.01	Q				
1+30	0.0014	0.01	Q				
1+35	0.0014	0.01	Q				
1+40	0.0015	0.01	Q				
1+45	0.0016	0.01	Q				
1+50	0.0017	0.01	Q				
1+55	0.0018	0.01	Q				
2+ 0	0.0019	0.02	Q				
2+ 5	0.0020	0.02	Q				
2+10	0.0021	0.02	Q				
2+15	0.0022	0.02	QV				
2+20	0.0023	0.02	QV				
2+25	0.0024	0.02	QV				
2+30	0.0025	0.02	QV				
2+35	0.0026	0.02	QV				
2+40	0.0028	0.02	QV				
2+45	0.0029	0.02	QV				
2+50	0.0030	0.02	QV				
2+55	0.0031	0.02	QV				
3+ 0	0.0033	0.02	QV				

3+ 5	0.0034	0.02	QV	|	|	|	|
3+10	0.0035	0.02	QV	|	|	|	|
3+15	0.0037	0.02	QV	|	|	|	|
3+20	0.0038	0.02	QV	|	|	|	|
3+25	0.0039	0.02	QV	|	|	|	|
3+30	0.0041	0.02	QV	|	|	|	|
3+35	0.0042	0.02	QV	|	|	|	|
3+40	0.0043	0.02	Q V	|	|	|	|
3+45	0.0045	0.02	Q V	|	|	|	|
3+50	0.0046	0.02	Q V	|	|	|	|
3+55	0.0047	0.02	Q V	|	|	|	|
4+ 0	0.0049	0.02	Q V	|	|	|	|
4+ 5	0.0051	0.02	Q V	|	|	|	|
4+10	0.0052	0.02	Q V	|	|	|	|
4+15	0.0054	0.02	Q V	|	|	|	|
4+20	0.0055	0.02	Q V	|	|	|	|
4+25	0.0057	0.03	Q V	|	|	|	|
4+30	0.0059	0.03	Q V	|	|	|	|
4+35	0.0061	0.03	Q V	|	|	|	|
4+40	0.0063	0.03	Q V	|	|	|	|
4+45	0.0065	0.03	Q V	|	|	|	|
4+50	0.0066	0.03	Q V	|	|	|	|
4+55	0.0069	0.03	Q V	|	|	|	|
5+ 0	0.0071	0.03	Q V	|	|	|	|
5+ 5	0.0072	0.03	Q V	|	|	|	|
5+10	0.0074	0.02	Q V	|	|	|	|
5+15	0.0076	0.02	Q V	|	|	|	|
5+20	0.0077	0.02	Q V	|	|	|	|
5+25	0.0079	0.03	Q V	|	|	|	|
5+30	0.0081	0.03	Q V	|	|	|	|
5+35	0.0083	0.03	Q V	|	|	|	|
5+40	0.0085	0.03	Q V	|	|	|	|
5+45	0.0087	0.03	Q V	|	|	|	|
5+50	0.0089	0.03	Q V	|	|	|	|
5+55	0.0091	0.03	Q V	|	|	|	|
6+ 0	0.0093	0.03	Q V	|	|	|	|
6+ 5	0.0096	0.03	Q V	|	|	|	|
6+10	0.0098	0.03	Q V	|	|	|	|
6+15	0.0100	0.03	Q V	|	|	|	|
6+20	0.0103	0.03	Q V	|	|	|	|
6+25	0.0105	0.03	Q V	|	|	|	|
6+30	0.0107	0.03	Q V	|	|	|	|
6+35	0.0110	0.04	Q V	|	|	|	|
6+40	0.0112	0.04	Q V	|	|	|	|
6+45	0.0115	0.04	Q V	|	|	|	|
6+50	0.0117	0.04	Q V	|	|	|	|
6+55	0.0120	0.04	Q V	|	|	|	|
7+ 0	0.0123	0.04	Q V	|	|	|	|
7+ 5	0.0125	0.04	Q V	|	|	|	|
7+10	0.0128	0.04	Q V	|	|	|	|

7+15	0.0131	0.04	Q	V	|	|	|	|
7+20	0.0133	0.04	Q	V	|	|	|	|
7+25	0.0136	0.04	Q	V	|	|	|	|
7+30	0.0139	0.04	Q	V	|	|	|	|
7+35	0.0142	0.04	Q	V	|	|	|	|
7+40	0.0145	0.05	Q	V	|	|	|	|
7+45	0.0148	0.05	Q	V	|	|	|	|
7+50	0.0151	0.05	Q	V	|	|	|	|
7+55	0.0155	0.05	Q	V	|	|	|	|
8+ 0	0.0158	0.05	Q	V	|	|	|	|
8+ 5	0.0162	0.05	Q	V	|	|	|	|
8+10	0.0166	0.06	Q	V	|	|	|	|
8+15	0.0170	0.06	Q	V	|	|	|	|
8+20	0.0173	0.06	Q	V	|	|	|	|
8+25	0.0177	0.06	Q	V	|	|	|	|
8+30	0.0181	0.06	Q	V	|	|	|	|
8+35	0.0185	0.06	Q	V	|	|	|	|
8+40	0.0190	0.06	Q	V	|	|	|	|
8+45	0.0194	0.06	Q	V	|	|	|	|
8+50	0.0198	0.06	Q	V	|	|	|	|
8+55	0.0202	0.06	Q	V	|	|	|	|
9+ 0	0.0207	0.06	Q	V	|	|	|	|
9+ 5	0.0211	0.07	Q	V	|	|	|	|
9+10	0.0216	0.07	Q	V	|	|	|	|
9+15	0.0221	0.07	Q	V	|	|	|	|
9+20	0.0226	0.07	Q	V	|	|	|	|
9+25	0.0232	0.08	Q	V	|	|	|	|
9+30	0.0237	0.08	Q	V	|	|	|	|
9+35	0.0242	0.08	Q	V	|	|	|	|
9+40	0.0248	0.08	Q	V	|	|	|	|
9+45	0.0253	0.08	Q	V	|	|	|	|
9+50	0.0259	0.08	Q	V	|	|	|	|
9+55	0.0264	0.08	Q	V	|	|	|	|
10+ 0	0.0270	0.08	Q	V	|	|	|	|
10+ 5	0.0275	0.07	Q	V	|	|	|	|
10+10	0.0279	0.06	Q	V	|	|	|	|
10+15	0.0283	0.06	Q	V	|	|	|	|
10+20	0.0287	0.06	Q	V	|	|	|	|
10+25	0.0291	0.06	Q	V	|	|	|	|
10+30	0.0295	0.06	Q	V	|	|	|	|
10+35	0.0299	0.07	Q	V	|	|	|	|
10+40	0.0304	0.07	Q	V	|	|	|	|
10+45	0.0310	0.08	Q	V	|	|	|	|
10+50	0.0315	0.08	Q	V	|	|	|	|
10+55	0.0320	0.08	Q	V	|	|	|	|
11+ 0	0.0325	0.08	Q	V	|	|	|	|
11+ 5	0.0330	0.07	Q	V	|	|	|	|
11+10	0.0335	0.07	Q	V	|	|	|	|
11+15	0.0340	0.07	Q	V	|	|	|	|
11+20	0.0345	0.07	Q	V	|	|	|	|

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11+25       0.0350      0.07  Q          |     V    |          |          |
11+30       0.0355      0.07  Q          |     V    |          |          |
11+35       0.0360      0.07  Q          |      V   |          |          |
11+40       0.0365      0.07  Q          |      V   |          |          |
11+45       0.0369      0.06  Q          |      V   |          |          |
11+50       0.0374      0.07  Q          |      V   |          |          |
11+55       0.0378      0.07  Q          |      V   |          |          |
12+ 0       0.0383      0.07  Q          |       V  |          |          |
12+ 5       0.0388      0.08  Q          |       V  |          |          |
12+10       0.0395      0.09  Q          |       V  |          |          |
12+15       0.0401      0.09  Q          |        V |          |          |
12+20       0.0408      0.10  Q          |        V |          |          |
12+25       0.0415      0.10  Q          |        V |          |          |
12+30       0.0421      0.10  Q          |        V |          |          |
12+35       0.0428      0.10  Q          |         V          |          |
12+40       0.0436      0.11  Q          |         V          |          |
12+45       0.0443      0.11  Q          |         V          |          |
12+50       0.0450      0.11  Q          |          |V        |          |
12+55       0.0458      0.11  Q          |          |V        |          |
13+ 0       0.0465      0.11  Q          |          | V       |          |
13+ 5       0.0478      0.18  Q          |          | V       |          |
13+10       0.0495      0.25  Q          |          |  V      |          |
13+15       0.0513      0.26  |Q         |          |   V     |          |
13+20       0.0532      0.28  |Q         |          |    V    |          |
13+25       0.0551      0.28  |Q         |          |     V   |          |
13+30       0.0571      0.29  |Q         |          |      V  |          |
13+35       0.0585      0.20  Q          |          |      V  |          |
13+40       0.0592      0.11  Q          |          |       V |          |
13+45       0.0599      0.09  Q          |          |       V |          |
13+50       0.0605      0.09  Q          |          |       V |          |
13+55       0.0611      0.09  Q          |          |       V |          |
14+ 0       0.0617      0.09  Q          |          |        V|          |
14+ 5       0.0623      0.09  Q          |          |        V|          |
14+10       0.0630      0.10  Q          |          |        V|          |
14+15       0.0637      0.10  Q          |          |         V          |
14+20       0.0644      0.10  Q          |          |         V          |
14+25       0.0651      0.10  Q          |          |         V          |
14+30       0.0658      0.10  Q          |          |          |V        |
14+35       0.0664      0.10  Q          |          |          |V        |
14+40       0.0671      0.10  Q          |          |          |V        |
14+45       0.0678      0.10  Q          |          |          | V       |
14+50       0.0685      0.10  Q          |          |          | V       |
14+55       0.0691      0.10  Q          |          |          | V       |
15+ 0       0.0698      0.09  Q          |          |          |  V      |
15+ 5       0.0704      0.09  Q          |          |          |  V      |
15+10       0.0711      0.09  Q          |          |          |  V      |
15+15       0.0717      0.09  Q          |          |          |  V      |
15+20       0.0723      0.09  Q          |          |          |   V     |
15+25       0.0729      0.09  Q          |          |          |   V     |
15+30       0.0735      0.09  Q          |          |          |   V     |
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15+35       0.0741      0.08  Q        |          |          |    V     |
15+40       0.0746      0.07  Q        |          |          |    V     |
15+45       0.0751      0.07  Q        |          |          |    V     |
15+50       0.0756      0.07  Q        |          |          |    V     |
15+55       0.0761      0.07  Q        |          |          |     V    |
16+ 0       0.0765      0.07  Q        |          |          |     V    |
16+ 5       0.0769      0.05  Q        |          |          |     V    |
16+10       0.0770      0.02  Q        |          |          |     V    |
16+15       0.0771      0.02  Q        |          |          |     V    |
16+20       0.0772      0.02  Q        |          |          |     V    |
16+25       0.0773      0.02  Q        |          |          |     V    |
16+30       0.0775      0.02  Q        |          |          |     V    |
16+35       0.0775      0.01  Q        |          |          |     V    |
16+40       0.0776      0.01  Q        |          |          |     V    |
16+45       0.0777      0.01  Q        |          |          |     V    |
16+50       0.0778      0.01  Q        |          |          |     V    |
16+55       0.0779      0.01  Q        |          |          |     V    |
17+ 0       0.0779      0.01  Q        |          |          |     V    |
17+ 5       0.0780      0.01  Q        |          |          |     V    |
17+10       0.0782      0.02  Q        |          |          |      V   |
17+15       0.0783      0.02  Q        |          |          |      V   |
17+20       0.0784      0.02  Q        |          |          |      V   |
17+25       0.0786      0.02  Q        |          |          |      V   |
17+30       0.0787      0.02  Q        |          |          |      V   |
17+35       0.0788      0.02  Q        |          |          |      V   |
17+40       0.0789      0.02  Q        |          |          |      V   |
17+45       0.0791      0.02  Q        |          |          |      V   |
17+50       0.0792      0.02  Q        |          |          |      V   |
17+55       0.0793      0.02  Q        |          |          |      V   |
18+ 0       0.0794      0.02  Q        |          |          |      V   |
18+ 5       0.0795      0.02  Q        |          |          |      V   |
18+10       0.0796      0.02  Q        |          |          |      V   |
18+15       0.0797      0.02  Q        |          |          |      V   |
18+20       0.0798      0.02  Q        |          |          |      V   |
18+25       0.0799      0.02  Q        |          |          |      V   |
18+30       0.0800      0.02  Q        |          |          |      V   |
18+35       0.0801      0.01  Q        |          |          |      V   |
18+40       0.0802      0.01  Q        |          |          |       V  |
18+45       0.0803      0.01  Q        |          |          |       V  |
18+50       0.0804      0.01  Q        |          |          |       V  |
18+55       0.0804      0.01  Q        |          |          |       V  |
19+ 0       0.0805      0.01  Q        |          |          |       V  |
19+ 5       0.0805      0.01  Q        |          |          |       V  |
19+10       0.0806      0.01  Q        |          |          |       V  |
19+15       0.0807      0.01  Q        |          |          |       V  |
19+20       0.0808      0.01  Q        |          |          |       V  |
19+25       0.0809      0.01  Q        |          |          |       V  |
19+30       0.0810      0.02  Q        |          |          |       V  |
19+35       0.0811      0.01  Q        |          |          |       V  |
19+40       0.0812      0.01  Q        |          |          |       V  |
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19+45       0.0812      0.01  Q         |          |          |        V |
19+50       0.0813      0.01  Q         |          |          |        V |
19+55       0.0814      0.01  Q         |          |          |        V |
20+ 0       0.0814      0.01  Q         |          |          |        V |
20+ 5       0.0815      0.01  Q         |          |          |        V |
20+10       0.0815      0.01  Q         |          |          |        V |
20+15       0.0816      0.01  Q         |          |          |        V |
20+20       0.0817      0.01  Q         |          |          |        V |
20+25       0.0818      0.01  Q         |          |          |        V |
20+30       0.0819      0.01  Q         |          |          |        V |
20+35       0.0819      0.01  Q         |          |          |        V |
20+40       0.0820      0.01  Q         |          |          |        V |
20+45       0.0821      0.01  Q         |          |          |        V |
20+50       0.0822      0.01  Q         |          |          |        V |
20+55       0.0822      0.01  Q         |          |          |        V |
21+ 0       0.0823      0.01  Q         |          |          |        V |
21+ 5       0.0823      0.01  Q         |          |          |         V|
21+10       0.0824      0.01  Q         |          |          |         V|
21+15       0.0825      0.01  Q         |          |          |         V|
21+20       0.0825      0.01  Q         |          |          |         V|
21+25       0.0826      0.01  Q         |          |          |         V|
21+30       0.0827      0.01  Q         |          |          |         V|
21+35       0.0827      0.01  Q         |          |          |         V|
21+40       0.0828      0.01  Q         |          |          |         V|
21+45       0.0829      0.01  Q         |          |          |         V|
21+50       0.0829      0.01  Q         |          |          |         V|
21+55       0.0830      0.01  Q         |          |          |         V|
22+ 0       0.0830      0.01  Q         |          |          |         V|
22+ 5       0.0831      0.01  Q         |          |          |         V|
22+10       0.0832      0.01  Q         |          |          |         V|
22+15       0.0833      0.01  Q         |          |          |         V|
22+20       0.0833      0.01  Q         |          |          |         V|
22+25       0.0834      0.01  Q         |          |          |         V|
22+30       0.0834      0.01  Q         |          |          |         V|
22+35       0.0835      0.01  Q         |          |          |         V|
22+40       0.0835      0.01  Q         |          |          |         V|
22+45       0.0836      0.01  Q         |          |          |         V|
22+50       0.0837      0.01  Q         |          |          |         V|
22+55       0.0837      0.01  Q         |          |          |         V|
23+ 0       0.0838      0.01  Q         |          |          |         V|
23+ 5       0.0838      0.01  Q         |          |          |         V|
23+10       0.0839      0.01  Q         |          |          |         V|
23+15       0.0839      0.01  Q         |          |          |         V|
23+20       0.0840      0.01  Q         |          |          |         V|
23+25       0.0840      0.01  Q         |          |          |         V|
23+30       0.0841      0.01  Q         |          |          |         V|
23+35       0.0841      0.01  Q         |          |          |         V|
23+40       0.0842      0.01  Q         |          |          |         V|
23+45       0.0842      0.01  Q         |          |          |         V|
23+50       0.0843      0.01  Q         |          |          |         V|
```

```
   23+55       0.0843      0.01  Q         |         |         |        V|
   24+ 0       0.0844      0.01  Q         |         |         |        V|
   24+ 5       0.0844      0.00  Q         |         |         |        V|
   24+10       0.0844      0.00  Q         |         |         |        V|
   24+15       0.0844      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 08/16/23 File: ONSITEPREE1110.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 10-YEAR 1-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            0.50                  2.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            1.30                  6.11

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                              Sum = 100.000   Sum=       4.737
-----------------------------------------------------------------
```

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	3.30	0.328	0.117	(0.295)	0.211
2	0.17	4.20	0.418	0.117	(0.376)	0.301
3	0.25	4.40	0.438	0.117	(0.394)	0.321
4	0.33	4.80	0.478	0.117	(0.430)	0.361
5	0.42	5.20	0.517	0.117	(0.466)	0.400
6	0.50	6.20	0.617	0.117	(0.555)	0.500
7	0.58	6.80	0.677	0.117	(0.609)	0.560
8	0.67	8.80	0.876	0.117	(0.788)	0.759
9	0.75	13.90	1.383	0.117	(1.245)	1.266
10	0.83	31.40	3.124	0.117	(2.812)	3.007
11	0.92	7.20	0.716	0.117	(0.645)	0.599
12	1.00	3.80	0.378	0.117	(0.340)	0.261
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.71(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.046(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 12149.0 Cubic Feet
Total soil loss = 1996.1 Cubic Feet

Peak flow rate of this hydrograph = 9.428(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	0.0031	0.46	VQ				
0+10	0.0105	1.07	V Q				
0+15	0.0200	1.38	V Q				
0+20	0.0309	1.58	V Q				
0+25	0.0431	1.77	VQ				
0+30	0.0574	2.08	Q				
0+35	0.0742	2.43	QV				
0+40	0.0951	3.03	QV				
0+45	0.1265	4.56	Q				
0+50	0.1914	9.43	V			Q	

```
    0+55       0.2464      7.98  |         |         |         |Q   V    |
    1+ 0       0.2683      3.18  |         | Q       |         |       V |
    1+ 5       0.2772      1.29  |    Q    |         |         |        V|
    1+10       0.2786      0.21  Q         |         |         |        V|
    1+15       0.2789      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 08/16/23 File: ONSITEPREE1310.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 10-YEAR 3-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            0.80                    3.76

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.00                    9.40

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

Flood volume = Effective rainfall 0.95(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.136(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 16129.9 Cubic Feet
Total soil loss = 5941.3 Cubic Feet

Peak flow rate of this hydrograph = 4.983(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	0.0013	0.18	Q | | | |
0+10	0.0037	0.35	VQ | | | |
0+15	0.0059	0.32	VQ | | | |
0+20	0.0087	0.41	VQ | | | |
0+25	0.0123	0.52	|VQ | | | |
0+30	0.0167	0.64	|VQ | | | |
0+35	0.0211	0.64	| Q | | | |
0+40	0.0257	0.67	| Q | | | |
0+45	0.0309	0.75	| Q | | | |
0+50	0.0354	0.66	| QV | | | |
0+55	0.0396	0.61	| Q V | | | |
1+ 0	0.0444	0.69	| Q V | | | |
1+ 5	0.0504	0.88	| Q V | | | |
1+10	0.0575	1.02	| Q V | | | |
1+15	0.0647	1.05	| Q V | | | |
1+20	0.0716	1.00	| Q V | | | |
1+25	0.0794	1.14	| Q V | | | |
1+30	0.0887	1.34	| Q V| | | |
1+35	0.0977	1.31	| Q V | | |
1+40	0.1069	1.34	| Q |V | | |
1+45	0.1180	1.61	| Q | V | | |
1+50	0.1300	1.75	| Q | V | | |
1+55	0.1415	1.66	| Q | V | | |
2+ 0	0.1527	1.64	| Q | V | | |
2+ 5	0.1643	1.68	| Q | V | | |
2+10	0.1787	2.08	| Q | V| | |
2+15	0.1973	2.70	| Q |V | |
2+20	0.2146	2.52	| Q | V | |
2+25	0.2369	3.24	| | Q | V | |
2+30	0.2670	4.36	| | Q | V | |
2+35	0.3013	4.98	| | Q| | V |
2+40	0.3331	4.62	| | Q | | V |
2+45	0.3514	2.66	| | Q | | V |
2+50	0.3601	1.26	| Q | | | V |
2+55	0.3662	0.89	| Q | | | V|
3+ 0	0.3693	0.45	|Q | | | V|
3+ 5	0.3701	0.11	Q | | | V|
3+10	0.3703	0.03	Q | | | V|

3+15	0.3703	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 08/16/23 File: ONSITEPREE1610.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 10-YEAR 6-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            1.20                  5.64

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.80                 13.16

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

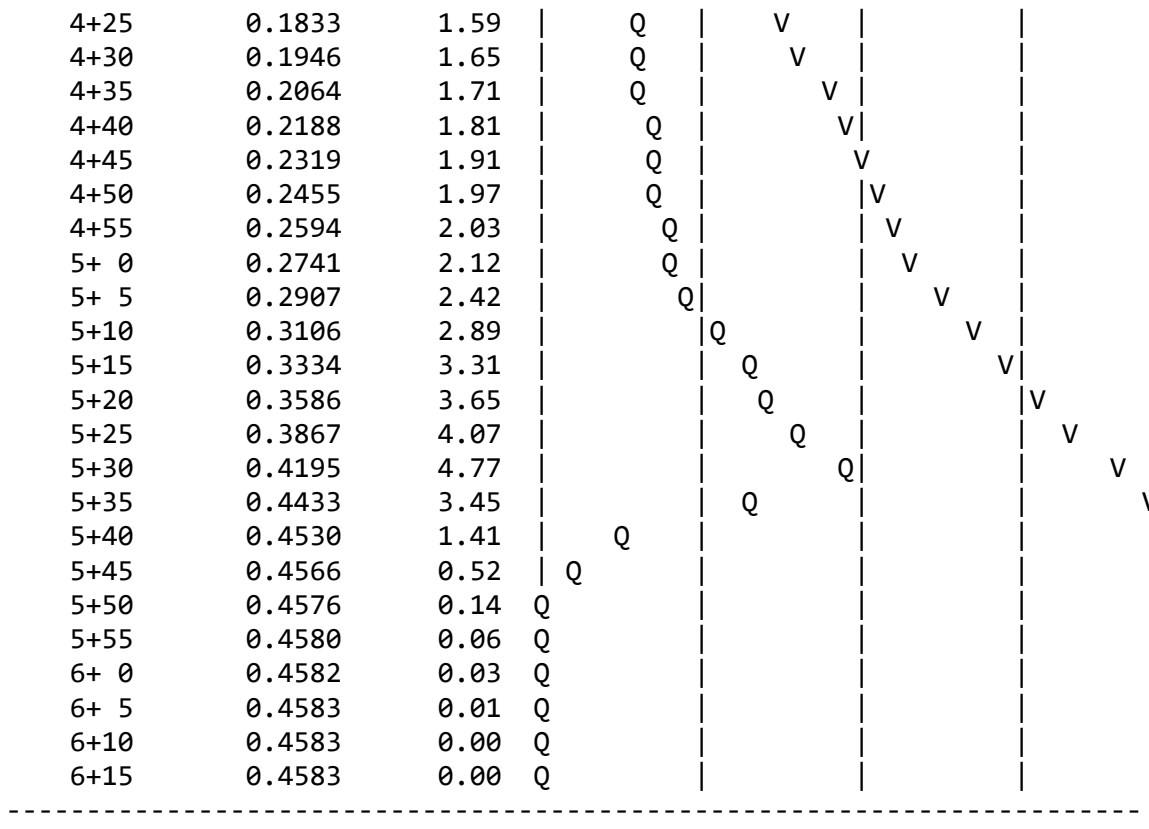
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217

```
46   3.83     1.50      0.334          0.117    (  0.301)        0.217
47   3.92     1.60      0.357          0.117    (  0.321)        0.240
48   4.00     1.60      0.357          0.117    (  0.321)        0.240
49   4.08     1.70      0.379          0.117    (  0.341)        0.262
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       4.7(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.270(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =       19963.7 Cubic Feet
      Total soil loss =       11739.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      4.770(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      0.02  Q         |         |         |         |
  0+10       0.0006      0.06  Q         |         |         |         |
```

```
0+15       0.0011      0.07  Q         |         |         |         |
0+20       0.0016      0.08  Q         |         |         |         |
0+25       0.0022      0.08  Q         |         |         |         |
0+30       0.0031      0.13  Q         |         |         |         |
0+35       0.0042      0.17  Q         |         |         |         |
0+40       0.0055      0.18  Q         |         |         |         |
0+45       0.0068      0.19  Q         |         |         |         |
0+50       0.0080      0.19  Q         |         |         |         |
0+55       0.0093      0.19  Q         |         |         |         |
1+ 0       0.0109      0.23  Q         |         |         |         |
1+ 5       0.0128      0.28  |Q        |         |         |         |
1+10       0.0148      0.29  |Q        |         |         |         |
1+15       0.0168      0.29  |Q        |         |         |         |
1+20       0.0188      0.29  |Q        |         |         |         |
1+25       0.0208      0.29  |Q        |         |         |         |
1+30       0.0228      0.29  |Q        |         |         |         |
1+35       0.0248      0.29  |QV       |         |         |         |
1+40       0.0268      0.29  |QV       |         |         |         |
1+45       0.0288      0.29  |QV       |         |         |         |
1+50       0.0308      0.29  |QV       |         |         |         |
1+55       0.0328      0.29  |QV       |         |         |         |
2+ 0       0.0352      0.34  |Q V      |         |         |         |
2+ 5       0.0375      0.34  |Q V      |         |         |         |
2+10       0.0399      0.35  |Q V      |         |         |         |
2+15       0.0426      0.39  |Q V      |         |         |         |
2+20       0.0453      0.39  |Q V      |         |         |         |
2+25       0.0480      0.40  |Q  V     |         |         |         |
2+30       0.0507      0.40  |Q  V     |         |         |         |
2+35       0.0535      0.40  |Q  V     |         |         |         |
2+40       0.0562      0.40  |Q  V     |         |         |         |
2+45       0.0593      0.44  |Q   V    |         |         |         |
2+50       0.0626      0.49  |Q   V    |         |         |         |
2+55       0.0661      0.50  |Q   V    |         |         |         |
3+ 0       0.0695      0.50  | Q   V   |         |         |         |
3+ 5       0.0730      0.50  | Q   V   |         |         |         |
3+10       0.0768      0.55  | Q   V   |         |         |         |
3+15       0.0809      0.60  | Q    V  |         |         |         |
3+20       0.0850      0.60  | Q    V  |         |         |         |
3+25       0.0895      0.66  | Q    V  |         |         |         |
3+30       0.0947      0.75  | Q     V |         |         |         |
3+35       0.1006      0.85  |  Q    V |         |         |         |
3+40       0.1068      0.91  |  Q     V|         |         |         |
3+45       0.1135      0.97  |  Q     V|         |         |         |
3+50       0.1205      1.02  |   Q     V         |         |         |
3+55       0.1279      1.07  |   Q     |V        |         |         |
4+ 0       0.1356      1.12  |   Q     |V        |         |         |
4+ 5       0.1438      1.18  |   Q     | V       |         |         |
4+10       0.1526      1.28  |    Q    |  V      |         |         |
4+15       0.1621      1.38  |    Q    |   V     |         |         |
4+20       0.1723      1.48  |    Q    |    V    |         |         |
```


4+25 0.1833 1.59
4+30 0.1946 1.65
4+35 0.2064 1.71
4+40 0.2188 1.81
4+45 0.2319 1.91
4+50 0.2455 1.97
4+55 0.2594 2.03
5+ 0 0.2741 2.12
5+ 5 0.2907 2.42
5+10 0.3106 2.89
5+15 0.3334 3.31
5+20 0.3586 3.65
5+25 0.3867 4.07
5+30 0.4195 4.77
5+35 0.4433 3.45
5+40 0.4530 1.41
5+45 0.4566 0.52
5+50 0.4576 0.14
5+55 0.4580 0.06
6+ 0 0.4582 0.03
6+ 5 0.4583 0.01
6+10 0.4583 0.00
6+15 0.4583 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 08/16/23 File: ONSITEPREE12410.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007

46	3.83	0.20	0.082	(	0.173)		0.073		0.008
47	3.92	0.20	0.082	(	0.172)		0.073		0.008
48	4.00	0.20	0.082	(	0.171)		0.073		0.008
49	4.08	0.20	0.082	(	0.171)		0.073		0.008
50	4.17	0.20	0.082	(	0.170)		0.073		0.008
51	4.25	0.20	0.082	(	0.169)		0.073		0.008
52	4.33	0.23	0.095	(	0.169)		0.086		0.010
53	4.42	0.23	0.095	(	0.168)		0.086		0.010
54	4.50	0.23	0.095	(	0.167)		0.086		0.010
55	4.58	0.23	0.095	(	0.166)		0.086		0.010
56	4.67	0.23	0.095	(	0.166)		0.086		0.010
57	4.75	0.23	0.095	(	0.165)		0.086		0.010
58	4.83	0.27	0.109	(	0.164)		0.098		0.011
59	4.92	0.27	0.109	(	0.164)		0.098		0.011
60	5.00	0.27	0.109	(	0.163)		0.098		0.011
61	5.08	0.20	0.082	(	0.162)		0.073		0.008
62	5.17	0.20	0.082	(	0.161)		0.073		0.008
63	5.25	0.20	0.082	(	0.161)		0.073		0.008
64	5.33	0.23	0.095	(	0.160)		0.086		0.010
65	5.42	0.23	0.095	(	0.159)		0.086		0.010
66	5.50	0.23	0.095	(	0.159)		0.086		0.010
67	5.58	0.27	0.109	(	0.158)		0.098		0.011
68	5.67	0.27	0.109	(	0.157)		0.098		0.011
69	5.75	0.27	0.109	(	0.157)		0.098		0.011
70	5.83	0.27	0.109	(	0.156)		0.098		0.011
71	5.92	0.27	0.109	(	0.155)		0.098		0.011
72	6.00	0.27	0.109	(	0.154)		0.098		0.011
73	6.08	0.30	0.122	(	0.154)		0.110		0.012
74	6.17	0.30	0.122	(	0.153)		0.110		0.012
75	6.25	0.30	0.122	(	0.152)		0.110		0.012
76	6.33	0.30	0.122	(	0.152)		0.110		0.012
77	6.42	0.30	0.122	(	0.151)		0.110		0.012
78	6.50	0.30	0.122	(	0.150)		0.110		0.012
79	6.58	0.33	0.136	(	0.150)		0.122		0.014
80	6.67	0.33	0.136	(	0.149)		0.122		0.014
81	6.75	0.33	0.136	(	0.148)		0.122		0.014
82	6.83	0.33	0.136	(	0.148)		0.122		0.014
83	6.92	0.33	0.136	(	0.147)		0.122		0.014
84	7.00	0.33	0.136	(	0.146)		0.122		0.014
85	7.08	0.33	0.136	(	0.146)		0.122		0.014
86	7.17	0.33	0.136	(	0.145)		0.122		0.014
87	7.25	0.33	0.136	(	0.144)		0.122		0.014
88	7.33	0.37	0.150	(	0.144)		0.135		0.015
89	7.42	0.37	0.150	(	0.143)		0.135		0.015
90	7.50	0.37	0.150	(	0.142)		0.135		0.015
91	7.58	0.40	0.163		0.142	(	0.147)		0.021
92	7.67	0.40	0.163		0.141	(	0.147)		0.022
93	7.75	0.40	0.163		0.140	(	0.147)		0.023
94	7.83	0.43	0.177		0.140	(	0.159)		0.037
95	7.92	0.43	0.177		0.139	(	0.159)		0.038

96	8.00	0.43	0.177	0.138	(	0.159)	0.038
97	8.08	0.50	0.204	0.138	(	0.184)	0.066
98	8.17	0.50	0.204	0.137	(	0.184)	0.067
99	8.25	0.50	0.204	0.137	(	0.184)	0.067
100	8.33	0.50	0.204	0.136	(	0.184)	0.068
101	8.42	0.50	0.204	0.135	(	0.184)	0.069
102	8.50	0.50	0.204	0.135	(	0.184)	0.069
103	8.58	0.53	0.218	0.134	(	0.196)	0.084
104	8.67	0.53	0.218	0.133	(	0.196)	0.084
105	8.75	0.53	0.218	0.133	(	0.196)	0.085
106	8.83	0.57	0.231	0.132	(	0.208)	0.099
107	8.92	0.57	0.231	0.131	(	0.208)	0.100
108	9.00	0.57	0.231	0.131	(	0.208)	0.100
109	9.08	0.63	0.258	0.130	(	0.232)	0.128
110	9.17	0.63	0.258	0.130	(	0.232)	0.129
111	9.25	0.63	0.258	0.129	(	0.232)	0.129
112	9.33	0.67	0.272	0.128	(	0.245)	0.143
113	9.42	0.67	0.272	0.128	(	0.245)	0.144
114	9.50	0.67	0.272	0.127	(	0.245)	0.145
115	9.58	0.70	0.285	0.127	(	0.257)	0.159
116	9.67	0.70	0.285	0.126	(	0.257)	0.160
117	9.75	0.70	0.285	0.125	(	0.257)	0.160
118	9.83	0.73	0.299	0.125	(	0.269)	0.174
119	9.92	0.73	0.299	0.124	(	0.269)	0.175
120	10.00	0.73	0.299	0.124	(	0.269)	0.176
121	10.08	0.50	0.204	0.123	(	0.184)	0.081
122	10.17	0.50	0.204	0.122	(	0.184)	0.082
123	10.25	0.50	0.204	0.122	(	0.184)	0.082
124	10.33	0.50	0.204	0.121	(	0.184)	0.083
125	10.42	0.50	0.204	0.121	(	0.184)	0.083
126	10.50	0.50	0.204	0.120	(	0.184)	0.084
127	10.58	0.67	0.272	0.119	(	0.245)	0.152
128	10.67	0.67	0.272	0.119	(	0.245)	0.153
129	10.75	0.67	0.272	0.118	(	0.245)	0.154
130	10.83	0.67	0.272	0.118	(	0.245)	0.154
131	10.92	0.67	0.272	0.117	(	0.245)	0.155
132	11.00	0.67	0.272	0.117	(	0.245)	0.155
133	11.08	0.63	0.258	0.116	(	0.232)	0.142
134	11.17	0.63	0.258	0.115	(	0.232)	0.143
135	11.25	0.63	0.258	0.115	(	0.232)	0.144
136	11.33	0.63	0.258	0.114	(	0.232)	0.144
137	11.42	0.63	0.258	0.114	(	0.232)	0.145
138	11.50	0.63	0.258	0.113	(	0.232)	0.145
139	11.58	0.57	0.231	0.113	(	0.208)	0.119
140	11.67	0.57	0.231	0.112	(	0.208)	0.119
141	11.75	0.57	0.231	0.111	(	0.208)	0.120
142	11.83	0.60	0.245	0.111	(	0.220)	0.134
143	11.92	0.60	0.245	0.110	(	0.220)	0.134
144	12.00	0.60	0.245	0.110	(	0.220)	0.135
145	12.08	0.83	0.340	0.109	(	0.306)	0.231

146	12.17	0.83	0.340	0.109	(0.306)	0.231
147	12.25	0.83	0.340	0.108	(0.306)	0.232
148	12.33	0.87	0.353	0.108	(0.318)	0.246
149	12.42	0.87	0.353	0.107	(0.318)	0.246
150	12.50	0.87	0.353	0.107	(0.318)	0.247
151	12.58	0.93	0.381	0.106	(0.343)	0.275
152	12.67	0.93	0.381	0.105	(0.343)	0.275
153	12.75	0.93	0.381	0.105	(0.343)	0.276
154	12.83	0.97	0.394	0.104	(0.355)	0.290
155	12.92	0.97	0.394	0.104	(0.355)	0.290
156	13.00	0.97	0.394	0.103	(0.355)	0.291
157	13.08	1.13	0.462	0.103	(0.416)	0.359
158	13.17	1.13	0.462	0.102	(0.416)	0.360
159	13.25	1.13	0.462	0.102	(0.416)	0.360
160	13.33	1.13	0.462	0.101	(0.416)	0.361
161	13.42	1.13	0.462	0.101	(0.416)	0.362
162	13.50	1.13	0.462	0.100	(0.416)	0.362
163	13.58	0.77	0.313	0.100	(0.281)	0.213
164	13.67	0.77	0.313	0.099	(0.281)	0.213
165	13.75	0.77	0.313	0.099	(0.281)	0.214
166	13.83	0.77	0.313	0.098	(0.281)	0.214
167	13.92	0.77	0.313	0.098	(0.281)	0.215
168	14.00	0.77	0.313	0.097	(0.281)	0.215
169	14.08	0.90	0.367	0.097	(0.330)	0.270
170	14.17	0.90	0.367	0.096	(0.330)	0.271
171	14.25	0.90	0.367	0.096	(0.330)	0.271
172	14.33	0.87	0.353	0.095	(0.318)	0.258
173	14.42	0.87	0.353	0.095	(0.318)	0.259
174	14.50	0.87	0.353	0.094	(0.318)	0.259
175	14.58	0.87	0.353	0.094	(0.318)	0.260
176	14.67	0.87	0.353	0.093	(0.318)	0.260
177	14.75	0.87	0.353	0.093	(0.318)	0.261
178	14.83	0.83	0.340	0.092	(0.306)	0.248
179	14.92	0.83	0.340	0.092	(0.306)	0.248
180	15.00	0.83	0.340	0.091	(0.306)	0.248
181	15.08	0.80	0.326	0.091	(0.294)	0.235
182	15.17	0.80	0.326	0.090	(0.294)	0.236
183	15.25	0.80	0.326	0.090	(0.294)	0.236
184	15.33	0.77	0.313	0.090	(0.281)	0.223
185	15.42	0.77	0.313	0.089	(0.281)	0.224
186	15.50	0.77	0.313	0.089	(0.281)	0.224
187	15.58	0.63	0.258	0.088	(0.232)	0.170
188	15.67	0.63	0.258	0.088	(0.232)	0.171
189	15.75	0.63	0.258	0.087	(0.232)	0.171
190	15.83	0.63	0.258	0.087	(0.232)	0.172
191	15.92	0.63	0.258	0.086	(0.232)	0.172
192	16.00	0.63	0.258	0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049	0.005
194	16.17	0.13	0.054	(0.085)	0.049	0.005
195	16.25	0.13	0.054	(0.085)	0.049	0.005

196	16.33	0.13	0.054	(0.084)	0.049	0.005
197	16.42	0.13	0.054	(0.084)	0.049	0.005
198	16.50	0.13	0.054	(0.083)	0.049	0.005
199	16.58	0.10	0.041	(0.083)	0.037	0.004
200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004

246	20.50	0.10	0.041	(0.066)	0.037	0.004
247	20.58	0.10	0.041	(0.066)	0.037	0.004
248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003
275	22.92	0.07	0.027	(0.060)	0.024	0.003
276	23.00	0.07	0.027	(0.060)	0.024	0.003
277	23.08	0.07	0.027	(0.060)	0.024	0.003
278	23.17	0.07	0.027	(0.059)	0.024	0.003
279	23.25	0.07	0.027	(0.059)	0.024	0.003
280	23.33	0.07	0.027	(0.059)	0.024	0.003
281	23.42	0.07	0.027	(0.059)	0.024	0.003
282	23.50	0.07	0.027	(0.059)	0.024	0.003
283	23.58	0.07	0.027	(0.059)	0.024	0.003
284	23.67	0.07	0.027	(0.059)	0.024	0.003
285	23.75	0.07	0.027	(0.059)	0.024	0.003
286	23.83	0.07	0.027	(0.059)	0.024	0.003
287	23.92	0.07	0.027	(0.059)	0.024	0.003
288	24.00	0.07	0.027	(0.059)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 0.704(Ac.Ft)
Total rainfall = 3.40(In)

Flood volume = 27333.0 Cubic Feet
Total soil loss = 30653.2 Cubic Feet

Peak flow rate of this hydrograph = 1.714(CFS)

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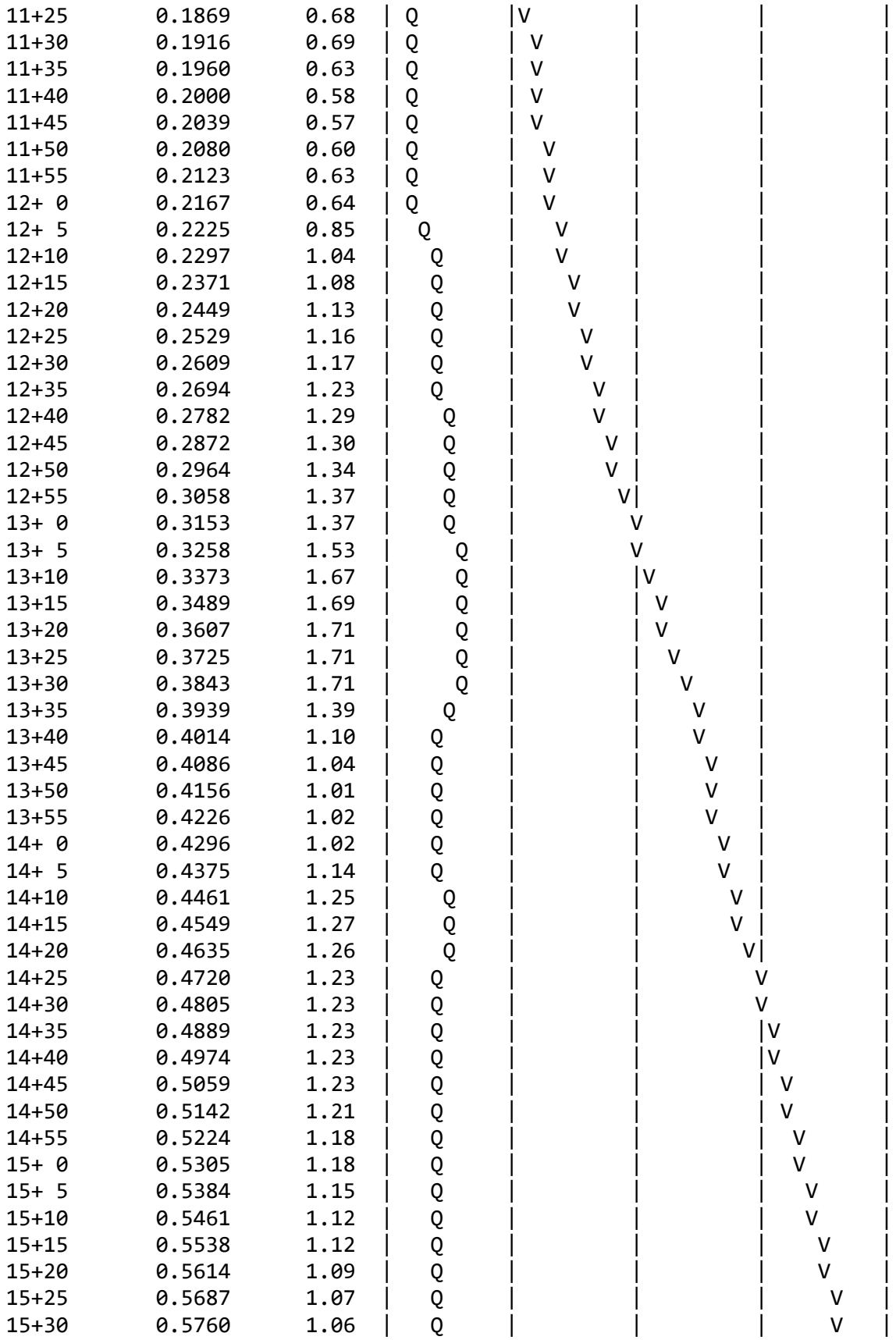
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0001	0.01	Q				
0+15	0.0002	0.01	Q				
0+20	0.0003	0.02	Q				
0+25	0.0004	0.02	Q				
0+30	0.0006	0.02	Q				
0+35	0.0007	0.02	Q				
0+40	0.0008	0.02	Q				
0+45	0.0010	0.02	Q				
0+50	0.0011	0.02	Q				
0+55	0.0013	0.02	Q				
1+ 0	0.0015	0.03	Q				
1+ 5	0.0016	0.02	Q				
1+10	0.0018	0.02	Q				
1+15	0.0019	0.02	Q				
1+20	0.0020	0.02	Q				
1+25	0.0022	0.02	Q				
1+30	0.0023	0.02	Q				
1+35	0.0024	0.02	Q				
1+40	0.0026	0.02	Q				
1+45	0.0027	0.02	Q				
1+50	0.0029	0.02	Q				
1+55	0.0030	0.02	Q				
2+ 0	0.0032	0.03	Q				
2+ 5	0.0034	0.03	Q				
2+10	0.0036	0.03	Q				
2+15	0.0037	0.03	Q				
2+20	0.0039	0.03	Q				
2+25	0.0041	0.03	Q				
2+30	0.0043	0.03	Q				
2+35	0.0045	0.03	Q				
2+40	0.0047	0.03	Q				
2+45	0.0049	0.03	Q				
2+50	0.0051	0.03	Q				
2+55	0.0053	0.03	Q				
3+ 0	0.0056	0.03	Q				

3+ 5	0.0058	0.03	Q				
3+10	0.0060	0.03	Q				
3+15	0.0062	0.03	Q				
3+20	0.0065	0.03	Q				
3+25	0.0067	0.03	Q				
3+30	0.0069	0.03	Q				
3+35	0.0071	0.03	Q				
3+40	0.0073	0.03	Q				
3+45	0.0076	0.03	Q				
3+50	0.0078	0.04	Q				
3+55	0.0081	0.04	Q				
4+ 0	0.0083	0.04	Q				
4+ 5	0.0086	0.04	Q				
4+10	0.0089	0.04	Q				
4+15	0.0091	0.04	Q				
4+20	0.0094	0.04	Q				
4+25	0.0097	0.04	Q				
4+30	0.0100	0.04	Q				
4+35	0.0103	0.05	Q				
4+40	0.0107	0.05	Q				
4+45	0.0110	0.05	Q				
4+50	0.0113	0.05	Q				
4+55	0.0116	0.05	Q				
5+ 0	0.0120	0.05	Q				
5+ 5	0.0123	0.05	Q				
5+10	0.0126	0.04	Q				
5+15	0.0129	0.04	Q				
5+20	0.0131	0.04	Q				
5+25	0.0135	0.04	Q				
5+30	0.0138	0.04	Q				
5+35	0.0141	0.05	Q				
5+40	0.0144	0.05	Q				
5+45	0.0148	0.05	Q				
5+50	0.0151	0.05	Q				
5+55	0.0155	0.05	Q				
6+ 0	0.0159	0.05	QV				
6+ 5	0.0162	0.05	QV				
6+10	0.0166	0.06	QV				
6+15	0.0170	0.06	QV				
6+20	0.0174	0.06	QV				
6+25	0.0178	0.06	QV				
6+30	0.0182	0.06	QV				
6+35	0.0186	0.06	QV				
6+40	0.0191	0.06	QV				
6+45	0.0195	0.06	QV				
6+50	0.0200	0.06	QV				
6+55	0.0204	0.06	QV				
7+ 0	0.0209	0.06	QV				
7+ 5	0.0213	0.06	QV				
7+10	0.0217	0.06	QV				

7+15	0.0222	0.06	QV	|	|	|	|
7+20	0.0226	0.07	QV	|	|	|	|
7+25	0.0231	0.07	QV	|	|	|	|
7+30	0.0236	0.07	QV	|	|	|	|
7+35	0.0242	0.08	QV	|	|	|	|
7+40	0.0249	0.10	QV	|	|	|	|
7+45	0.0256	0.10	QV	|	|	|	|
7+50	0.0266	0.14	QV	|	|	|	|
7+55	0.0277	0.17	QV	|	|	|	|
8+ 0	0.0289	0.18	QV	|	|	|	|
8+ 5	0.0306	0.24	QV	|	|	|	|
8+10	0.0327	0.30	|QV	|	|	|	|
8+15	0.0348	0.31	|QV	|	|	|	|
8+20	0.0370	0.32	|QV	|	|	|	|
8+25	0.0392	0.32	|QV	|	|	|	|
8+30	0.0415	0.33	|QV	|	|	|	|
8+35	0.0440	0.36	|QV	|	|	|	|
8+40	0.0466	0.39	|QV	|	|	|	|
8+45	0.0494	0.40	|Q V	|	|	|	|
8+50	0.0523	0.43	|Q V	|	|	|	|
8+55	0.0555	0.46	|Q V	|	|	|	|
9+ 0	0.0588	0.47	|Q V	|	|	|	|
9+ 5	0.0624	0.53	| QV	|	|	|	|
9+10	0.0665	0.59	| Q V	|	|	|	|
9+15	0.0707	0.61	| Q V	|	|	|	|
9+20	0.0751	0.64	| Q V	|	|	|	|
9+25	0.0798	0.67	| Q V	|	|	|	|
9+30	0.0845	0.68	| Q V	|	|	|	|
9+35	0.0894	0.72	| Q V	|	|	|	|
9+40	0.0945	0.75	| Q V	|	|	|	|
9+45	0.0997	0.75	| Q V	|	|	|	|
9+50	0.1052	0.79	| Q V	|	|	|	|
9+55	0.1108	0.82	| Q V	|	|	|	|
10+ 0	0.1165	0.83	| Q V	|	|	|	|
10+ 5	0.1208	0.63	| Q V	|	|	|	|
10+10	0.1238	0.44	|Q V	|	|	|	|
10+15	0.1266	0.40	|Q V	|	|	|	|
10+20	0.1293	0.39	|Q V	|	|	|	|
10+25	0.1320	0.39	|Q V	|	|	|	|
10+30	0.1347	0.40	|Q V	|	|	|	|
10+35	0.1385	0.55	| Q V	|	|	|	|
10+40	0.1432	0.68	| Q V|	|	|	|
10+45	0.1481	0.71	| Q V|	|	|	|
10+50	0.1532	0.73	| Q V|	|	|	|
10+55	0.1582	0.73	| Q V	|	|	|
11+ 0	0.1633	0.73	| Q V	|	|	|
11+ 5	0.1681	0.71	| Q V	|	|	|
11+10	0.1728	0.68	| Q |V	|	|	|
11+15	0.1775	0.68	| Q |V	|	|	|
11+20	0.1822	0.68	| Q |V	|	|	|



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15+35       0.5825      0.95  |  Q      |         |         |      V  |
15+40       0.5883      0.84  |  Q      |         |         |      V  |
15+45       0.5939      0.82  |  Q      |         |         |      V  |
15+50       0.5995      0.81  |  Q      |         |         |       V |
15+55       0.6051      0.81  |  Q      |         |         |       V |
16+ 0       0.6107      0.82  |  Q      |         |         |       V |
16+ 5       0.6139      0.46  |Q        |         |         |         V|
16+10       0.6147      0.12  Q         |         |         |         V|
16+15       0.6151      0.06  Q         |         |         |         V|
16+20       0.6153      0.03  Q         |         |         |         V|
16+25       0.6155      0.03  Q         |         |         |         V|
16+30       0.6156      0.03  Q         |         |         |         V|
16+35       0.6158      0.02  Q         |         |         |         V|
16+40       0.6159      0.02  Q         |         |         |         V|
16+45       0.6161      0.02  Q         |         |         |         V|
16+50       0.6162      0.02  Q         |         |         |         V|
16+55       0.6163      0.02  Q         |         |         |         V|
17+ 0       0.6165      0.02  Q         |         |         |         V|
17+ 5       0.6166      0.03  Q         |         |         |         V|
17+10       0.6169      0.03  Q         |         |         |         V|
17+15       0.6171      0.03  Q         |         |         |         V|
17+20       0.6173      0.03  Q         |         |         |         V|
17+25       0.6175      0.03  Q         |         |         |         V|
17+30       0.6177      0.03  Q         |         |         |         V|
17+35       0.6180      0.03  Q         |         |         |         V|
17+40       0.6182      0.03  Q         |         |         |         V|
17+45       0.6184      0.03  Q         |         |         |         V|
17+50       0.6186      0.03  Q         |         |         |         V|
17+55       0.6188      0.03  Q         |         |         |         V|
18+ 0       0.6190      0.03  Q         |         |         |         V|
18+ 5       0.6191      0.03  Q         |         |         |         V|
18+10       0.6193      0.03  Q         |         |         |         V|
18+15       0.6195      0.03  Q         |         |         |         V|
18+20       0.6197      0.03  Q         |         |         |         V|
18+25       0.6199      0.03  Q         |         |         |         V|
18+30       0.6200      0.03  Q         |         |         |         V|
18+35       0.6202      0.02  Q         |         |         |         V|
18+40       0.6203      0.02  Q         |         |         |         V|
18+45       0.6205      0.02  Q         |         |         |         V|
18+50       0.6206      0.02  Q         |         |         |         V|
18+55       0.6207      0.01  Q         |         |         |         V|
19+ 0       0.6208      0.01  Q         |         |         |         V|
19+ 5       0.6209      0.02  Q         |         |         |         V|
19+10       0.6210      0.02  Q         |         |         |         V|
19+15       0.6211      0.02  Q         |         |         |         V|
19+20       0.6213      0.02  Q         |         |         |         V|
19+25       0.6215      0.02  Q         |         |         |         V|
19+30       0.6216      0.03  Q         |         |         |         V|
19+35       0.6218      0.02  Q         |         |         |         V|
19+40       0.6219      0.02  Q         |         |         |         V|
```

19+45	0.6221	0.02	Q	|	|	|	V|
19+50	0.6222	0.02	Q	|	|	|	V|
19+55	0.6223	0.01	Q	|	|	|	V|
20+ 0	0.6224	0.01	Q	|	|	|	V|
20+ 5	0.6225	0.02	Q	|	|	|	V|
20+10	0.6226	0.02	Q	|	|	|	V|
20+15	0.6227	0.02	Q	|	|	|	V|
20+20	0.6229	0.02	Q	|	|	|	V|
20+25	0.6230	0.02	Q	|	|	|	V|
20+30	0.6231	0.02	Q	|	|	|	V|
20+35	0.6233	0.02	Q	|	|	|	V|
20+40	0.6234	0.02	Q	|	|	|	V|
20+45	0.6235	0.02	Q	|	|	|	V|
20+50	0.6236	0.02	Q	|	|	|	V|
20+55	0.6237	0.01	Q	|	|	|	V|
21+ 0	0.6238	0.01	Q	|	|	|	V|
21+ 5	0.6239	0.02	Q	|	|	|	V|
21+10	0.6241	0.02	Q	|	|	|	V|
21+15	0.6242	0.02	Q	|	|	|	V|
21+20	0.6243	0.02	Q	|	|	|	V|
21+25	0.6244	0.01	Q	|	|	|	V|
21+30	0.6245	0.01	Q	|	|	|	V|
21+35	0.6246	0.02	Q	|	|	|	V|
21+40	0.6247	0.02	Q	|	|	|	V|
21+45	0.6249	0.02	Q	|	|	|	V|
21+50	0.6250	0.02	Q	|	|	|	V|
21+55	0.6251	0.01	Q	|	|	|	V|
22+ 0	0.6252	0.01	Q	|	|	|	V|
22+ 5	0.6253	0.02	Q	|	|	|	V|
22+10	0.6254	0.02	Q	|	|	|	V|
22+15	0.6255	0.02	Q	|	|	|	V|
22+20	0.6256	0.02	Q	|	|	|	V|
22+25	0.6257	0.01	Q	|	|	|	V|
22+30	0.6258	0.01	Q	|	|	|	V|
22+35	0.6259	0.01	Q	|	|	|	V|
22+40	0.6260	0.01	Q	|	|	|	V|
22+45	0.6261	0.01	Q	|	|	|	V|
22+50	0.6262	0.01	Q	|	|	|	V|
22+55	0.6263	0.01	Q	|	|	|	V|
23+ 0	0.6264	0.01	Q	|	|	|	V|
23+ 5	0.6264	0.01	Q	|	|	|	V|
23+10	0.6265	0.01	Q	|	|	|	V|
23+15	0.6266	0.01	Q	|	|	|	V|
23+20	0.6267	0.01	Q	|	|	|	V|
23+25	0.6268	0.01	Q	|	|	|	V|
23+30	0.6269	0.01	Q	|	|	|	V|
23+35	0.6270	0.01	Q	|	|	|	V|
23+40	0.6271	0.01	Q	|	|	|	V|
23+45	0.6272	0.01	Q	|	|	|	V|
23+50	0.6272	0.01	Q	|	|	|	V|

```
   23+55       0.6273      0.01  Q         |         |         |        V|
   24+ 0       0.6274      0.01  Q         |         |         |        V|
   24+ 5       0.6275      0.01  Q         |         |         |        V|
   24+10       0.6275      0.00  Q         |         |         |        V|
   24+15       0.6275      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 08/16/23 File: ONSITEPREE11100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 100-YEAR 1-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            0.50                  2.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            1.30                  6.11

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                              Sum = 100.000   Sum=       4.737
-----------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.235)	1.256
9	0.75	13.90	2.168	0.117	(1.951)	2.051
10	0.83	31.40	4.898	0.117	(4.408)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.533)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

Flood volume = Effective rainfall 1.18(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.046(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 20182.2 Cubic Feet
Total soil loss = 1996.1 Cubic Feet

Peak flow rate of this hydrograph = 15.098(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	0.0059	0.86	VQ | | | |
0+10	0.0194	1.96	|V Q | | | |
0+15	0.0364	2.47	| VQ | | | |
0+20	0.0556	2.79	| VQ | | | |
0+25	0.0769	3.09	| Q | | | |
0+30	0.1015	3.58	| QV | | | |
0+35	0.1300	4.13	| Q |V | | |
0+40	0.1649	5.06	| Q V | | |
0+45	0.2163	7.47	| | Q V | |
0+50	0.3203	15.10	| | | V Q |

```
    0+55       0.4087     12.83  |         |         |    Q    |    V    |
    1+ 0       0.4451      5.30  |         Q         |         |       V |
    1+ 5       0.4602      2.19  |   Q     |         |         |        V|
    1+10       0.4627      0.36  Q         |         |         |        V|
    1+15       0.4633      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 08/16/23 File: ONSITEPREE13100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 100-YEAR 3-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            0.80                    3.76

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.00                    9.40

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0				Sum = 19.8

Flood volume = Effective rainfall 1.65(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.137(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 28132.9 Cubic Feet
Total soil loss = 5988.4 Cubic Feet

Peak flow rate of this hydrograph = 8.006(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	0.0029	0.42	VQ
0+10	0.0085	0.81	V Q
0+15	0.0139	0.79	V Q
0+20	0.0203	0.93	V Q
0+25	0.0279	1.11	V Q
0+30	0.0368	1.29	V Q
0+35	0.0457	1.30	V Q
0+40	0.0549	1.34	V Q
0+45	0.0650	1.46	VQ
0+50	0.0742	1.32	VQ
0+55	0.0827	1.24	QV
1+ 0	0.0921	1.37	Q
1+ 5	0.1036	1.67	Q
1+10	0.1166	1.88	Q
1+15	0.1299	1.93	QV
1+20	0.1426	1.84	QV
1+25	0.1568	2.06	QV
1+30	0.1732	2.38	QV
1+35	0.1892	2.32	Q V
1+40	0.2055	2.37	Q V
1+45	0.2248	2.80	Q V
1+50	0.2454	3.00	Q V
1+55	0.2652	2.87	Q V
2+ 0	0.2847	2.83	Q V
2+ 5	0.3047	2.90	Q V
2+10	0.3289	3.52	Q V
2+15	0.3598	4.48	Q V
2+20	0.3887	4.20	Q V
2+25	0.4253	5.30	Q V
2+30	0.4738	7.05	QV
2+35	0.5290	8.01	Q
2+40	0.5802	7.44	Q V
2+45	0.6106	4.41	Q V
2+50	0.6261	2.25	Q V
2+55	0.6377	1.68	Q V
3+ 0	0.6437	0.88	Q V
3+ 5	0.6454	0.23	Q V
3+10	0.6458	0.07	Q V

3+15	0.6458	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 08/16/23 File: ONSITEPREE16100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 100-YEAR 6-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            1.20                  5.64

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.80                 13.16

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

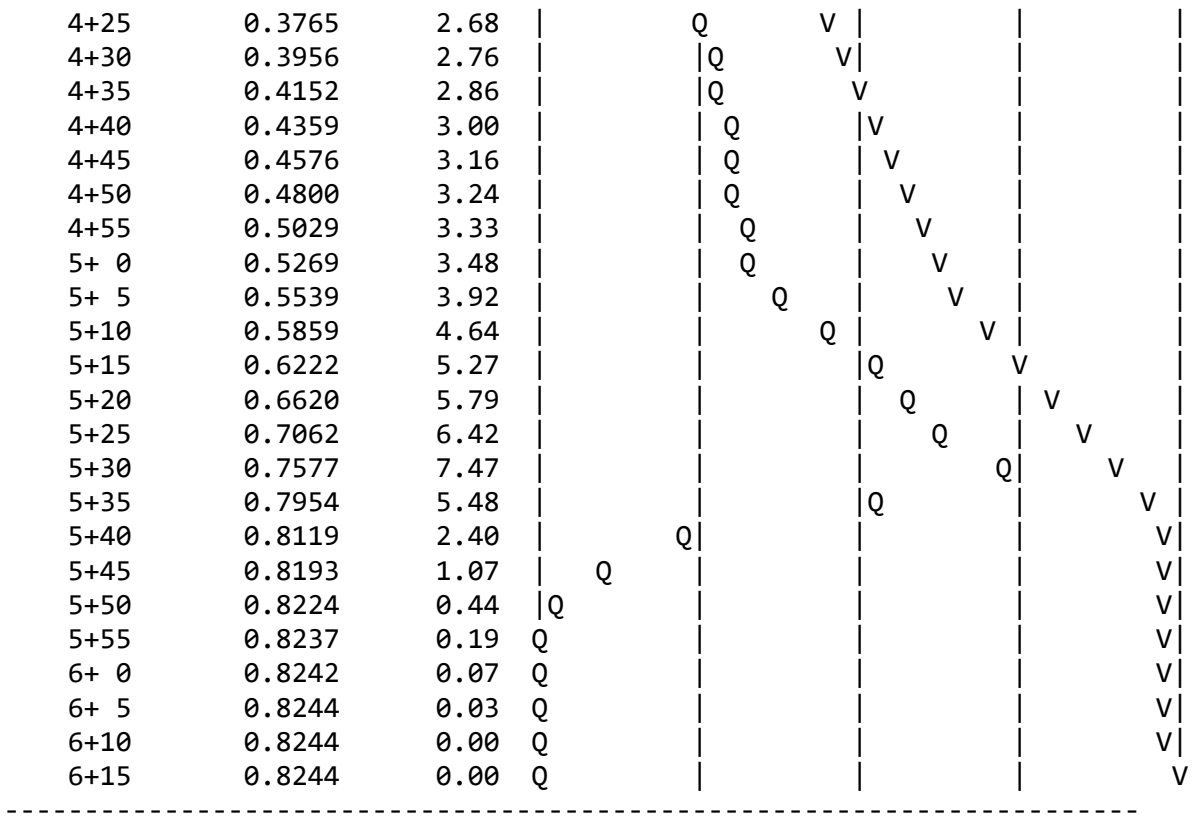
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387

```
46   3.83     1.50      0.504          0.117    (  0.454)        0.387
47   3.92     1.60      0.538          0.117    (  0.484)        0.421
48   4.00     1.60      0.538          0.117    (  0.484)        0.421
49   4.08     1.70      0.571          0.117    (  0.514)        0.454
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
      Flood volume = Effective rainfall      2.10(In)
       times area       4.7(Ac.)/[(In)/(Ft.)] =       0.8(Ac.Ft)
      Total soil loss =      0.70(In)
      Total soil loss =     0.272(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       35910.9 Cubic Feet
      Total soil loss =       11859.1 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      7.468(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       0.0008      0.11  Q         |         |         |         |
  0+10       0.0027      0.29  VQ        |         |         |         |
```

```
0+15       0.0053      0.37  VQ        |         |         |         |
0+20       0.0080      0.40  VQ        |         |         |         |
0+25       0.0108      0.40  VQ        |         |         |         |
0+30       0.0140      0.47  VQ        |         |         |         |
0+35       0.0178      0.54  V Q       |         |         |         |
0+40       0.0216      0.55  |VQ       |         |         |         |
0+45       0.0254      0.56  |VQ       |         |         |         |
0+50       0.0293      0.56  |VQ       |         |         |         |
0+55       0.0331      0.56  |VQ       |         |         |         |
1+ 0       0.0375      0.63  |VQ       |         |         |         |
1+ 5       0.0423      0.70  | Q       |         |         |         |
1+10       0.0472      0.71  | Q       |         |         |         |
1+15       0.0522      0.72  | Q       |         |         |         |
1+20       0.0571      0.72  | Q       |         |         |         |
1+25       0.0621      0.72  | QV      |         |         |         |
1+30       0.0671      0.72  | QV      |         |         |         |
1+35       0.0720      0.72  | QV      |         |         |         |
1+40       0.0770      0.72  | QV      |         |         |         |
1+45       0.0819      0.72  | QV      |         |         |         |
1+50       0.0869      0.72  | Q V     |         |         |         |
1+55       0.0918      0.72  | Q V     |         |         |         |
2+ 0       0.0973      0.79  |  QV     |         |         |         |
2+ 5       0.1027      0.79  |  QV     |         |         |         |
2+10       0.1082      0.81  |  Q V    |         |         |         |
2+15       0.1142      0.87  |  Q V    |         |         |         |
2+20       0.1202      0.87  |  Q V    |         |         |         |
2+25       0.1263      0.88  |  Q  V   |         |         |         |
2+30       0.1323      0.88  |  Q  V   |         |         |         |
2+35       0.1384      0.88  |  Q  V   |         |         |         |
2+40       0.1444      0.88  |  Q   V  |         |         |         |
2+45       0.1510      0.95  |  Q   V  |         |         |         |
2+50       0.1580      1.02  |   Q  V  |         |         |         |
2+55       0.1651      1.03  |   Q   V |         |         |         |
3+ 0       0.1722      1.04  |   Q   V |         |         |         |
3+ 5       0.1794      1.04  |   Q   V |         |         |         |
3+10       0.1870      1.11  |   Q    V|         |         |         |
3+15       0.1951      1.18  |   Q    V|         |         |         |
3+20       0.2034      1.19  |   Q    V|         |         |         |
3+25       0.2121      1.27  |    Q    V         |         |         |
3+30       0.2218      1.41  |    Q    V         |         |         |
3+35       0.2326      1.56  |     Q   |V         |         |         |
3+40       0.2439      1.65  |     Q   |V         |         |         |
3+45       0.2559      1.74  |     Q   | V        |         |         |
3+50       0.2684      1.81  |      Q  |  V       |         |         |
3+55       0.2815      1.90  |      Q  |  V       |         |         |
4+ 0       0.2951      1.97  |      Q  |   V      |         |         |
4+ 5       0.3093      2.06  |       Q |    V     |         |         |
4+10       0.3245      2.21  |       Q |    V     |         |         |
4+15       0.3407      2.36  |        Q|     V    |         |         |
4+20       0.3581      2.52  |         Q      V  |         |         |
```


4+25 0.3765 2.68
4+30 0.3956 2.76
4+35 0.4152 2.86
4+40 0.4359 3.00
4+45 0.4576 3.16
4+50 0.4800 3.24
4+55 0.5029 3.33
5+ 0 0.5269 3.48
5+ 5 0.5539 3.92
5+10 0.5859 4.64
5+15 0.6222 5.27
5+20 0.6620 5.79
5+25 0.7062 6.42
5+30 0.7577 7.47
5+35 0.7954 5.48
5+40 0.8119 2.40
5+45 0.8193 1.07
5+50 0.8224 0.44
5+55 0.8237 0.19
6+ 0 0.8242 0.07
6+ 5 0.8244 0.03
6+10 0.8244 0.00
6+15 0.8244 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 08/16/23 File: ONSITEPREE124100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 577.00(Ft.)
Length along longest watercourse measured to centroid = 276.00(Ft.)
Length along longest watercourse = 0.109 Mi.
Length along longest watercourse measured to centroid = 0.052 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 146.4125 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.039 Hr.
Lag time = 2.35 Min.
25% of lag time = 0.59 Min.
40% of lag time = 0.94 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           91.00         0.000
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        212.498         45.480              2.154
    2   0.167        424.997         42.505              2.013
    3   0.250        637.495          8.308              0.394
    4   0.333        849.994          3.707              0.176
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011

46	3.83	0.20	0.130	(0.173)	0.117	0.013
47	3.92	0.20	0.130	(0.172)	0.117	0.013
48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013
50	4.17	0.20	0.130	(0.170)	0.117	0.013
51	4.25	0.20	0.130	(0.169)	0.117	0.013
52	4.33	0.23	0.151	(0.169)	0.136	0.015
53	4.42	0.23	0.151	(0.168)	0.136	0.015
54	4.50	0.23	0.151	(0.167)	0.136	0.015
55	4.58	0.23	0.151	(0.166)	0.136	0.015
56	4.67	0.23	0.151	(0.166)	0.136	0.015
57	4.75	0.23	0.151	(0.165)	0.136	0.015
58	4.83	0.27	0.173	(0.164)	0.156	0.017
59	4.92	0.27	0.173	(0.164)	0.156	0.017
60	5.00	0.27	0.173	(0.163)	0.156	0.017
61	5.08	0.20	0.130	(0.162)	0.117	0.013
62	5.17	0.20	0.130	(0.161)	0.117	0.013
63	5.25	0.20	0.130	(0.161)	0.117	0.013
64	5.33	0.23	0.151	(0.160)	0.136	0.015
65	5.42	0.23	0.151	(0.159)	0.136	0.015
66	5.50	0.23	0.151	(0.159)	0.136	0.015
67	5.58	0.27	0.173	(0.158)	0.156	0.017
68	5.67	0.27	0.173	(0.157)	0.156	0.017
69	5.75	0.27	0.173	(0.157)	0.156	0.017
70	5.83	0.27	0.173	(0.156)	0.156	0.017
71	5.92	0.27	0.173	0.155	(0.156)	0.018
72	6.00	0.27	0.173	0.154	(0.156)	0.018
73	6.08	0.30	0.194	0.154	(0.175)	0.041
74	6.17	0.30	0.194	0.153	(0.175)	0.041
75	6.25	0.30	0.194	0.152	(0.175)	0.042
76	6.33	0.30	0.194	0.152	(0.175)	0.043
77	6.42	0.30	0.194	0.151	(0.175)	0.043
78	6.50	0.30	0.194	0.150	(0.175)	0.044
79	6.58	0.33	0.216	0.150	(0.194)	0.066
80	6.67	0.33	0.216	0.149	(0.194)	0.067
81	6.75	0.33	0.216	0.148	(0.194)	0.068
82	6.83	0.33	0.216	0.148	(0.194)	0.068
83	6.92	0.33	0.216	0.147	(0.194)	0.069
84	7.00	0.33	0.216	0.146	(0.194)	0.070
85	7.08	0.33	0.216	0.146	(0.194)	0.070
86	7.17	0.33	0.216	0.145	(0.194)	0.071
87	7.25	0.33	0.216	0.144	(0.194)	0.072
88	7.33	0.37	0.238	0.144	(0.214)	0.094
89	7.42	0.37	0.238	0.143	(0.214)	0.095
90	7.50	0.37	0.238	0.142	(0.214)	0.095
91	7.58	0.40	0.259	0.142	(0.233)	0.117
92	7.67	0.40	0.259	0.141	(0.233)	0.118
93	7.75	0.40	0.259	0.140	(0.233)	0.119
94	7.83	0.43	0.281	0.140	(0.253)	0.141
95	7.92	0.43	0.281	0.139	(0.253)	0.142

96	8.00	0.43	0.281	0.138	(	0.253)	0.142
97	8.08	0.50	0.324	0.138	(	0.292)	0.186
98	8.17	0.50	0.324	0.137	(	0.292)	0.187
99	8.25	0.50	0.324	0.137	(	0.292)	0.187
100	8.33	0.50	0.324	0.136	(	0.292)	0.188
101	8.42	0.50	0.324	0.135	(	0.292)	0.189
102	8.50	0.50	0.324	0.135	(	0.292)	0.189
103	8.58	0.53	0.346	0.134	(	0.311)	0.212
104	8.67	0.53	0.346	0.133	(	0.311)	0.212
105	8.75	0.53	0.346	0.133	(	0.311)	0.213
106	8.83	0.57	0.367	0.132	(	0.330)	0.235
107	8.92	0.57	0.367	0.131	(	0.330)	0.236
108	9.00	0.57	0.367	0.131	(	0.330)	0.236
109	9.08	0.63	0.410	0.130	(	0.369)	0.280
110	9.17	0.63	0.410	0.130	(	0.369)	0.281
111	9.25	0.63	0.410	0.129	(	0.369)	0.281
112	9.33	0.67	0.432	0.128	(	0.389)	0.304
113	9.42	0.67	0.432	0.128	(	0.389)	0.304
114	9.50	0.67	0.432	0.127	(	0.389)	0.305
115	9.58	0.70	0.454	0.127	(	0.408)	0.327
116	9.67	0.70	0.454	0.126	(	0.408)	0.328
117	9.75	0.70	0.454	0.125	(	0.408)	0.328
118	9.83	0.73	0.475	0.125	(	0.428)	0.350
119	9.92	0.73	0.475	0.124	(	0.428)	0.351
120	10.00	0.73	0.475	0.124	(	0.428)	0.352
121	10.08	0.50	0.324	0.123	(	0.292)	0.201
122	10.17	0.50	0.324	0.122	(	0.292)	0.202
123	10.25	0.50	0.324	0.122	(	0.292)	0.202
124	10.33	0.50	0.324	0.121	(	0.292)	0.203
125	10.42	0.50	0.324	0.121	(	0.292)	0.203
126	10.50	0.50	0.324	0.120	(	0.292)	0.204
127	10.58	0.67	0.432	0.119	(	0.389)	0.313
128	10.67	0.67	0.432	0.119	(	0.389)	0.313
129	10.75	0.67	0.432	0.118	(	0.389)	0.314
130	10.83	0.67	0.432	0.118	(	0.389)	0.314
131	10.92	0.67	0.432	0.117	(	0.389)	0.315
132	11.00	0.67	0.432	0.117	(	0.389)	0.315
133	11.08	0.63	0.410	0.116	(	0.369)	0.294
134	11.17	0.63	0.410	0.115	(	0.369)	0.295
135	11.25	0.63	0.410	0.115	(	0.369)	0.296
136	11.33	0.63	0.410	0.114	(	0.369)	0.296
137	11.42	0.63	0.410	0.114	(	0.369)	0.297
138	11.50	0.63	0.410	0.113	(	0.369)	0.297
139	11.58	0.57	0.367	0.113	(	0.330)	0.255
140	11.67	0.57	0.367	0.112	(	0.330)	0.255
141	11.75	0.57	0.367	0.111	(	0.330)	0.256
142	11.83	0.60	0.389	0.111	(	0.350)	0.278
143	11.92	0.60	0.389	0.110	(	0.350)	0.278
144	12.00	0.60	0.389	0.110	(	0.350)	0.279
145	12.08	0.83	0.540	0.109	(	0.486)	0.431

146	12.17	0.83	0.540	0.109	(0.486)	0.431
147	12.25	0.83	0.540	0.108	(0.486)	0.432
148	12.33	0.87	0.562	0.108	(0.505)	0.454
149	12.42	0.87	0.562	0.107	(0.505)	0.455
150	12.50	0.87	0.562	0.107	(0.505)	0.455
151	12.58	0.93	0.605	0.106	(0.544)	0.499
152	12.67	0.93	0.605	0.105	(0.544)	0.499
153	12.75	0.93	0.605	0.105	(0.544)	0.500
154	12.83	0.97	0.626	0.104	(0.564)	0.522
155	12.92	0.97	0.626	0.104	(0.564)	0.523
156	13.00	0.97	0.626	0.103	(0.564)	0.523
157	13.08	1.13	0.734	0.103	(0.661)	0.632
158	13.17	1.13	0.734	0.102	(0.661)	0.632
159	13.25	1.13	0.734	0.102	(0.661)	0.633
160	13.33	1.13	0.734	0.101	(0.661)	0.633
161	13.42	1.13	0.734	0.101	(0.661)	0.634
162	13.50	1.13	0.734	0.100	(0.661)	0.634
163	13.58	0.77	0.497	0.100	(0.447)	0.397
164	13.67	0.77	0.497	0.099	(0.447)	0.398
165	13.75	0.77	0.497	0.099	(0.447)	0.398
166	13.83	0.77	0.497	0.098	(0.447)	0.399
167	13.92	0.77	0.497	0.098	(0.447)	0.399
168	14.00	0.77	0.497	0.097	(0.447)	0.400
169	14.08	0.90	0.583	0.097	(0.525)	0.487
170	14.17	0.90	0.583	0.096	(0.525)	0.487
171	14.25	0.90	0.583	0.096	(0.525)	0.487
172	14.33	0.87	0.562	0.095	(0.505)	0.466
173	14.42	0.87	0.562	0.095	(0.505)	0.467
174	14.50	0.87	0.562	0.094	(0.505)	0.467
175	14.58	0.87	0.562	0.094	(0.505)	0.468
176	14.67	0.87	0.562	0.093	(0.505)	0.468
177	14.75	0.87	0.562	0.093	(0.505)	0.469
178	14.83	0.83	0.540	0.092	(0.486)	0.448
179	14.92	0.83	0.540	0.092	(0.486)	0.448
180	15.00	0.83	0.540	0.091	(0.486)	0.449
181	15.08	0.80	0.518	0.091	(0.467)	0.427
182	15.17	0.80	0.518	0.090	(0.467)	0.428
183	15.25	0.80	0.518	0.090	(0.467)	0.428
184	15.33	0.77	0.497	0.090	(0.447)	0.407
185	15.42	0.77	0.497	0.089	(0.447)	0.408
186	15.50	0.77	0.497	0.089	(0.447)	0.408
187	15.58	0.63	0.410	0.088	(0.369)	0.322
188	15.67	0.63	0.410	0.088	(0.369)	0.323
189	15.75	0.63	0.410	0.087	(0.369)	0.323
190	15.83	0.63	0.410	0.087	(0.369)	0.324
191	15.92	0.63	0.410	0.086	(0.369)	0.324
192	16.00	0.63	0.410	0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078	0.009
194	16.17	0.13	0.086	(0.085)	0.078	0.009
195	16.25	0.13	0.086	(0.085)	0.078	0.009

196	16.33	0.13	0.086	(	0.084)	0.078		0.009
197	16.42	0.13	0.086	(	0.084)	0.078		0.009
198	16.50	0.13	0.086	(	0.083)	0.078		0.009
199	16.58	0.10	0.065	(	0.083)	0.058		0.006
200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006

246	20.50	0.10	0.065	(0.066)	0.058	0.006
247	20.58	0.10	0.065	(0.066)	0.058	0.006
248	20.67	0.10	0.065	(0.066)	0.058	0.006
249	20.75	0.10	0.065	(0.065)	0.058	0.006
250	20.83	0.07	0.043	(0.065)	0.039	0.004
251	20.92	0.07	0.043	(0.065)	0.039	0.004
252	21.00	0.07	0.043	(0.065)	0.039	0.004
253	21.08	0.10	0.065	(0.064)	0.058	0.006
254	21.17	0.10	0.065	(0.064)	0.058	0.006
255	21.25	0.10	0.065	(0.064)	0.058	0.006
256	21.33	0.07	0.043	(0.064)	0.039	0.004
257	21.42	0.07	0.043	(0.063)	0.039	0.004
258	21.50	0.07	0.043	(0.063)	0.039	0.004
259	21.58	0.10	0.065	(0.063)	0.058	0.006
260	21.67	0.10	0.065	(0.063)	0.058	0.006
261	21.75	0.10	0.065	(0.062)	0.058	0.006
262	21.83	0.07	0.043	(0.062)	0.039	0.004
263	21.92	0.07	0.043	(0.062)	0.039	0.004
264	22.00	0.07	0.043	(0.062)	0.039	0.004
265	22.08	0.10	0.065	(0.062)	0.058	0.006
266	22.17	0.10	0.065	(0.061)	0.058	0.006
267	22.25	0.10	0.065	(0.061)	0.058	0.006
268	22.33	0.07	0.043	(0.061)	0.039	0.004
269	22.42	0.07	0.043	(0.061)	0.039	0.004
270	22.50	0.07	0.043	(0.061)	0.039	0.004
271	22.58	0.07	0.043	(0.060)	0.039	0.004
272	22.67	0.07	0.043	(0.060)	0.039	0.004
273	22.75	0.07	0.043	(0.060)	0.039	0.004
274	22.83	0.07	0.043	(0.060)	0.039	0.004
275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 38.3

Flood volume = Effective rainfall 3.19(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.866(Ac.Ft)
Total rainfall = 5.40(In)

Flood volume = 54399.0 Cubic Feet
Total soil loss = 37729.6 Cubic Feet

Peak flow rate of this hydrograph = 3.004(CFS)

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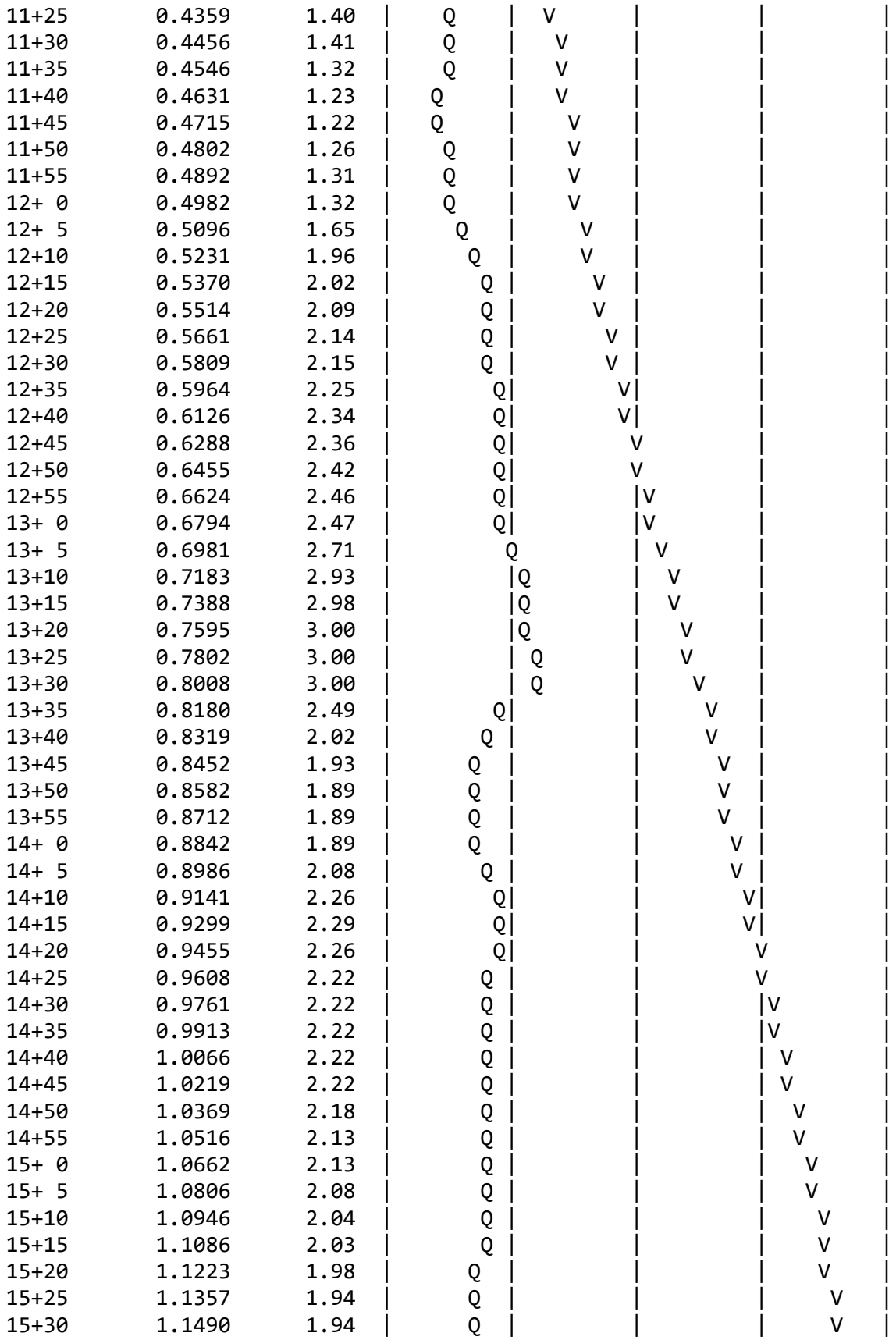
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0009	0.03	Q				
0+35	0.0011	0.03	Q				
0+40	0.0013	0.03	Q				
0+45	0.0015	0.03	Q				
0+50	0.0018	0.04	Q				
0+55	0.0021	0.04	Q				
1+ 0	0.0023	0.04	Q				
1+ 5	0.0026	0.04	Q				
1+10	0.0028	0.03	Q				
1+15	0.0030	0.03	Q				
1+20	0.0032	0.03	Q				
1+25	0.0034	0.03	Q				
1+30	0.0037	0.03	Q				
1+35	0.0039	0.03	Q				
1+40	0.0041	0.03	Q				
1+45	0.0043	0.03	Q				
1+50	0.0045	0.04	Q				
1+55	0.0048	0.04	Q				
2+ 0	0.0051	0.04	Q				
2+ 5	0.0054	0.04	Q				
2+10	0.0057	0.04	Q				
2+15	0.0059	0.04	Q				
2+20	0.0062	0.04	Q				
2+25	0.0065	0.04	Q				
2+30	0.0068	0.04	Q				
2+35	0.0071	0.05	Q				
2+40	0.0074	0.05	Q				
2+45	0.0078	0.05	Q				
2+50	0.0081	0.05	Q				
2+55	0.0085	0.05	Q				
3+ 0	0.0088	0.05	Q				

3+ 5	0.0092	0.05	Q	|	|	|	|
3+10	0.0096	0.05	Q	|	|	|	|
3+15	0.0099	0.05	Q	|	|	|	|
3+20	0.0103	0.05	Q	|	|	|	|
3+25	0.0106	0.05	Q	|	|	|	|
3+30	0.0110	0.05	Q	|	|	|	|
3+35	0.0113	0.05	Q	|	|	|	|
3+40	0.0117	0.05	Q	|	|	|	|
3+45	0.0120	0.05	Q	|	|	|	|
3+50	0.0124	0.06	Q	|	|	|	|
3+55	0.0128	0.06	Q	|	|	|	|
4+ 0	0.0132	0.06	Q	|	|	|	|
4+ 5	0.0137	0.06	Q	|	|	|	|
4+10	0.0141	0.06	Q	|	|	|	|
4+15	0.0145	0.06	Q	|	|	|	|
4+20	0.0150	0.07	Q	|	|	|	|
4+25	0.0154	0.07	Q	|	|	|	|
4+30	0.0159	0.07	Q	|	|	|	|
4+35	0.0164	0.07	Q	|	|	|	|
4+40	0.0169	0.07	Q	|	|	|	|
4+45	0.0174	0.07	Q	|	|	|	|
4+50	0.0179	0.08	Q	|	|	|	|
4+55	0.0185	0.08	Q	|	|	|	|
5+ 0	0.0191	0.08	Q	|	|	|	|
5+ 5	0.0196	0.07	Q	|	|	|	|
5+10	0.0200	0.06	Q	|	|	|	|
5+15	0.0204	0.06	Q	|	|	|	|
5+20	0.0209	0.07	Q	|	|	|	|
5+25	0.0214	0.07	Q	|	|	|	|
5+30	0.0219	0.07	Q	|	|	|	|
5+35	0.0224	0.08	Q	|	|	|	|
5+40	0.0229	0.08	Q	|	|	|	|
5+45	0.0235	0.08	Q	|	|	|	|
5+50	0.0241	0.08	Q	|	|	|	|
5+55	0.0246	0.08	Q	|	|	|	|
6+ 0	0.0252	0.09	Q	|	|	|	|
6+ 5	0.0261	0.13	Q	|	|	|	|
6+10	0.0274	0.18	Q	|	|	|	|
6+15	0.0287	0.19	Q	|	|	|	|
6+20	0.0301	0.20	Q	|	|	|	|
6+25	0.0315	0.20	QV	|	|	|	|
6+30	0.0329	0.21	QV	|	|	|	|
6+35	0.0347	0.26	|Q	|	|	|	|
6+40	0.0368	0.30	|Q	|	|	|	|
6+45	0.0389	0.31	|Q	|	|	|	|
6+50	0.0412	0.32	|Q	|	|	|	|
6+55	0.0434	0.32	|Q	|	|	|	|
7+ 0	0.0457	0.33	|Q	|	|	|	|
7+ 5	0.0479	0.33	|Q	|	|	|	|
7+10	0.0502	0.33	|Q	|	|	|	|

7+15	0.0526	0.34	Q				
7+20	0.0552	0.39	Q				
7+25	0.0582	0.43	Q				
7+30	0.0613	0.45	Q				
7+35	0.0647	0.50	QV				
7+40	0.0685	0.55	Q				
7+45	0.0723	0.56	Q				
7+50	0.0765	0.61	Q				
7+55	0.0810	0.66	Q				
8+ 0	0.0856	0.67	Q				
8+ 5	0.0909	0.77	VQ				
8+10	0.0969	0.86	Q				
8+15	0.1029	0.88	Q				
8+20	0.1090	0.89	Q				
8+25	0.1152	0.89	Q				
8+30	0.1213	0.90	Q				
8+35	0.1278	0.94	QV				
8+40	0.1347	0.99	QV				
8+45	0.1416	1.00	Q				
8+50	0.1489	1.06	Q				
8+55	0.1564	1.10	QV				
9+ 0	0.1641	1.11	QV				
9+ 5	0.1725	1.21	QV				
9+10	0.1815	1.30	Q				
9+15	0.1906	1.32	QV				
9+20	0.2001	1.38	QV				
9+25	0.2099	1.43	QV				
9+30	0.2198	1.44	Q V				
9+35	0.2301	1.49	Q V				
9+40	0.2407	1.54	QV				
9+45	0.2514	1.55	Q V				
9+50	0.2624	1.60	Q V				
9+55	0.2738	1.65	Q V				
10+ 0	0.2852	1.66	Q V				
10+ 5	0.2944	1.34	Q V				
10+10	0.3016	1.04	Q V				
10+15	0.3084	0.98	Q V				
10+20	0.3150	0.96	Q V				
10+25	0.3216	0.96	Q V				
10+30	0.3283	0.96	Q V				
10+35	0.3365	1.20	Q V				
10+40	0.3463	1.42	Q V				
10+45	0.3564	1.47	Q V				
10+50	0.3667	1.49	Q V				
10+55	0.3769	1.49	Q V				
11+ 0	0.3872	1.49	Q V				
11+ 5	0.3972	1.45	Q V				
11+10	0.4069	1.41	Q V				
11+15	0.4165	1.40	Q V				
11+20	0.4262	1.40	Q V				



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15+35       1.1610      1.75  |     Q   |         |         |      V  |
15+40       1.1719      1.58  |     Q   |         |         |      V  |
15+45       1.1825      1.55  |     Q   |         |         |      V  |
15+50       1.1931      1.53  |     Q   |         |         |       V |
15+55       1.2037      1.53  |     Q   |         |         |       V |
16+ 0       1.2142      1.54  |     Q   |         |         |       V |
16+ 5       1.2201      0.86  |  Q      |         |         |         V|
16+10       1.2217      0.22  Q         |         |         |         V|
16+15       1.2223      0.10  Q         |         |         |         V|
16+20       1.2226      0.04  Q         |         |         |         V|
16+25       1.2229      0.04  Q         |         |         |         V|
16+30       1.2232      0.04  Q         |         |         |         V|
16+35       1.2234      0.04  Q         |         |         |         V|
16+40       1.2236      0.03  Q         |         |         |         V|
16+45       1.2239      0.03  Q         |         |         |         V|
16+50       1.2241      0.03  Q         |         |         |         V|
16+55       1.2243      0.03  Q         |         |         |         V|
17+ 0       1.2245      0.03  Q         |         |         |         V|
17+ 5       1.2250      0.08  Q         |         |         |         V|
17+10       1.2258      0.12  Q         |         |         |         V|
17+15       1.2267      0.13  Q         |         |         |         V|
17+20       1.2277      0.14  Q         |         |         |         V|
17+25       1.2286      0.14  Q         |         |         |         V|
17+30       1.2296      0.14  Q         |         |         |         V|
17+35       1.2305      0.14  Q         |         |         |         V|
17+40       1.2315      0.14  Q         |         |         |         V|
17+45       1.2325      0.14  Q         |         |         |         V|
17+50       1.2332      0.10  Q         |         |         |         V|
17+55       1.2336      0.06  Q         |         |         |         V|
18+ 0       1.2339      0.05  Q         |         |         |         V|
18+ 5       1.2343      0.05  Q         |         |         |         V|
18+10       1.2346      0.05  Q         |         |         |         V|
18+15       1.2350      0.05  Q         |         |         |         V|
18+20       1.2354      0.05  Q         |         |         |         V|
18+25       1.2358      0.06  Q         |         |         |         V|
18+30       1.2362      0.06  Q         |         |         |         V|
18+35       1.2365      0.05  Q         |         |         |         V|
18+40       1.2367      0.03  Q         |         |         |         V|
18+45       1.2369      0.03  Q         |         |         |         V|
18+50       1.2371      0.03  Q         |         |         |         V|
18+55       1.2373      0.02  Q         |         |         |         V|
19+ 0       1.2374      0.02  Q         |         |         |         V|
19+ 5       1.2376      0.03  Q         |         |         |         V|
19+10       1.2378      0.03  Q         |         |         |         V|
19+15       1.2380      0.03  Q         |         |         |         V|
19+20       1.2383      0.05  Q         |         |         |         V|
19+25       1.2388      0.07  Q         |         |         |         V|
19+30       1.2394      0.08  Q         |         |         |         V|
19+35       1.2397      0.06  Q         |         |         |         V|
19+40       1.2400      0.04  Q         |         |         |         V|
```

19+45	1.2402	0.03	Q	|	|	|	V|
19+50	1.2404	0.03	Q	|	|	|	V|
19+55	1.2405	0.02	Q	|	|	|	V|
20+ 0	1.2407	0.02	Q	|	|	|	V|
20+ 5	1.2409	0.03	Q	|	|	|	V|
20+10	1.2411	0.03	Q	|	|	|	V|
20+15	1.2413	0.03	Q	|	|	|	V|
20+20	1.2415	0.03	Q	|	|	|	V|
20+25	1.2417	0.03	Q	|	|	|	V|
20+30	1.2419	0.03	Q	|	|	|	V|
20+35	1.2421	0.03	Q	|	|	|	V|
20+40	1.2423	0.03	Q	|	|	|	V|
20+45	1.2425	0.03	Q	|	|	|	V|
20+50	1.2427	0.03	Q	|	|	|	V|
20+55	1.2429	0.02	Q	|	|	|	V|
21+ 0	1.2430	0.02	Q	|	|	|	V|
21+ 5	1.2432	0.03	Q	|	|	|	V|
21+10	1.2434	0.03	Q	|	|	|	V|
21+15	1.2436	0.03	Q	|	|	|	V|
21+20	1.2438	0.03	Q	|	|	|	V|
21+25	1.2439	0.02	Q	|	|	|	V|
21+30	1.2441	0.02	Q	|	|	|	V|
21+35	1.2442	0.03	Q	|	|	|	V|
21+40	1.2445	0.03	Q	|	|	|	V|
21+45	1.2447	0.03	Q	|	|	|	V|
21+50	1.2448	0.03	Q	|	|	|	V|
21+55	1.2450	0.02	Q	|	|	|	V|
22+ 0	1.2451	0.02	Q	|	|	|	V|
22+ 5	1.2453	0.03	Q	|	|	|	V|
22+10	1.2455	0.03	Q	|	|	|	V|
22+15	1.2457	0.03	Q	|	|	|	V|
22+20	1.2459	0.03	Q	|	|	|	V|
22+25	1.2460	0.02	Q	|	|	|	V|
22+30	1.2462	0.02	Q	|	|	|	V|
22+35	1.2463	0.02	Q	|	|	|	V|
22+40	1.2465	0.02	Q	|	|	|	V|
22+45	1.2466	0.02	Q	|	|	|	V|
22+50	1.2468	0.02	Q	|	|	|	V|
22+55	1.2469	0.02	Q	|	|	|	V|
23+ 0	1.2470	0.02	Q	|	|	|	V|
23+ 5	1.2472	0.02	Q	|	|	|	V|
23+10	1.2473	0.02	Q	|	|	|	V|
23+15	1.2475	0.02	Q	|	|	|	V|
23+20	1.2476	0.02	Q	|	|	|	V|
23+25	1.2477	0.02	Q	|	|	|	V|
23+30	1.2479	0.02	Q	|	|	|	V|
23+35	1.2480	0.02	Q	|	|	|	V|
23+40	1.2482	0.02	Q	|	|	|	V|
23+45	1.2483	0.02	Q	|	|	|	V|
23+50	1.2484	0.02	Q	|	|	|	V|

```
   23+55       1.2486      0.02  Q         |         |         |        V|
   24+ 0       1.2487      0.02  Q         |         |         |        V|
   24+ 5       1.2488      0.01  Q         |         |         |        V|
   24+10       1.2488      0.00  Q         |         |         |        V|
   24+15       1.2488      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/04/24 File: ONSITEPREE2242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  79.8      0.246     0.000        0.246       1.000      0.246
                                                 Sum (F) =   0.246
Area averaged mean soil loss (F) (In/Hr) =  0.246
Minimum soil loss rate ((In/Hr)) =  0.123
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004
46	3.83	0.20	0.048	(0.364)	0.043	0.005

47	3.92	0.20	0.048	(0.362)	0.043	0.005
48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005
50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010
96	8.00	0.43	0.104	(0.292)	0.094	0.010

97	8.08	0.50	0.120	(0.290)	0.108	0.012
98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012
125	10.42	0.50	0.120	(0.254)	0.108	0.012
126	10.50	0.50	0.120	(0.253)	0.108	0.012
127	10.58	0.67	0.160	(0.251)	0.144	0.016
128	10.67	0.67	0.160	(0.250)	0.144	0.016
129	10.75	0.67	0.160	(0.249)	0.144	0.016
130	10.83	0.67	0.160	(0.248)	0.144	0.016
131	10.92	0.67	0.160	(0.247)	0.144	0.016
132	11.00	0.67	0.160	(0.245)	0.144	0.016
133	11.08	0.63	0.152	(0.244)	0.137	0.015
134	11.17	0.63	0.152	(0.243)	0.137	0.015
135	11.25	0.63	0.152	(0.242)	0.137	0.015
136	11.33	0.63	0.152	(0.241)	0.137	0.015
137	11.42	0.63	0.152	(0.239)	0.137	0.015
138	11.50	0.63	0.152	(0.238)	0.137	0.015
139	11.58	0.57	0.136	(0.237)	0.122	0.014
140	11.67	0.57	0.136	(0.236)	0.122	0.014
141	11.75	0.57	0.136	(0.235)	0.122	0.014
142	11.83	0.60	0.144	(0.233)	0.130	0.014
143	11.92	0.60	0.144	(0.232)	0.130	0.014
144	12.00	0.60	0.144	(0.231)	0.130	0.014
145	12.08	0.83	0.200	(0.230)	0.180	0.020
146	12.17	0.83	0.200	(0.229)	0.180	0.020

147	12.25	0.83	0.200	(	0.228)	0.180	0.020
148	12.33	0.87	0.208	(	0.227)	0.187	0.021
149	12.42	0.87	0.208	(	0.225)	0.187	0.021
150	12.50	0.87	0.208	(	0.224)	0.187	0.021
151	12.58	0.93	0.224	(	0.223)	0.202	0.022
152	12.67	0.93	0.224	(	0.222)	0.202	0.022
153	12.75	0.93	0.224	(	0.221)	0.202	0.022
154	12.83	0.97	0.232	(	0.220)	0.209	0.023
155	12.92	0.97	0.232	(	0.219)	0.209	0.023
156	13.00	0.97	0.232	(	0.218)	0.209	0.023
157	13.08	1.13	0.272		0.216	(0.245)	0.056
158	13.17	1.13	0.272		0.215	(0.245)	0.057
159	13.25	1.13	0.272		0.214	(0.245)	0.058
160	13.33	1.13	0.272		0.213	(0.245)	0.059
161	13.42	1.13	0.272		0.212	(0.245)	0.060
162	13.50	1.13	0.272		0.211	(0.245)	0.061
163	13.58	0.77	0.184	(	0.210)	0.166	0.018
164	13.67	0.77	0.184	(	0.209)	0.166	0.018
165	13.75	0.77	0.184	(	0.208)	0.166	0.018
166	13.83	0.77	0.184	(	0.207)	0.166	0.018
167	13.92	0.77	0.184	(	0.206)	0.166	0.018
168	14.00	0.77	0.184	(	0.205)	0.166	0.018
169	14.08	0.90	0.216	(	0.204)	0.194	0.022
170	14.17	0.90	0.216	(	0.203)	0.194	0.022
171	14.25	0.90	0.216	(	0.202)	0.194	0.022
172	14.33	0.87	0.208	(	0.200)	0.187	0.021
173	14.42	0.87	0.208	(	0.199)	0.187	0.021
174	14.50	0.87	0.208	(	0.198)	0.187	0.021
175	14.58	0.87	0.208	(	0.197)	0.187	0.021
176	14.67	0.87	0.208	(	0.196)	0.187	0.021
177	14.75	0.87	0.208	(	0.195)	0.187	0.021
178	14.83	0.83	0.200	(	0.194)	0.180	0.020
179	14.92	0.83	0.200	(	0.193)	0.180	0.020
180	15.00	0.83	0.200	(	0.192)	0.180	0.020
181	15.08	0.80	0.192	(	0.191)	0.173	0.019
182	15.17	0.80	0.192	(	0.190)	0.173	0.019
183	15.25	0.80	0.192	(	0.189)	0.173	0.019
184	15.33	0.77	0.184	(	0.188)	0.166	0.018
185	15.42	0.77	0.184	(	0.188)	0.166	0.018
186	15.50	0.77	0.184	(	0.187)	0.166	0.018
187	15.58	0.63	0.152	(	0.186)	0.137	0.015
188	15.67	0.63	0.152	(	0.185)	0.137	0.015
189	15.75	0.63	0.152	(	0.184)	0.137	0.015
190	15.83	0.63	0.152	(	0.183)	0.137	0.015
191	15.92	0.63	0.152	(	0.182)	0.137	0.015
192	16.00	0.63	0.152	(	0.181)	0.137	0.015
193	16.08	0.13	0.032	(	0.180)	0.029	0.003
194	16.17	0.13	0.032	(	0.179)	0.029	0.003
195	16.25	0.13	0.032	(	0.178)	0.029	0.003
196	16.33	0.13	0.032	(	0.177)	0.029	0.003

197	16.42	0.13	0.032	(0.176)	0.029	0.003
198	16.50	0.13	0.032	(0.175)	0.029	0.003
199	16.58	0.10	0.024	(0.175)	0.022	0.002
200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002
246	20.50	0.10	0.024	(0.139)	0.022	0.002

247	20.58	0.10	0.024	(0.139)	0.022	0.002
248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002
275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	2.6

Flood volume = Effective rainfall 0.22(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.0(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.297(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 1564.8 Cubic Feet

Total soil loss = 12955.1 Cubic Feet

Peak flow rate of this hydrograph = 0.122(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	0.0000	0.00	Q				
0+15	0.0001	0.00	Q				
0+20	0.0001	0.00	Q				
0+25	0.0001	0.00	Q				
0+30	0.0002	0.00	Q				
0+35	0.0002	0.00	Q				
0+40	0.0002	0.00	Q				
0+45	0.0003	0.00	Q				
0+50	0.0003	0.01	Q				
0+55	0.0003	0.01	Q				
1+ 0	0.0004	0.01	Q				
1+ 5	0.0004	0.01	Q				
1+10	0.0005	0.00	Q				
1+15	0.0005	0.00	Q				
1+20	0.0005	0.00	Q				
1+25	0.0006	0.00	Q				
1+30	0.0006	0.00	Q				
1+35	0.0006	0.00	Q				
1+40	0.0007	0.00	Q				
1+45	0.0007	0.00	Q				
1+50	0.0007	0.01	Q				
1+55	0.0008	0.01	Q				
2+ 0	0.0008	0.01	Q				
2+ 5	0.0009	0.01	Q				
2+10	0.0009	0.01	QV				
2+15	0.0009	0.01	QV				
2+20	0.0010	0.01	QV				
2+25	0.0010	0.01	QV				
2+30	0.0011	0.01	QV				
2+35	0.0011	0.01	QV				
2+40	0.0012	0.01	QV				
2+45	0.0012	0.01	QV				
2+50	0.0013	0.01	QV				
2+55	0.0014	0.01	QV				
3+ 0	0.0014	0.01	QV				
3+ 5	0.0015	0.01	QV				

3+10	0.0015	0.01	QV	|	|	|	|
3+15	0.0016	0.01	QV	|	|	|	|
3+20	0.0016	0.01	QV	|	|	|	|
3+25	0.0017	0.01	QV	|	|	|	|
3+30	0.0017	0.01	QV	|	|	|	|
3+35	0.0018	0.01	Q V	|	|	|	|
3+40	0.0019	0.01	Q V	|	|	|	|
3+45	0.0019	0.01	Q V	|	|	|	|
3+50	0.0020	0.01	Q V	|	|	|	|
3+55	0.0020	0.01	Q V	|	|	|	|
4+ 0	0.0021	0.01	Q V	|	|	|	|
4+ 5	0.0022	0.01	Q V	|	|	|	|
4+10	0.0022	0.01	Q V	|	|	|	|
4+15	0.0023	0.01	Q V	|	|	|	|
4+20	0.0024	0.01	Q V	|	|	|	|
4+25	0.0025	0.01	Q V	|	|	|	|
4+30	0.0025	0.01	Q V	|	|	|	|
4+35	0.0026	0.01	Q V	|	|	|	|
4+40	0.0027	0.01	Q V	|	|	|	|
4+45	0.0028	0.01	Q V	|	|	|	|
4+50	0.0029	0.01	Q V	|	|	|	|
4+55	0.0029	0.01	Q V	|	|	|	|
5+ 0	0.0030	0.01	Q V	|	|	|	|
5+ 5	0.0031	0.01	Q V	|	|	|	|
5+10	0.0032	0.01	Q V	|	|	|	|
5+15	0.0032	0.01	Q V	|	|	|	|
5+20	0.0033	0.01	Q V	|	|	|	|
5+25	0.0034	0.01	Q V	|	|	|	|
5+30	0.0035	0.01	Q V	|	|	|	|
5+35	0.0036	0.01	Q V	|	|	|	|
5+40	0.0036	0.01	Q V	|	|	|	|
5+45	0.0037	0.01	Q V	|	|	|	|
5+50	0.0038	0.01	Q V	|	|	|	|
5+55	0.0039	0.01	Q V	|	|	|	|
6+ 0	0.0040	0.01	Q V	|	|	|	|
6+ 5	0.0041	0.01	Q V	|	|	|	|
6+10	0.0042	0.01	Q V	|	|	|	|
6+15	0.0043	0.01	Q V	|	|	|	|
6+20	0.0044	0.01	Q V	|	|	|	|
6+25	0.0045	0.01	Q V	|	|	|	|
6+30	0.0046	0.01	Q V	|	|	|	|
6+35	0.0047	0.02	Q V	|	|	|	|
6+40	0.0048	0.02	Q V	|	|	|	|
6+45	0.0049	0.02	Q V	|	|	|	|
6+50	0.0050	0.02	Q V	|	|	|	|
6+55	0.0051	0.02	Q V	|	|	|	|
7+ 0	0.0053	0.02	Q V	|	|	|	|
7+ 5	0.0054	0.02	Q V	|	|	|	|
7+10	0.0055	0.02	Q V	|	|	|	|
7+15	0.0056	0.02	Q V	|	|	|	|

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 7+20       0.0057      0.02  Q     V   |          |          |          |
 7+25       0.0058      0.02  Q     V   |          |          |          |
 7+30       0.0060      0.02  Q     V   |          |          |          |
 7+35       0.0061      0.02  Q     V   |          |          |          |
 7+40       0.0062      0.02  Q     V   |          |          |          |
 7+45       0.0063      0.02  Q      V  |          |          |          |
 7+50       0.0065      0.02  Q      V  |          |          |          |
 7+55       0.0066      0.02  Q      V  |          |          |          |
 8+ 0       0.0068      0.02  Q      V  |          |          |          |
 8+ 5       0.0069      0.02  Q      V  |          |          |          |
 8+10       0.0071      0.02  Q      V  |          |          |          |
 8+15       0.0073      0.02  Q       V |          |          |          |
 8+20       0.0074      0.02  Q       V |          |          |          |
 8+25       0.0076      0.02  Q       V |          |          |          |
 8+30       0.0078      0.02  Q       V |          |          |          |
 8+35       0.0079      0.03  Q       V |          |          |          |
 8+40       0.0081      0.03  Q        V|          |          |          |
 8+45       0.0083      0.03  Q        V|          |          |          |
 8+50       0.0085      0.03  Q        V|          |          |          |
 8+55       0.0087      0.03  Q        V|          |          |          |
 9+ 0       0.0089      0.03  Q        V|          |          |          |
 9+ 5       0.0091      0.03  Q         V          |          |          |
 9+10       0.0093      0.03  Q         V          |          |          |
 9+15       0.0095      0.03  Q         V          |          |          |
 9+20       0.0097      0.03  Q         V          |          |          |
 9+25       0.0099      0.03  Q          |V         |          |          |
 9+30       0.0101      0.03  Q          |V         |          |          |
 9+35       0.0104      0.03  Q          |V         |          |          |
 9+40       0.0106      0.03  Q          |V         |          |          |
 9+45       0.0108      0.03  Q          | V        |          |          |
 9+50       0.0111      0.03  Q          | V        |          |          |
 9+55       0.0113      0.04  Q          | V        |          |          |
10+ 0       0.0116      0.04  Q          | V        |          |          |
10+ 5       0.0118      0.03  Q          |  V       |          |          |
10+10       0.0119      0.02  Q          |  V       |          |          |
10+15       0.0121      0.02  Q          |  V       |          |          |
10+20       0.0123      0.02  Q          |  V       |          |          |
10+25       0.0124      0.02  Q          |  V       |          |          |
10+30       0.0126      0.02  Q          |   V      |          |          |
10+35       0.0128      0.03  Q          |   V      |          |          |
10+40       0.0130      0.03  Q          |   V      |          |          |
10+45       0.0132      0.03  Q          |   V      |          |          |
10+50       0.0135      0.03  Q          |   V      |          |          |
10+55       0.0137      0.03  Q          |    V     |          |          |
11+ 0       0.0139      0.03  Q          |    V     |          |          |
11+ 5       0.0141      0.03  Q          |    V     |          |          |
11+10       0.0143      0.03  Q          |    V     |          |          |
11+15       0.0146      0.03  Q          |     V    |          |          |
11+20       0.0148      0.03  Q          |     V    |          |          |
11+25       0.0150      0.03  Q          |     V    |          |          |
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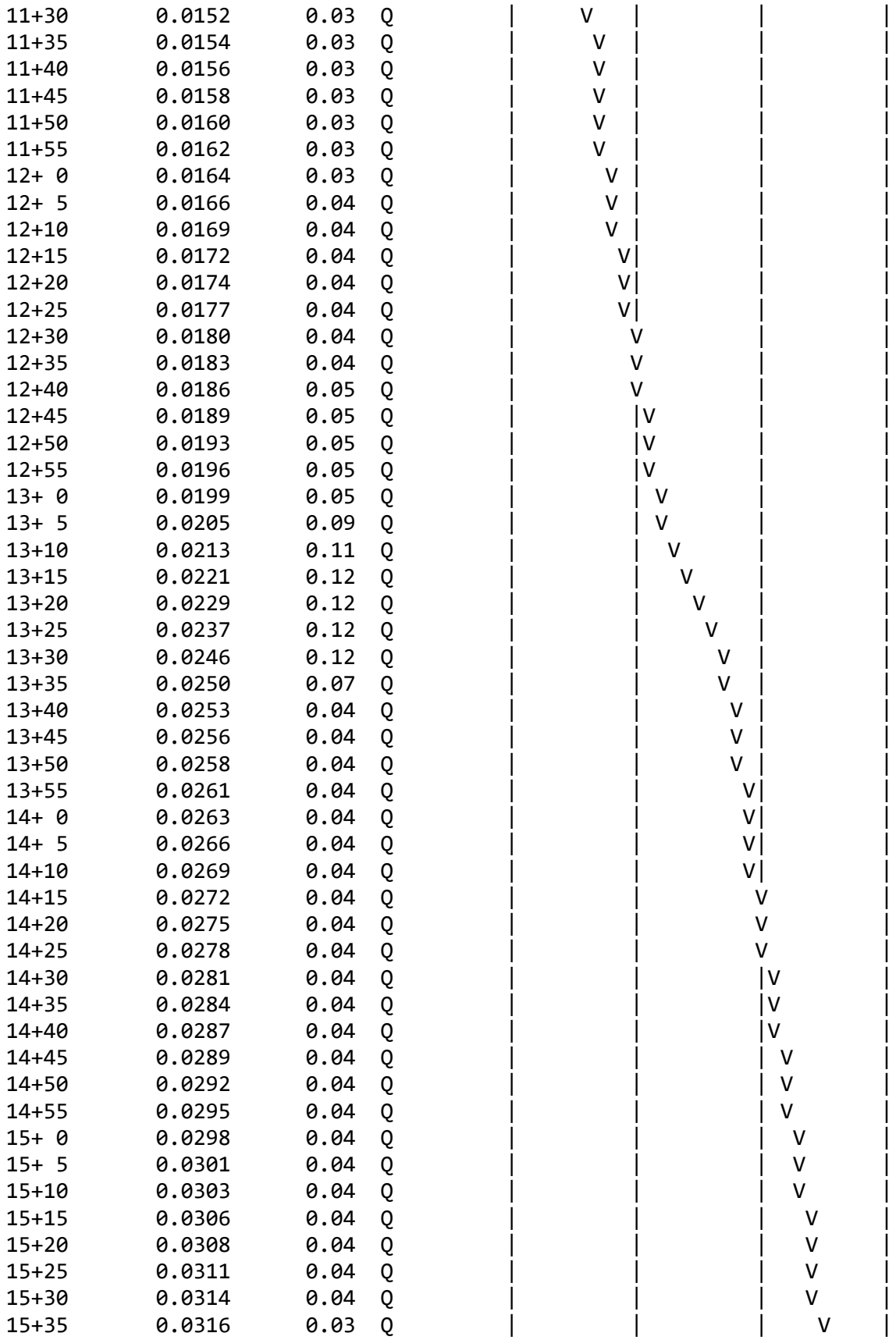
11+30 0.0152 0.03 Q
11+35 0.0154 0.03 Q
11+40 0.0156 0.03 Q
11+45 0.0158 0.03 Q
11+50 0.0160 0.03 Q
11+55 0.0162 0.03 Q
12+ 0 0.0164 0.03 Q
12+ 5 0.0166 0.04 Q
12+10 0.0169 0.04 Q
12+15 0.0172 0.04 Q
12+20 0.0174 0.04 Q
12+25 0.0177 0.04 Q
12+30 0.0180 0.04 Q
12+35 0.0183 0.04 Q
12+40 0.0186 0.05 Q
12+45 0.0189 0.05 Q
12+50 0.0193 0.05 Q
12+55 0.0196 0.05 Q
13+ 0 0.0199 0.05 Q
13+ 5 0.0205 0.09 Q
13+10 0.0213 0.11 Q
13+15 0.0221 0.12 Q
13+20 0.0229 0.12 Q
13+25 0.0237 0.12 Q
13+30 0.0246 0.12 Q
13+35 0.0250 0.07 Q
13+40 0.0253 0.04 Q
13+45 0.0256 0.04 Q
13+50 0.0258 0.04 Q
13+55 0.0261 0.04 Q
14+ 0 0.0263 0.04 Q
14+ 5 0.0266 0.04 Q
14+10 0.0269 0.04 Q
14+15 0.0272 0.04 Q
14+20 0.0275 0.04 Q
14+25 0.0278 0.04 Q
14+30 0.0281 0.04 Q
14+35 0.0284 0.04 Q
14+40 0.0287 0.04 Q
14+45 0.0289 0.04 Q
14+50 0.0292 0.04 Q
14+55 0.0295 0.04 Q
15+ 0 0.0298 0.04 Q
15+ 5 0.0301 0.04 Q
15+10 0.0303 0.04 Q
15+15 0.0306 0.04 Q
15+20 0.0308 0.04 Q
15+25 0.0311 0.04 Q
15+30 0.0314 0.04 Q
15+35 0.0316 0.03 Q

```
15+40       0.0318      0.03  Q         |          |          |    V     |
15+45       0.0320      0.03  Q         |          |          |    V     |
15+50       0.0322      0.03  Q         |          |          |    V     |
15+55       0.0324      0.03  Q         |          |          |     V    |
16+ 0       0.0326      0.03  Q         |          |          |     V    |
16+ 5       0.0327      0.02  Q         |          |          |     V    |
16+10       0.0328      0.01  Q         |          |          |     V    |
16+15       0.0328      0.01  Q         |          |          |     V    |
16+20       0.0329      0.01  Q         |          |          |     V    |
16+25       0.0329      0.01  Q         |          |          |     V    |
16+30       0.0330      0.01  Q         |          |          |     V    |
16+35       0.0330      0.01  Q         |          |          |     V    |
16+40       0.0330      0.00  Q         |          |          |     V    |
16+45       0.0331      0.00  Q         |          |          |     V    |
16+50       0.0331      0.00  Q         |          |          |     V    |
16+55       0.0331      0.00  Q         |          |          |     V    |
17+ 0       0.0332      0.00  Q         |          |          |     V    |
17+ 5       0.0332      0.01  Q         |          |          |     V    |
17+10       0.0333      0.01  Q         |          |          |      V   |
17+15       0.0333      0.01  Q         |          |          |      V   |
17+20       0.0334      0.01  Q         |          |          |      V   |
17+25       0.0334      0.01  Q         |          |          |      V   |
17+30       0.0335      0.01  Q         |          |          |      V   |
17+35       0.0336      0.01  Q         |          |          |      V   |
17+40       0.0336      0.01  Q         |          |          |      V   |
17+45       0.0337      0.01  Q         |          |          |      V   |
17+50       0.0337      0.01  Q         |          |          |      V   |
17+55       0.0338      0.01  Q         |          |          |      V   |
18+ 0       0.0338      0.01  Q         |          |          |      V   |
18+ 5       0.0339      0.01  Q         |          |          |      V   |
18+10       0.0339      0.01  Q         |          |          |      V   |
18+15       0.0339      0.01  Q         |          |          |      V   |
18+20       0.0340      0.01  Q         |          |          |      V   |
18+25       0.0340      0.01  Q         |          |          |      V   |
18+30       0.0341      0.01  Q         |          |          |      V   |
18+35       0.0341      0.01  Q         |          |          |      V   |
18+40       0.0341      0.00  Q         |          |          |       V  |
18+45       0.0342      0.00  Q         |          |          |       V  |
18+50       0.0342      0.00  Q         |          |          |       V  |
18+55       0.0342      0.00  Q         |          |          |       V  |
19+ 0       0.0342      0.00  Q         |          |          |       V  |
19+ 5       0.0343      0.00  Q         |          |          |       V  |
19+10       0.0343      0.00  Q         |          |          |       V  |
19+15       0.0343      0.00  Q         |          |          |       V  |
19+20       0.0344      0.01  Q         |          |          |       V  |
19+25       0.0344      0.01  Q         |          |          |       V  |
19+30       0.0345      0.01  Q         |          |          |       V  |
19+35       0.0345      0.01  Q         |          |          |       V  |
19+40       0.0345      0.00  Q         |          |          |       V  |
19+45       0.0346      0.00  Q         |          |          |       V  |
```

19+50	0.0346	0.00	Q	|	|	|	V |
19+55	0.0346	0.00	Q	|	|	|	V |
20+ 0	0.0346	0.00	Q	|	|	|	V |
20+ 5	0.0347	0.00	Q	|	|	|	V |
20+10	0.0347	0.00	Q	|	|	|	V |
20+15	0.0347	0.00	Q	|	|	|	V |
20+20	0.0348	0.00	Q	|	|	|	V |
20+25	0.0348	0.00	Q	|	|	|	V |
20+30	0.0348	0.00	Q	|	|	|	V |
20+35	0.0349	0.00	Q	|	|	|	V |
20+40	0.0349	0.00	Q	|	|	|	V |
20+45	0.0349	0.00	Q	|	|	|	V |
20+50	0.0350	0.00	Q	|	|	|	V |
20+55	0.0350	0.00	Q	|	|	|	V |
21+ 0	0.0350	0.00	Q	|	|	|	V |
21+ 5	0.0350	0.00	Q	|	|	|	V|
21+10	0.0351	0.00	Q	|	|	|	V|
21+15	0.0351	0.00	Q	|	|	|	V|
21+20	0.0351	0.00	Q	|	|	|	V|
21+25	0.0352	0.00	Q	|	|	|	V|
21+30	0.0352	0.00	Q	|	|	|	V|
21+35	0.0352	0.00	Q	|	|	|	V|
21+40	0.0352	0.00	Q	|	|	|	V|
21+45	0.0353	0.00	Q	|	|	|	V|
21+50	0.0353	0.00	Q	|	|	|	V|
21+55	0.0353	0.00	Q	|	|	|	V|
22+ 0	0.0353	0.00	Q	|	|	|	V|
22+ 5	0.0354	0.00	Q	|	|	|	V|
22+10	0.0354	0.00	Q	|	|	|	V|
22+15	0.0354	0.00	Q	|	|	|	V|
22+20	0.0355	0.00	Q	|	|	|	V|
22+25	0.0355	0.00	Q	|	|	|	V|
22+30	0.0355	0.00	Q	|	|	|	V|
22+35	0.0355	0.00	Q	|	|	|	V|
22+40	0.0356	0.00	Q	|	|	|	V|
22+45	0.0356	0.00	Q	|	|	|	V|
22+50	0.0356	0.00	Q	|	|	|	V|
22+55	0.0356	0.00	Q	|	|	|	V|
23+ 0	0.0356	0.00	Q	|	|	|	V|
23+ 5	0.0357	0.00	Q	|	|	|	V|
23+10	0.0357	0.00	Q	|	|	|	V|
23+15	0.0357	0.00	Q	|	|	|	V|
23+20	0.0357	0.00	Q	|	|	|	V|
23+25	0.0358	0.00	Q	|	|	|	V|
23+30	0.0358	0.00	Q	|	|	|	V|
23+35	0.0358	0.00	Q	|	|	|	V|
23+40	0.0358	0.00	Q	|	|	|	V|
23+45	0.0358	0.00	Q	|	|	|	V|
23+50	0.0359	0.00	Q	|	|	|	V|
23+55	0.0359	0.00	Q	|	|	|	V|

```
   24+ 0       0.0359      0.00  Q         |         |         |        V|
   24+ 5       0.0359      0.00  Q         |         |         |        V|
   24+10       0.0359      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 08/16/23 File: ONSITEPREE2110.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 10-YEAR 1-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            0.50                  1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                  2.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                              Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.328	0.117	(0.295)	0.211
2	0.17	4.20	0.418	0.117	(0.376)	0.301
3	0.25	4.40	0.438	0.117	(0.394)	0.321
4	0.33	4.80	0.478	0.117	(0.430)	0.361
5	0.42	5.20	0.517	0.117	(0.466)	0.400
6	0.50	6.20	0.617	0.117	(0.555)	0.500
7	0.58	6.80	0.677	0.117	(0.609)	0.560
8	0.67	8.80	0.876	0.117	(0.788)	0.759
9	0.75	13.90	1.383	0.117	(1.245)	1.266
10	0.83	31.40	3.124	0.117	(2.812)	3.007
11	0.92	7.20	0.716	0.117	(0.645)	0.599
12	1.00	3.80	0.378	0.117	(0.340)	0.261
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.71(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.019(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 5169.9 Cubic Feet
Total soil loss = 849.4 Cubic Feet

Peak flow rate of this hydrograph = 4.781(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	0.0019	0.27	VQ				
0+10	0.0055	0.53	VQ				
0+15	0.0099	0.63	QV				
0+20	0.0147	0.70	Q V				
0+25	0.0200	0.78	Q V				
0+30	0.0264	0.93	Q V				
0+35	0.0339	1.08	Q V				
0+40	0.0434	1.38	Q V				
0+45	0.0584	2.18	Q V				
0+50	0.0913	4.78	Q V				
0+55	0.1108	2.83	Q V				

```
    1+ 0       0.1171      0.92  |  Q      |         |         |        V|
    1+ 5       0.1186      0.21  Q         |         |         |        V|
    1+10       0.1187      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 08/16/23 File: ONSITEPREE2310.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 10-YEAR 3-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            0.80                  1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                  4.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0				Sum = 11.3

Flood volume = Effective rainfall 0.95(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.058(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 6863.9 Cubic Feet
Total soil loss = 2528.2 Cubic Feet

Peak flow rate of this hydrograph = 2.226(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	0.0008	0.11	Q				
0+10	0.0019	0.17	Q				
0+15	0.0028	0.13	Q				
0+20	0.0041	0.19	QV				
0+25	0.0057	0.23	QV				
0+30	0.0077	0.29	|Q				
0+35	0.0095	0.26	|QV				
0+40	0.0116	0.30	|QV				
0+45	0.0138	0.32	|Q V				
0+50	0.0157	0.27	|Q V				
0+55	0.0174	0.26	|Q V				
1+ 0	0.0195	0.30	|Q V				
1+ 5	0.0223	0.41	|Q V				
1+10	0.0254	0.45	|Q V				
1+15	0.0285	0.45	|Q V				
1+20	0.0314	0.41	|Q V				
1+25	0.0349	0.51	| Q V				
1+30	0.0390	0.59	| Q V				
1+35	0.0428	0.55	| Q V				
1+40	0.0468	0.58	| Q V				
1+45	0.0518	0.73	| Q V				
1+50	0.0569	0.75	| Q V				
1+55	0.0617	0.70	| Q V				
2+ 0	0.0665	0.69	| Q V				
2+ 5	0.0715	0.72	| Q V				
2+10	0.0781	0.96	| Q V				
2+15	0.0865	1.23	| Q V				
2+20	0.0936	1.02	| Q V				
2+25	0.1042	1.54	| Q V				
2+30	0.1177	1.96	| Q V				
2+35	0.1330	2.23	| Q V				
2+40	0.1458	1.86	| Q V				
2+45	0.1516	0.85	| Q V				
2+50	0.1543	0.39	|Q V				
2+55	0.1566	0.33	|Q V				
3+ 0	0.1575	0.13	Q V				
3+ 5	0.1576	0.02	Q V				
3+10	0.1576	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 08/16/23 File: ONSITEPREE2610.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 10-YEAR 6-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated loss
```

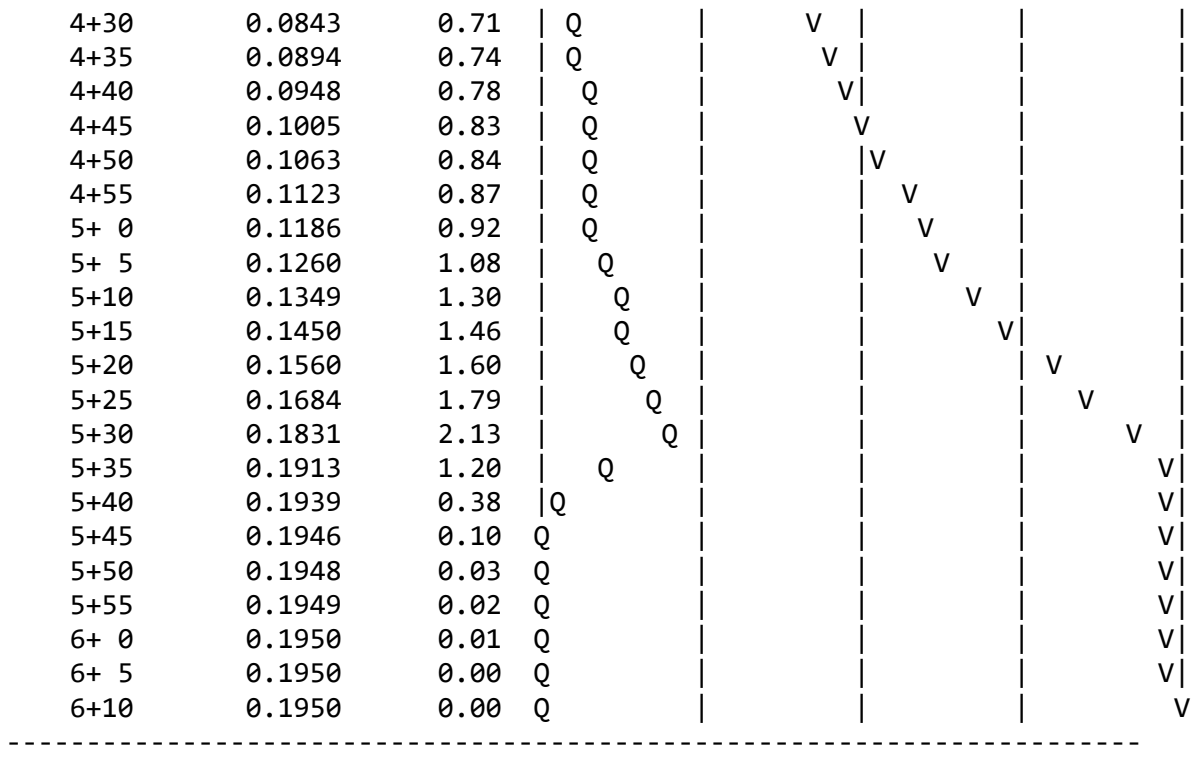
rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217
46	3.83	1.50	0.334	0.117	(0.301)	0.217

```
47   3.92     1.60      0.357          0.117    (  0.321)        0.240
48   4.00     1.60      0.357          0.117    (  0.321)        0.240
49   4.08     1.70      0.379          0.117    (  0.341)        0.262
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.115(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        8495.3 Cubic Feet
      Total soil loss =        4995.5 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.131(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      0.01  Q         |         |         |         |
  0+10       0.0003      0.03  Q         |         |         |         |
  0+15       0.0005      0.03  Q         |         |         |         |
```

```
0+20       0.0008      0.03  Q         |         |         |         |
0+25       0.0010      0.03  Q         |         |         |         |
0+30       0.0014      0.06  Q         |         |         |         |
0+35       0.0020      0.08  Q         |         |         |         |
0+40       0.0025      0.08  Q         |         |         |         |
0+45       0.0030      0.08  Q         |         |         |         |
0+50       0.0036      0.08  Q         |         |         |         |
0+55       0.0041      0.08  Q         |         |         |         |
1+ 0       0.0049      0.11  QV        |         |         |         |
1+ 5       0.0057      0.12  QV        |         |         |         |
1+10       0.0066      0.12  QV        |         |         |         |
1+15       0.0074      0.12  QV        |         |         |         |
1+20       0.0083      0.12  QV        |         |         |         |
1+25       0.0091      0.12  QV        |         |         |         |
1+30       0.0100      0.12  Q V       |         |         |         |
1+35       0.0108      0.12  Q V       |         |         |         |
1+40       0.0117      0.12  Q V       |         |         |         |
1+45       0.0125      0.12  Q V       |         |         |         |
1+50       0.0134      0.12  Q V       |         |         |         |
1+55       0.0142      0.12  Q V       |         |         |         |
2+ 0       0.0153      0.15  Q  V      |         |         |         |
2+ 5       0.0163      0.14  Q  V      |         |         |         |
2+10       0.0173      0.15  Q  V      |         |         |         |
2+15       0.0185      0.17  Q  V      |         |         |         |
2+20       0.0196      0.17  Q   V     |         |         |         |
2+25       0.0208      0.17  Q   V     |         |         |         |
2+30       0.0220      0.17  Q   V     |         |         |         |
2+35       0.0231      0.17  Q   V     |         |         |         |
2+40       0.0243      0.17  Q   V     |         |         |         |
2+45       0.0256      0.20  Q    V    |         |         |         |
2+50       0.0271      0.21  Q    V    |         |         |         |
2+55       0.0286      0.21  Q    V    |         |         |         |
3+ 0       0.0300      0.21  Q     V   |         |         |         |
3+ 5       0.0315      0.21  Q     V   |         |         |         |
3+10       0.0332      0.24  Q     V   |         |         |         |
3+15       0.0350      0.26  |Q     V  |         |         |         |
3+20       0.0367      0.26  |Q     V  |         |         |         |
3+25       0.0387      0.29  |Q     V  |         |         |         |
3+30       0.0410      0.33  |Q      V |         |         |         |
3+35       0.0436      0.38  |Q      V |         |         |         |
3+40       0.0463      0.39  |Q       V|         |         |         |
3+45       0.0492      0.42  |Q        V         |         |         |
3+50       0.0522      0.44  |Q        V         |         |         |
3+55       0.0554      0.47  |Q        |V        |         |         |
4+ 0       0.0588      0.48  |Q        | V       |         |         |
4+ 5       0.0623      0.51  | Q       | V       |         |         |
4+10       0.0661      0.56  | Q       |  V      |         |         |
4+15       0.0703      0.60  | Q       |   V     |         |         |
4+20       0.0747      0.65  | Q       |    V    |         |         |
4+25       0.0795      0.69  | Q       |     V   |         |         |
```


4+30 0.0843 0.71
4+35 0.0894 0.74
4+40 0.0948 0.78
4+45 0.1005 0.83
4+50 0.1063 0.84
4+55 0.1123 0.87
5+ 0 0.1186 0.92
5+ 5 0.1260 1.08
5+10 0.1349 1.30
5+15 0.1450 1.46
5+20 0.1560 1.60
5+25 0.1684 1.79
5+30 0.1831 2.13
5+35 0.1913 1.20
5+40 0.1939 0.38
5+45 0.1946 0.10
5+50 0.1948 0.03
5+55 0.1949 0.02
6+ 0 0.1950 0.01
6+ 5 0.1950 0.00
6+10 0.1950 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 08/16/23 File: ONSITEPREE22410.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007
46	3.83	0.20	0.082	(0.173)	0.073	0.008

47	3.92	0.20	0.082	(0.172)	0.073	0.008
48	4.00	0.20	0.082	(0.171)	0.073	0.008
49	4.08	0.20	0.082	(0.171)	0.073	0.008
50	4.17	0.20	0.082	(0.170)	0.073	0.008
51	4.25	0.20	0.082	(0.169)	0.073	0.008
52	4.33	0.23	0.095	(0.169)	0.086	0.010
53	4.42	0.23	0.095	(0.168)	0.086	0.010
54	4.50	0.23	0.095	(0.167)	0.086	0.010
55	4.58	0.23	0.095	(0.166)	0.086	0.010
56	4.67	0.23	0.095	(0.166)	0.086	0.010
57	4.75	0.23	0.095	(0.165)	0.086	0.010
58	4.83	0.27	0.109	(0.164)	0.098	0.011
59	4.92	0.27	0.109	(0.164)	0.098	0.011
60	5.00	0.27	0.109	(0.163)	0.098	0.011
61	5.08	0.20	0.082	(0.162)	0.073	0.008
62	5.17	0.20	0.082	(0.161)	0.073	0.008
63	5.25	0.20	0.082	(0.161)	0.073	0.008
64	5.33	0.23	0.095	(0.160)	0.086	0.010
65	5.42	0.23	0.095	(0.159)	0.086	0.010
66	5.50	0.23	0.095	(0.159)	0.086	0.010
67	5.58	0.27	0.109	(0.158)	0.098	0.011
68	5.67	0.27	0.109	(0.157)	0.098	0.011
69	5.75	0.27	0.109	(0.157)	0.098	0.011
70	5.83	0.27	0.109	(0.156)	0.098	0.011
71	5.92	0.27	0.109	(0.155)	0.098	0.011
72	6.00	0.27	0.109	(0.154)	0.098	0.011
73	6.08	0.30	0.122	(0.154)	0.110	0.012
74	6.17	0.30	0.122	(0.153)	0.110	0.012
75	6.25	0.30	0.122	(0.152)	0.110	0.012
76	6.33	0.30	0.122	(0.152)	0.110	0.012
77	6.42	0.30	0.122	(0.151)	0.110	0.012
78	6.50	0.30	0.122	(0.150)	0.110	0.012
79	6.58	0.33	0.136	(0.150)	0.122	0.014
80	6.67	0.33	0.136	(0.149)	0.122	0.014
81	6.75	0.33	0.136	(0.148)	0.122	0.014
82	6.83	0.33	0.136	(0.148)	0.122	0.014
83	6.92	0.33	0.136	(0.147)	0.122	0.014
84	7.00	0.33	0.136	(0.146)	0.122	0.014
85	7.08	0.33	0.136	(0.146)	0.122	0.014
86	7.17	0.33	0.136	(0.145)	0.122	0.014
87	7.25	0.33	0.136	(0.144)	0.122	0.014
88	7.33	0.37	0.150	(0.144)	0.135	0.015
89	7.42	0.37	0.150	(0.143)	0.135	0.015
90	7.50	0.37	0.150	(0.142)	0.135	0.015
91	7.58	0.40	0.163	0.142	(0.147)	0.021
92	7.67	0.40	0.163	0.141	(0.147)	0.022
93	7.75	0.40	0.163	0.140	(0.147)	0.023
94	7.83	0.43	0.177	0.140	(0.159)	0.037
95	7.92	0.43	0.177	0.139	(0.159)	0.038
96	8.00	0.43	0.177	0.138	(0.159)	0.038

97	8.08	0.50	0.204	0.138	(	0.184)	0.066
98	8.17	0.50	0.204	0.137	(	0.184)	0.067
99	8.25	0.50	0.204	0.137	(	0.184)	0.067
100	8.33	0.50	0.204	0.136	(	0.184)	0.068
101	8.42	0.50	0.204	0.135	(	0.184)	0.069
102	8.50	0.50	0.204	0.135	(	0.184)	0.069
103	8.58	0.53	0.218	0.134	(	0.196)	0.084
104	8.67	0.53	0.218	0.133	(	0.196)	0.084
105	8.75	0.53	0.218	0.133	(	0.196)	0.085
106	8.83	0.57	0.231	0.132	(	0.208)	0.099
107	8.92	0.57	0.231	0.131	(	0.208)	0.100
108	9.00	0.57	0.231	0.131	(	0.208)	0.100
109	9.08	0.63	0.258	0.130	(	0.232)	0.128
110	9.17	0.63	0.258	0.130	(	0.232)	0.129
111	9.25	0.63	0.258	0.129	(	0.232)	0.129
112	9.33	0.67	0.272	0.128	(	0.245)	0.144
113	9.42	0.67	0.272	0.128	(	0.245)	0.144
114	9.50	0.67	0.272	0.127	(	0.245)	0.145
115	9.58	0.70	0.285	0.127	(	0.257)	0.159
116	9.67	0.70	0.285	0.126	(	0.257)	0.160
117	9.75	0.70	0.285	0.125	(	0.257)	0.160
118	9.83	0.73	0.299	0.125	(	0.269)	0.174
119	9.92	0.73	0.299	0.124	(	0.269)	0.175
120	10.00	0.73	0.299	0.124	(	0.269)	0.176
121	10.08	0.50	0.204	0.123	(	0.184)	0.081
122	10.17	0.50	0.204	0.122	(	0.184)	0.082
123	10.25	0.50	0.204	0.122	(	0.184)	0.082
124	10.33	0.50	0.204	0.121	(	0.184)	0.083
125	10.42	0.50	0.204	0.121	(	0.184)	0.083
126	10.50	0.50	0.204	0.120	(	0.184)	0.084
127	10.58	0.67	0.272	0.119	(	0.245)	0.152
128	10.67	0.67	0.272	0.119	(	0.245)	0.153
129	10.75	0.67	0.272	0.118	(	0.245)	0.154
130	10.83	0.67	0.272	0.118	(	0.245)	0.154
131	10.92	0.67	0.272	0.117	(	0.245)	0.155
132	11.00	0.67	0.272	0.117	(	0.245)	0.155
133	11.08	0.63	0.258	0.116	(	0.232)	0.142
134	11.17	0.63	0.258	0.115	(	0.232)	0.143
135	11.25	0.63	0.258	0.115	(	0.232)	0.144
136	11.33	0.63	0.258	0.114	(	0.232)	0.144
137	11.42	0.63	0.258	0.114	(	0.232)	0.145
138	11.50	0.63	0.258	0.113	(	0.232)	0.145
139	11.58	0.57	0.231	0.113	(	0.208)	0.119
140	11.67	0.57	0.231	0.112	(	0.208)	0.119
141	11.75	0.57	0.231	0.111	(	0.208)	0.120
142	11.83	0.60	0.245	0.111	(	0.220)	0.134
143	11.92	0.60	0.245	0.110	(	0.220)	0.134
144	12.00	0.60	0.245	0.110	(	0.220)	0.135
145	12.08	0.83	0.340	0.109	(	0.306)	0.231
146	12.17	0.83	0.340	0.109	(	0.306)	0.231

147	12.25	0.83	0.340	0.108	(0.306)	0.232
148	12.33	0.87	0.353	0.108	(0.318)	0.246
149	12.42	0.87	0.353	0.107	(0.318)	0.246
150	12.50	0.87	0.353	0.107	(0.318)	0.247
151	12.58	0.93	0.381	0.106	(0.343)	0.275
152	12.67	0.93	0.381	0.105	(0.343)	0.275
153	12.75	0.93	0.381	0.105	(0.343)	0.276
154	12.83	0.97	0.394	0.104	(0.355)	0.290
155	12.92	0.97	0.394	0.104	(0.355)	0.290
156	13.00	0.97	0.394	0.103	(0.355)	0.291
157	13.08	1.13	0.462	0.103	(0.416)	0.359
158	13.17	1.13	0.462	0.102	(0.416)	0.360
159	13.25	1.13	0.462	0.102	(0.416)	0.360
160	13.33	1.13	0.462	0.101	(0.416)	0.361
161	13.42	1.13	0.462	0.101	(0.416)	0.362
162	13.50	1.13	0.462	0.100	(0.416)	0.362
163	13.58	0.77	0.313	0.100	(0.281)	0.213
164	13.67	0.77	0.313	0.099	(0.281)	0.213
165	13.75	0.77	0.313	0.099	(0.281)	0.214
166	13.83	0.77	0.313	0.098	(0.281)	0.215
167	13.92	0.77	0.313	0.098	(0.281)	0.215
168	14.00	0.77	0.313	0.097	(0.281)	0.216
169	14.08	0.90	0.367	0.097	(0.330)	0.270
170	14.17	0.90	0.367	0.096	(0.330)	0.271
171	14.25	0.90	0.367	0.096	(0.330)	0.271
172	14.33	0.87	0.353	0.095	(0.318)	0.258
173	14.42	0.87	0.353	0.095	(0.318)	0.259
174	14.50	0.87	0.353	0.094	(0.318)	0.259
175	14.58	0.87	0.353	0.094	(0.318)	0.260
176	14.67	0.87	0.353	0.093	(0.318)	0.260
177	14.75	0.87	0.353	0.093	(0.318)	0.261
178	14.83	0.83	0.340	0.092	(0.306)	0.248
179	14.92	0.83	0.340	0.092	(0.306)	0.248
180	15.00	0.83	0.340	0.091	(0.306)	0.248
181	15.08	0.80	0.326	0.091	(0.294)	0.235
182	15.17	0.80	0.326	0.090	(0.294)	0.236
183	15.25	0.80	0.326	0.090	(0.294)	0.236
184	15.33	0.77	0.313	0.090	(0.281)	0.223
185	15.42	0.77	0.313	0.089	(0.281)	0.224
186	15.50	0.77	0.313	0.089	(0.281)	0.224
187	15.58	0.63	0.258	0.088	(0.232)	0.170
188	15.67	0.63	0.258	0.088	(0.232)	0.171
189	15.75	0.63	0.258	0.087	(0.232)	0.171
190	15.83	0.63	0.258	0.087	(0.232)	0.172
191	15.92	0.63	0.258	0.086	(0.232)	0.172
192	16.00	0.63	0.258	0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049	0.005
194	16.17	0.13	0.054	(0.085)	0.049	0.005
195	16.25	0.13	0.054	(0.085)	0.049	0.005
196	16.33	0.13	0.054	(0.084)	0.049	0.005

197	16.42	0.13	0.054	(0.084)	0.049	0.005
198	16.50	0.13	0.054	(0.083)	0.049	0.005
199	16.58	0.10	0.041	(0.083)	0.037	0.004
200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004
246	20.50	0.10	0.041	(0.066)	0.037	0.004

247	20.58	0.10	0.041	(0.066)	0.037	0.004
248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003
275	22.92	0.07	0.027	(0.060)	0.024	0.003
276	23.00	0.07	0.027	(0.060)	0.024	0.003
277	23.08	0.07	0.027	(0.060)	0.024	0.003
278	23.17	0.07	0.027	(0.059)	0.024	0.003
279	23.25	0.07	0.027	(0.059)	0.024	0.003
280	23.33	0.07	0.027	(0.059)	0.024	0.003
281	23.42	0.07	0.027	(0.059)	0.024	0.003
282	23.50	0.07	0.027	(0.059)	0.024	0.003
283	23.58	0.07	0.027	(0.059)	0.024	0.003
284	23.67	0.07	0.027	(0.059)	0.024	0.003
285	23.75	0.07	0.027	(0.059)	0.024	0.003
286	23.83	0.07	0.027	(0.059)	0.024	0.003
287	23.92	0.07	0.027	(0.059)	0.024	0.003
288	24.00	0.07	0.027	(0.059)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 0.299(Ac.Ft)
Total rainfall = 3.40(In)
Flood volume = 11631.1 Cubic Feet

Total soil loss = 13044.0 Cubic Feet

Peak flow rate of this hydrograph = 0.730(CFS)

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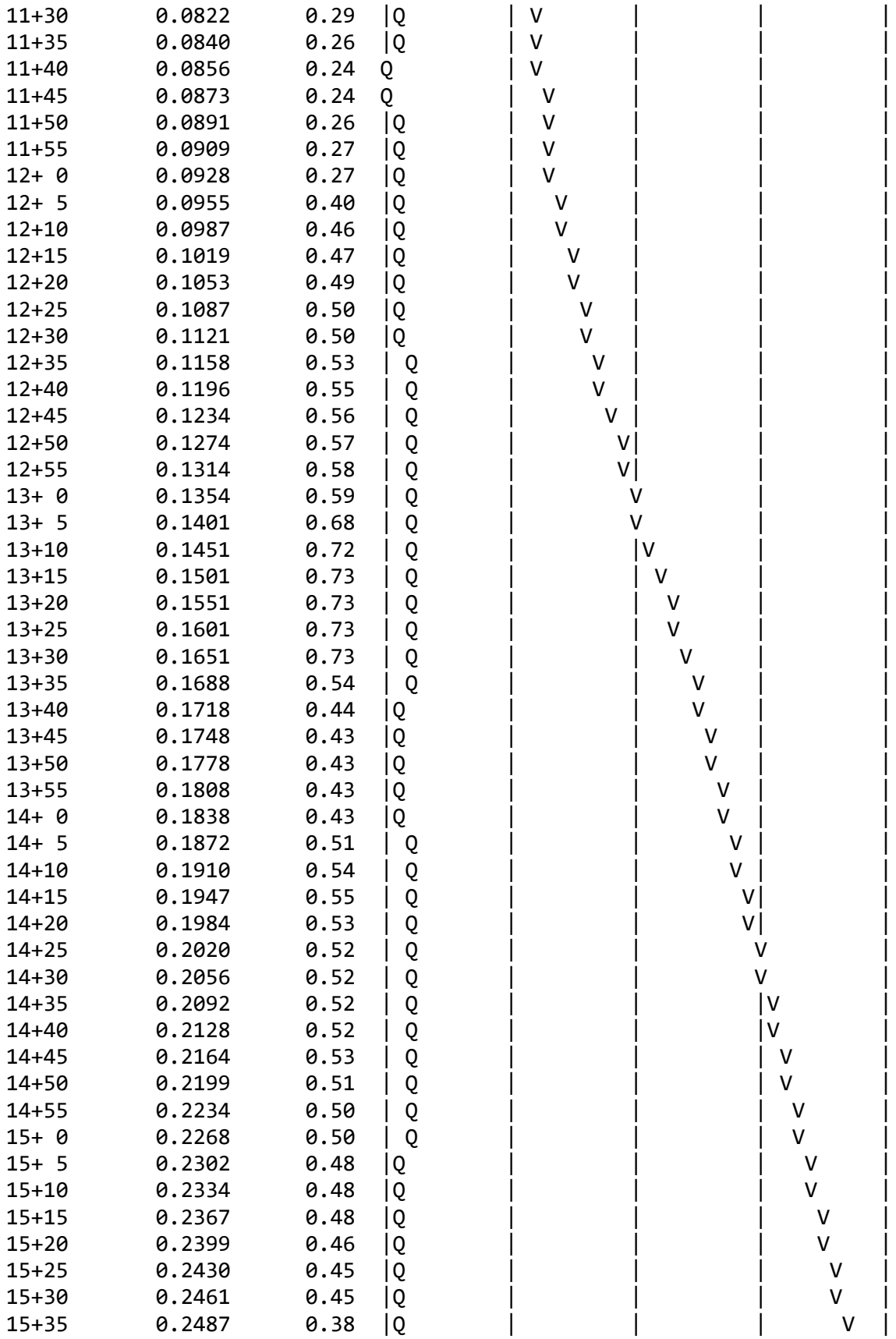
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0001	0.01	Q				
0+25	0.0002	0.01	Q				
0+30	0.0003	0.01	Q				
0+35	0.0003	0.01	Q				
0+40	0.0004	0.01	Q				
0+45	0.0004	0.01	Q				
0+50	0.0005	0.01	Q				
0+55	0.0006	0.01	Q				
1+ 0	0.0007	0.01	Q				
1+ 5	0.0007	0.01	Q				
1+10	0.0008	0.01	Q				
1+15	0.0008	0.01	Q				
1+20	0.0009	0.01	Q				
1+25	0.0009	0.01	Q				
1+30	0.0010	0.01	Q				
1+35	0.0011	0.01	Q				
1+40	0.0011	0.01	Q				
1+45	0.0012	0.01	Q				
1+50	0.0012	0.01	Q				
1+55	0.0013	0.01	Q				
2+ 0	0.0014	0.01	Q				
2+ 5	0.0015	0.01	Q				
2+10	0.0015	0.01	Q				
2+15	0.0016	0.01	Q				
2+20	0.0017	0.01	Q				
2+25	0.0018	0.01	Q				
2+30	0.0018	0.01	Q				
2+35	0.0019	0.01	Q				
2+40	0.0020	0.01	Q				
2+45	0.0021	0.01	Q				
2+50	0.0022	0.01	Q				
2+55	0.0023	0.01	Q				
3+ 0	0.0024	0.01	Q				
3+ 5	0.0025	0.01	Q				

3+10	0.0026	0.01	Q				
3+15	0.0027	0.01	Q				
3+20	0.0028	0.01	Q				
3+25	0.0029	0.01	Q				
3+30	0.0030	0.01	Q				
3+35	0.0031	0.01	Q				
3+40	0.0032	0.01	Q				
3+45	0.0032	0.01	Q				
3+50	0.0034	0.02	Q				
3+55	0.0035	0.02	Q				
4+ 0	0.0036	0.02	Q				
4+ 5	0.0037	0.02	Q				
4+10	0.0038	0.02	Q				
4+15	0.0039	0.02	Q				
4+20	0.0040	0.02	Q				
4+25	0.0042	0.02	Q				
4+30	0.0043	0.02	Q				
4+35	0.0044	0.02	Q				
4+40	0.0046	0.02	Q				
4+45	0.0047	0.02	Q				
4+50	0.0049	0.02	Q				
4+55	0.0050	0.02	Q				
5+ 0	0.0052	0.02	Q				
5+ 5	0.0053	0.02	Q				
5+10	0.0054	0.02	Q				
5+15	0.0055	0.02	Q				
5+20	0.0056	0.02	Q				
5+25	0.0058	0.02	Q				
5+30	0.0059	0.02	Q				
5+35	0.0060	0.02	Q				
5+40	0.0062	0.02	Q				
5+45	0.0063	0.02	Q				
5+50	0.0065	0.02	Q				
5+55	0.0066	0.02	Q				
6+ 0	0.0068	0.02	QV				
6+ 5	0.0070	0.02	QV				
6+10	0.0071	0.02	QV				
6+15	0.0073	0.02	QV				
6+20	0.0075	0.02	QV				
6+25	0.0076	0.02	QV				
6+30	0.0078	0.02	QV				
6+35	0.0080	0.03	QV				
6+40	0.0082	0.03	QV				
6+45	0.0084	0.03	QV				
6+50	0.0086	0.03	QV				
6+55	0.0087	0.03	QV				
7+ 0	0.0089	0.03	QV				
7+ 5	0.0091	0.03	QV				
7+10	0.0093	0.03	QV				
7+15	0.0095	0.03	QV				

7+20	0.0097	0.03	QV	|	|	|	|
7+25	0.0099	0.03	QV	|	|	|	|
7+30	0.0101	0.03	QV	|	|	|	|
7+35	0.0104	0.04	QV	|	|	|	|
7+40	0.0107	0.04	QV	|	|	|	|
7+45	0.0110	0.05	QV	|	|	|	|
7+50	0.0114	0.06	QV	|	|	|	|
7+55	0.0120	0.07	QV	|	|	|	|
8+ 0	0.0125	0.08	QV	|	|	|	|
8+ 5	0.0133	0.11	QV	|	|	|	|
8+10	0.0142	0.13	Q V	|	|	|	|
8+15	0.0151	0.14	Q V	|	|	|	|
8+20	0.0160	0.14	Q V	|	|	|	|
8+25	0.0170	0.14	Q V	|	|	|	|
8+30	0.0180	0.14	Q V	|	|	|	|
8+35	0.0190	0.16	Q V	|	|	|	|
8+40	0.0202	0.17	Q V	|	|	|	|
8+45	0.0214	0.17	Q V	|	|	|	|
8+50	0.0227	0.19	Q V	|	|	|	|
8+55	0.0241	0.20	Q V	|	|	|	|
9+ 0	0.0254	0.20	Q V	|	|	|	|
9+ 5	0.0271	0.24	Q V	|	|	|	|
9+10	0.0289	0.26	|Q V	|	|	|	|
9+15	0.0307	0.26	|Q V	|	|	|	|
9+20	0.0326	0.28	|Q V	|	|	|	|
9+25	0.0346	0.29	|Q V	|	|	|	|
9+30	0.0366	0.29	|Q V	|	|	|	|
9+35	0.0387	0.31	|Q V	|	|	|	|
9+40	0.0409	0.32	|Q V	|	|	|	|
9+45	0.0431	0.32	|Q V	|	|	|	|
9+50	0.0455	0.34	|Q V	|	|	|	|
9+55	0.0479	0.35	|Q V	|	|	|	|
10+ 0	0.0503	0.35	|Q V	|	|	|	|
10+ 5	0.0519	0.23	Q V	|	|	|	|
10+10	0.0531	0.17	Q V	|	|	|	|
10+15	0.0542	0.17	Q V	|	|	|	|
10+20	0.0554	0.17	Q V	|	|	|	|
10+25	0.0565	0.17	Q V	|	|	|	|
10+30	0.0577	0.17	Q V	|	|	|	|
10+35	0.0595	0.26	|Q V	|	|	|	|
10+40	0.0616	0.30	|Q V|	|	|	|	|
10+45	0.0637	0.31	|Q V|	|	|	|	|
10+50	0.0658	0.31	|Q V|	|	|	|	|
10+55	0.0680	0.31	|Q V	|	|	|	|
11+ 0	0.0702	0.31	|Q V	|	|	|	|
11+ 5	0.0722	0.30	|Q V	|	|	|	|
11+10	0.0742	0.29	|Q |V	|	|	|	|
11+15	0.0762	0.29	|Q |V	|	|	|	|
11+20	0.0782	0.29	|Q |V	|	|	|	|
11+25	0.0802	0.29	|Q | V	|	|	|	|



```
15+40       0.2511      0.35  |Q        |         |         |      V  |
15+45       0.2535      0.34  |Q        |         |         |      V  |
15+50       0.2559      0.35  |Q        |         |         |       V |
15+55       0.2583      0.35  |Q        |         |         |       V |
16+ 0       0.2607      0.35  |Q        |         |         |         V|
16+ 5       0.2616      0.13  Q         |         |         |         V|
16+10       0.2617      0.02  Q         |         |         |         V|
16+15       0.2618      0.01  Q         |         |         |         V|
16+20       0.2618      0.01  Q         |         |         |         V|
16+25       0.2619      0.01  Q         |         |         |         V|
16+30       0.2620      0.01  Q         |         |         |         V|
16+35       0.2621      0.01  Q         |         |         |         V|
16+40       0.2621      0.01  Q         |         |         |         V|
16+45       0.2622      0.01  Q         |         |         |         V|
16+50       0.2622      0.01  Q         |         |         |         V|
16+55       0.2623      0.01  Q         |         |         |         V|
17+ 0       0.2623      0.01  Q         |         |         |         V|
17+ 5       0.2624      0.01  Q         |         |         |         V|
17+10       0.2625      0.01  Q         |         |         |         V|
17+15       0.2626      0.01  Q         |         |         |         V|
17+20       0.2627      0.01  Q         |         |         |         V|
17+25       0.2628      0.01  Q         |         |         |         V|
17+30       0.2629      0.01  Q         |         |         |         V|
17+35       0.2630      0.01  Q         |         |         |         V|
17+40       0.2631      0.01  Q         |         |         |         V|
17+45       0.2632      0.01  Q         |         |         |         V|
17+50       0.2633      0.01  Q         |         |         |         V|
17+55       0.2633      0.01  Q         |         |         |         V|
18+ 0       0.2634      0.01  Q         |         |         |         V|
18+ 5       0.2635      0.01  Q         |         |         |         V|
18+10       0.2636      0.01  Q         |         |         |         V|
18+15       0.2636      0.01  Q         |         |         |         V|
18+20       0.2637      0.01  Q         |         |         |         V|
18+25       0.2638      0.01  Q         |         |         |         V|
18+30       0.2639      0.01  Q         |         |         |         V|
18+35       0.2639      0.01  Q         |         |         |         V|
18+40       0.2640      0.01  Q         |         |         |         V|
18+45       0.2640      0.01  Q         |         |         |         V|
18+50       0.2641      0.01  Q         |         |         |         V|
18+55       0.2641      0.01  Q         |         |         |         V|
19+ 0       0.2642      0.01  Q         |         |         |         V|
19+ 5       0.2642      0.01  Q         |         |         |         V|
19+10       0.2643      0.01  Q         |         |         |         V|
19+15       0.2643      0.01  Q         |         |         |         V|
19+20       0.2644      0.01  Q         |         |         |         V|
19+25       0.2645      0.01  Q         |         |         |         V|
19+30       0.2645      0.01  Q         |         |         |         V|
19+35       0.2646      0.01  Q         |         |         |         V|
19+40       0.2647      0.01  Q         |         |         |         V|
19+45       0.2647      0.01  Q         |         |         |         V|
```

19+50	0.2648	0.01	Q	|	|	|	V|
19+55	0.2648	0.01	Q	|	|	|	V|
20+ 0	0.2648	0.01	Q	|	|	|	V|
20+ 5	0.2649	0.01	Q	|	|	|	V|
20+10	0.2650	0.01	Q	|	|	|	V|
20+15	0.2650	0.01	Q	|	|	|	V|
20+20	0.2651	0.01	Q	|	|	|	V|
20+25	0.2651	0.01	Q	|	|	|	V|
20+30	0.2652	0.01	Q	|	|	|	V|
20+35	0.2652	0.01	Q	|	|	|	V|
20+40	0.2653	0.01	Q	|	|	|	V|
20+45	0.2653	0.01	Q	|	|	|	V|
20+50	0.2654	0.01	Q	|	|	|	V|
20+55	0.2654	0.01	Q	|	|	|	V|
21+ 0	0.2655	0.01	Q	|	|	|	V|
21+ 5	0.2655	0.01	Q	|	|	|	V|
21+10	0.2656	0.01	Q	|	|	|	V|
21+15	0.2656	0.01	Q	|	|	|	V|
21+20	0.2657	0.01	Q	|	|	|	V|
21+25	0.2657	0.01	Q	|	|	|	V|
21+30	0.2658	0.01	Q	|	|	|	V|
21+35	0.2658	0.01	Q	|	|	|	V|
21+40	0.2659	0.01	Q	|	|	|	V|
21+45	0.2659	0.01	Q	|	|	|	V|
21+50	0.2660	0.01	Q	|	|	|	V|
21+55	0.2660	0.01	Q	|	|	|	V|
22+ 0	0.2660	0.01	Q	|	|	|	V|
22+ 5	0.2661	0.01	Q	|	|	|	V|
22+10	0.2661	0.01	Q	|	|	|	V|
22+15	0.2662	0.01	Q	|	|	|	V|
22+20	0.2662	0.01	Q	|	|	|	V|
22+25	0.2663	0.01	Q	|	|	|	V|
22+30	0.2663	0.01	Q	|	|	|	V|
22+35	0.2664	0.01	Q	|	|	|	V|
22+40	0.2664	0.01	Q	|	|	|	V|
22+45	0.2664	0.01	Q	|	|	|	V|
22+50	0.2665	0.01	Q	|	|	|	V|
22+55	0.2665	0.01	Q	|	|	|	V|
23+ 0	0.2665	0.01	Q	|	|	|	V|
23+ 5	0.2666	0.01	Q	|	|	|	V|
23+10	0.2666	0.01	Q	|	|	|	V|
23+15	0.2667	0.01	Q	|	|	|	V|
23+20	0.2667	0.01	Q	|	|	|	V|
23+25	0.2667	0.01	Q	|	|	|	V|
23+30	0.2668	0.01	Q	|	|	|	V|
23+35	0.2668	0.01	Q	|	|	|	V|
23+40	0.2668	0.01	Q	|	|	|	V|
23+45	0.2669	0.01	Q	|	|	|	V|
23+50	0.2669	0.01	Q	|	|	|	V|
23+55	0.2670	0.01	Q	|	|	|	V|

```
   24+ 0       0.2670      0.01  Q         |         |         |        V|
   24+ 5       0.2670      0.00  Q         |         |         |        V|
   24+10       0.2670      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 08/16/23 File: ONSITEPREE21100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 100-YEAR 1-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            0.50                  1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                  2.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                              Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.235)	1.256
9	0.75	13.90	2.168	0.117	(1.952)	2.051
10	0.83	31.40	4.898	0.117	(4.408)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.534)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

Flood volume = Effective rainfall 1.18(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.019(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 8588.4 Cubic Feet
Total soil loss = 849.4 Cubic Feet

Peak flow rate of this hydrograph = 7.631(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	0.0036	0.52	V Q
0+10	0.0102	0.96	| VQ
0+15	0.0179	1.12	| VQ
0+20	0.0263	1.23	| QV
0+25	0.0356	1.35	| Q V
0+30	0.0466	1.60	| Q V|
0+35	0.0592	1.83	| Q | V
0+40	0.0751	2.30	| Q| V
0+45	0.0995	3.55	| | Q V
0+50	0.1520	7.63	| | | Q
0+55	0.1836	4.58	| | Q | | V |

```
    1+ 0       0.1944      1.57  |     Q   |         |         |        V|
    1+ 5       0.1970      0.37  |Q        |         |         |        V|
    1+10       0.1972      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 08/16/23 File: ONSITEPREE23100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 100-YEAR 3-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            0.80                  1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                  4.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	19.8

Flood volume = Effective rainfall 1.65(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.058(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 11971.6 Cubic Feet
Total soil loss = 2548.3 Cubic Feet

Peak flow rate of this hydrograph = 3.570(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	0.0017	0.25	VQ				
0+10	0.0044	0.38	VQ				
0+15	0.0066	0.33	VQ				
0+20	0.0096	0.42	|Q				
0+25	0.0129	0.48	|Q				
0+30	0.0169	0.58	| Q				
0+35	0.0206	0.54	| QV				
0+40	0.0247	0.59	| QV				
0+45	0.0290	0.63	| Q V				
0+50	0.0327	0.54	| Q V				
0+55	0.0364	0.53	| Q V				
1+ 0	0.0405	0.60	| Q V				
1+ 5	0.0457	0.76	| Q V				
1+10	0.0514	0.82	| Q V				
1+15	0.0571	0.83	| Q V				
1+20	0.0624	0.77	| Q V				
1+25	0.0687	0.92	| Q V				
1+30	0.0759	1.04	| Q |V				
1+35	0.0826	0.98	| Q | V				
1+40	0.0897	1.02	| Q | V				
1+45	0.0983	1.25	| Q | V				
1+50	0.1072	1.29	| Q | V				
1+55	0.1155	1.21	| Q | V				
2+ 0	0.1238	1.20	| Q | V				
2+ 5	0.1323	1.25	| Q | V				
2+10	0.1434	1.61	| Q | V				
2+15	0.1574	2.03	| Q | V				
2+20	0.1691	1.71	| Q | V				
2+25	0.1864	2.51	| Q | V				
2+30	0.2082	3.16	| Q | V				
2+35	0.2328	3.57	| Q | V				
2+40	0.2535	3.00	| Q | V				
2+45	0.2634	1.44	| Q | V				
2+50	0.2684	0.73	| Q | V				
2+55	0.2728	0.64	| Q | V				
3+ 0	0.2746	0.26	|Q | V				
3+ 5	0.2748	0.04	Q | V				
3+10	0.2748	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 08/16/23 File: ONSITEPREE26100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 100-YEAR 6-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387
46	3.83	1.50	0.504	0.117	(0.454)	0.387

```
47   3.92     1.60      0.538          0.117    (  0.484)        0.421
48   4.00     1.60      0.538          0.117    (  0.484)        0.421
49   4.08     1.70      0.571          0.117    (  0.514)        0.454
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
      Flood volume = Effective rainfall      2.10(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
      Total soil loss =      0.70(In)
      Total soil loss =     0.116(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       15281.4 Cubic Feet
      Total soil loss =        5046.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.331(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       0.0005      0.07  Q         |         |         |         |
  0+10       0.0014      0.14  Q         |         |         |         |
  0+15       0.0026      0.17  Q         |         |         |         |
```

```
0+20       0.0038      0.17  Q         |         |         |         |
0+25       0.0050      0.17  Q         |         |         |         |
0+30       0.0064      0.21  Q         |         |         |         |
0+35       0.0081      0.24  Q         |         |         |         |
0+40       0.0097      0.24  QV        |         |         |         |
0+45       0.0113      0.24  QV        |         |         |         |
0+50       0.0130      0.24  QV        |         |         |         |
0+55       0.0146      0.24  QV        |         |         |         |
1+ 0       0.0166      0.28  |Q        |         |         |         |
1+ 5       0.0187      0.30  |QV       |         |         |         |
1+10       0.0208      0.31  |QV       |         |         |         |
1+15       0.0229      0.31  |QV       |         |         |         |
1+20       0.0250      0.31  |QV       |         |         |         |
1+25       0.0271      0.31  |Q V      |         |         |         |
1+30       0.0292      0.31  |Q V      |         |         |         |
1+35       0.0313      0.31  |Q V      |         |         |         |
1+40       0.0334      0.31  |Q V      |         |         |         |
1+45       0.0355      0.31  |Q  V     |         |         |         |
1+50       0.0376      0.31  |Q  V     |         |         |         |
1+55       0.0397      0.31  |Q  V     |         |         |         |
2+ 0       0.0422      0.35  |Q  V     |         |         |         |
2+ 5       0.0444      0.33  |Q   V    |         |         |         |
2+10       0.0468      0.35  |Q   V    |         |         |         |
2+15       0.0494      0.37  |Q   V    |         |         |         |
2+20       0.0520      0.37  |Q   V    |         |         |         |
2+25       0.0545      0.37  |Q    V   |         |         |         |
2+30       0.0571      0.37  |Q    V   |         |         |         |
2+35       0.0597      0.37  |Q    V   |         |         |         |
2+40       0.0623      0.37  |Q     V  |         |         |         |
2+45       0.0651      0.42  |Q     V  |         |         |         |
2+50       0.0682      0.44  |Q     V  |         |         |         |
2+55       0.0712      0.44  |Q      V |         |         |         |
3+ 0       0.0743      0.44  |Q      V |         |         |         |
3+ 5       0.0773      0.44  |Q      V |         |         |         |
3+10       0.0806      0.49  |Q       V|         |         |         |
3+15       0.0841      0.51  | Q      V|         |         |         |
3+20       0.0876      0.51  | Q      V|         |         |         |
3+25       0.0915      0.55  | Q       V         |         |         |
3+30       0.0957      0.62  | Q       V         |         |         |
3+35       0.1004      0.69  | Q       |V        |         |         |
3+40       0.1053      0.71  | Q       | V       |         |         |
3+45       0.1105      0.76  |  Q      | V       |         |         |
3+50       0.1159      0.78  |  Q      |  V      |         |         |
3+55       0.1216      0.82  |  Q      |  V      |         |         |
4+ 0       0.1274      0.85  |  Q      |   V     |         |         |
4+ 5       0.1335      0.89  |  Q      |    V    |         |         |
4+10       0.1401      0.96  |  Q      |    V    |         |         |
4+15       0.1472      1.03  |   Q     |     V   |         |         |
4+20       0.1547      1.09  |   Q     |      V  |         |         |
4+25       0.1627      1.16  |   Q     |       V |         |         |
```

4+30	0.1709	1.18	Q	V			
4+35	0.1794	1.23	Q	V			
4+40	0.1883	1.30	Q	V			
4+45	0.1977	1.36	Q	V			
4+50	0.2072	1.39	Q	V			
4+55	0.2171	1.43	Q	V			
5+ 0	0.2274	1.50	Q	V			
5+ 5	0.2394	1.74	Q	V			
5+10	0.2537	2.07	Q	V			
5+15	0.2697	2.32	Q	V			
5+20	0.2872	2.53	Q	V			
5+25	0.3066	2.82	Q	V			
5+30	0.3295	3.33	Q	V			
5+35	0.3428	1.93	Q	V			
5+40	0.3476	0.69	Q	V			
5+45	0.3494	0.26	Q	V			
5+50	0.3503	0.13	Q	V			
5+55	0.3506	0.05	Q	V			
6+ 0	0.3508	0.02	Q	V			
6+ 5	0.3508	0.01	Q	V			
6+10	0.3508	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 08/16/23 File: ONSITEPREE224100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 321.00(Ft.)
Length along longest watercourse measured to centroid = 182.00(Ft.)
Length along longest watercourse = 0.061 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 29.00(Ft.)
Slope along watercourse = 477.0093 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.021 Hr.
Lag time = 1.28 Min.
25% of lag time = 0.32 Min.
40% of lag time = 0.51 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        389.322         64.334              1.297
    2   0.167        778.644         32.659              0.658
    3   0.250       1167.966          3.007              0.061
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011
46	3.83	0.20	0.130	(0.173)	0.117	0.013

47	3.92	0.20	0.130	(0.172)	0.117	0.013
48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013
50	4.17	0.20	0.130	(0.170)	0.117	0.013
51	4.25	0.20	0.130	(0.169)	0.117	0.013
52	4.33	0.23	0.151	(0.169)	0.136	0.015
53	4.42	0.23	0.151	(0.168)	0.136	0.015
54	4.50	0.23	0.151	(0.167)	0.136	0.015
55	4.58	0.23	0.151	(0.166)	0.136	0.015
56	4.67	0.23	0.151	(0.166)	0.136	0.015
57	4.75	0.23	0.151	(0.165)	0.136	0.015
58	4.83	0.27	0.173	(0.164)	0.156	0.017
59	4.92	0.27	0.173	(0.164)	0.156	0.017
60	5.00	0.27	0.173	(0.163)	0.156	0.017
61	5.08	0.20	0.130	(0.162)	0.117	0.013
62	5.17	0.20	0.130	(0.161)	0.117	0.013
63	5.25	0.20	0.130	(0.161)	0.117	0.013
64	5.33	0.23	0.151	(0.160)	0.136	0.015
65	5.42	0.23	0.151	(0.159)	0.136	0.015
66	5.50	0.23	0.151	(0.159)	0.136	0.015
67	5.58	0.27	0.173	(0.158)	0.156	0.017
68	5.67	0.27	0.173	(0.157)	0.156	0.017
69	5.75	0.27	0.173	(0.157)	0.156	0.017
70	5.83	0.27	0.173	(0.156)	0.156	0.017
71	5.92	0.27	0.173	0.155	(0.156)	0.018
72	6.00	0.27	0.173	0.154	(0.156)	0.018
73	6.08	0.30	0.194	0.154	(0.175)	0.041
74	6.17	0.30	0.194	0.153	(0.175)	0.041
75	6.25	0.30	0.194	0.152	(0.175)	0.042
76	6.33	0.30	0.194	0.152	(0.175)	0.043
77	6.42	0.30	0.194	0.151	(0.175)	0.043
78	6.50	0.30	0.194	0.150	(0.175)	0.044
79	6.58	0.33	0.216	0.150	(0.194)	0.066
80	6.67	0.33	0.216	0.149	(0.194)	0.067
81	6.75	0.33	0.216	0.148	(0.194)	0.068
82	6.83	0.33	0.216	0.148	(0.194)	0.068
83	6.92	0.33	0.216	0.147	(0.194)	0.069
84	7.00	0.33	0.216	0.146	(0.194)	0.070
85	7.08	0.33	0.216	0.146	(0.194)	0.070
86	7.17	0.33	0.216	0.145	(0.194)	0.071
87	7.25	0.33	0.216	0.144	(0.194)	0.072
88	7.33	0.37	0.238	0.144	(0.214)	0.094
89	7.42	0.37	0.238	0.143	(0.214)	0.095
90	7.50	0.37	0.238	0.142	(0.214)	0.095
91	7.58	0.40	0.259	0.142	(0.233)	0.117
92	7.67	0.40	0.259	0.141	(0.233)	0.118
93	7.75	0.40	0.259	0.140	(0.233)	0.119
94	7.83	0.43	0.281	0.140	(0.253)	0.141
95	7.92	0.43	0.281	0.139	(0.253)	0.142
96	8.00	0.43	0.281	0.138	(0.253)	0.142

97	8.08	0.50	0.324	0.138	(	0.292)	0.186
98	8.17	0.50	0.324	0.137	(	0.292)	0.187
99	8.25	0.50	0.324	0.137	(	0.292)	0.187
100	8.33	0.50	0.324	0.136	(	0.292)	0.188
101	8.42	0.50	0.324	0.135	(	0.292)	0.189
102	8.50	0.50	0.324	0.135	(	0.292)	0.189
103	8.58	0.53	0.346	0.134	(	0.311)	0.212
104	8.67	0.53	0.346	0.133	(	0.311)	0.212
105	8.75	0.53	0.346	0.133	(	0.311)	0.213
106	8.83	0.57	0.367	0.132	(	0.330)	0.235
107	8.92	0.57	0.367	0.131	(	0.330)	0.236
108	9.00	0.57	0.367	0.131	(	0.330)	0.236
109	9.08	0.63	0.410	0.130	(	0.369)	0.280
110	9.17	0.63	0.410	0.130	(	0.369)	0.281
111	9.25	0.63	0.410	0.129	(	0.369)	0.281
112	9.33	0.67	0.432	0.128	(	0.389)	0.304
113	9.42	0.67	0.432	0.128	(	0.389)	0.304
114	9.50	0.67	0.432	0.127	(	0.389)	0.305
115	9.58	0.70	0.454	0.127	(	0.408)	0.327
116	9.67	0.70	0.454	0.126	(	0.408)	0.328
117	9.75	0.70	0.454	0.125	(	0.408)	0.328
118	9.83	0.73	0.475	0.125	(	0.428)	0.350
119	9.92	0.73	0.475	0.124	(	0.428)	0.351
120	10.00	0.73	0.475	0.124	(	0.428)	0.352
121	10.08	0.50	0.324	0.123	(	0.292)	0.201
122	10.17	0.50	0.324	0.122	(	0.292)	0.202
123	10.25	0.50	0.324	0.122	(	0.292)	0.202
124	10.33	0.50	0.324	0.121	(	0.292)	0.203
125	10.42	0.50	0.324	0.121	(	0.292)	0.203
126	10.50	0.50	0.324	0.120	(	0.292)	0.204
127	10.58	0.67	0.432	0.119	(	0.389)	0.313
128	10.67	0.67	0.432	0.119	(	0.389)	0.313
129	10.75	0.67	0.432	0.118	(	0.389)	0.314
130	10.83	0.67	0.432	0.118	(	0.389)	0.314
131	10.92	0.67	0.432	0.117	(	0.389)	0.315
132	11.00	0.67	0.432	0.117	(	0.389)	0.315
133	11.08	0.63	0.410	0.116	(	0.369)	0.294
134	11.17	0.63	0.410	0.115	(	0.369)	0.295
135	11.25	0.63	0.410	0.115	(	0.369)	0.296
136	11.33	0.63	0.410	0.114	(	0.369)	0.296
137	11.42	0.63	0.410	0.114	(	0.369)	0.297
138	11.50	0.63	0.410	0.113	(	0.369)	0.297
139	11.58	0.57	0.367	0.113	(	0.330)	0.255
140	11.67	0.57	0.367	0.112	(	0.330)	0.255
141	11.75	0.57	0.367	0.111	(	0.330)	0.256
142	11.83	0.60	0.389	0.111	(	0.350)	0.278
143	11.92	0.60	0.389	0.110	(	0.350)	0.278
144	12.00	0.60	0.389	0.110	(	0.350)	0.279
145	12.08	0.83	0.540	0.109	(	0.486)	0.431
146	12.17	0.83	0.540	0.109	(	0.486)	0.431

147	12.25	0.83	0.540	0.108	(0.486)	0.432
148	12.33	0.87	0.562	0.108	(0.505)	0.454
149	12.42	0.87	0.562	0.107	(0.505)	0.455
150	12.50	0.87	0.562	0.107	(0.505)	0.455
151	12.58	0.93	0.605	0.106	(0.544)	0.499
152	12.67	0.93	0.605	0.105	(0.544)	0.499
153	12.75	0.93	0.605	0.105	(0.544)	0.500
154	12.83	0.97	0.626	0.104	(0.564)	0.522
155	12.92	0.97	0.626	0.104	(0.564)	0.523
156	13.00	0.97	0.626	0.103	(0.564)	0.523
157	13.08	1.13	0.734	0.103	(0.661)	0.632
158	13.17	1.13	0.734	0.102	(0.661)	0.632
159	13.25	1.13	0.734	0.102	(0.661)	0.633
160	13.33	1.13	0.734	0.101	(0.661)	0.633
161	13.42	1.13	0.734	0.101	(0.661)	0.634
162	13.50	1.13	0.734	0.100	(0.661)	0.634
163	13.58	0.77	0.497	0.100	(0.447)	0.397
164	13.67	0.77	0.497	0.099	(0.447)	0.398
165	13.75	0.77	0.497	0.099	(0.447)	0.398
166	13.83	0.77	0.497	0.098	(0.447)	0.399
167	13.92	0.77	0.497	0.098	(0.447)	0.399
168	14.00	0.77	0.497	0.097	(0.447)	0.400
169	14.08	0.90	0.583	0.097	(0.525)	0.487
170	14.17	0.90	0.583	0.096	(0.525)	0.487
171	14.25	0.90	0.583	0.096	(0.525)	0.487
172	14.33	0.87	0.562	0.095	(0.505)	0.466
173	14.42	0.87	0.562	0.095	(0.505)	0.467
174	14.50	0.87	0.562	0.094	(0.505)	0.467
175	14.58	0.87	0.562	0.094	(0.505)	0.468
176	14.67	0.87	0.562	0.093	(0.505)	0.468
177	14.75	0.87	0.562	0.093	(0.505)	0.469
178	14.83	0.83	0.540	0.092	(0.486)	0.448
179	14.92	0.83	0.540	0.092	(0.486)	0.448
180	15.00	0.83	0.540	0.091	(0.486)	0.449
181	15.08	0.80	0.518	0.091	(0.467)	0.427
182	15.17	0.80	0.518	0.090	(0.467)	0.428
183	15.25	0.80	0.518	0.090	(0.467)	0.428
184	15.33	0.77	0.497	0.090	(0.447)	0.407
185	15.42	0.77	0.497	0.089	(0.447)	0.408
186	15.50	0.77	0.497	0.089	(0.447)	0.408
187	15.58	0.63	0.410	0.088	(0.369)	0.322
188	15.67	0.63	0.410	0.088	(0.369)	0.323
189	15.75	0.63	0.410	0.087	(0.369)	0.323
190	15.83	0.63	0.410	0.087	(0.369)	0.324
191	15.92	0.63	0.410	0.086	(0.369)	0.324
192	16.00	0.63	0.410	0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078	0.009
194	16.17	0.13	0.086	(0.085)	0.078	0.009
195	16.25	0.13	0.086	(0.085)	0.078	0.009
196	16.33	0.13	0.086	(0.084)	0.078	0.009

197	16.42	0.13	0.086	(	0.084)	0.078		0.009
198	16.50	0.13	0.086	(	0.083)	0.078		0.009
199	16.58	0.10	0.065	(	0.083)	0.058		0.006
200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006
246	20.50	0.10	0.065	(	0.066)	0.058		0.006

247	20.58	0.10	0.065	(0.066)	0.058	0.006
248	20.67	0.10	0.065	(0.066)	0.058	0.006
249	20.75	0.10	0.065	(0.065)	0.058	0.006
250	20.83	0.07	0.043	(0.065)	0.039	0.004
251	20.92	0.07	0.043	(0.065)	0.039	0.004
252	21.00	0.07	0.043	(0.065)	0.039	0.004
253	21.08	0.10	0.065	(0.064)	0.058	0.006
254	21.17	0.10	0.065	(0.064)	0.058	0.006
255	21.25	0.10	0.065	(0.064)	0.058	0.006
256	21.33	0.07	0.043	(0.064)	0.039	0.004
257	21.42	0.07	0.043	(0.063)	0.039	0.004
258	21.50	0.07	0.043	(0.063)	0.039	0.004
259	21.58	0.10	0.065	(0.063)	0.058	0.006
260	21.67	0.10	0.065	(0.063)	0.058	0.006
261	21.75	0.10	0.065	(0.062)	0.058	0.006
262	21.83	0.07	0.043	(0.062)	0.039	0.004
263	21.92	0.07	0.043	(0.062)	0.039	0.004
264	22.00	0.07	0.043	(0.062)	0.039	0.004
265	22.08	0.10	0.065	(0.062)	0.058	0.006
266	22.17	0.10	0.065	(0.061)	0.058	0.006
267	22.25	0.10	0.065	(0.061)	0.058	0.006
268	22.33	0.07	0.043	(0.061)	0.039	0.004
269	22.42	0.07	0.043	(0.061)	0.039	0.004
270	22.50	0.07	0.043	(0.061)	0.039	0.004
271	22.58	0.07	0.043	(0.060)	0.039	0.004
272	22.67	0.07	0.043	(0.060)	0.039	0.004
273	22.75	0.07	0.043	(0.060)	0.039	0.004
274	22.83	0.07	0.043	(0.060)	0.039	0.004
275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 38.3

Flood volume = Effective rainfall 3.19(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.369(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 23148.7 Cubic Feet

Total soil loss = 16055.2 Cubic Feet

Peak flow rate of this hydrograph = 1.279(CFS)

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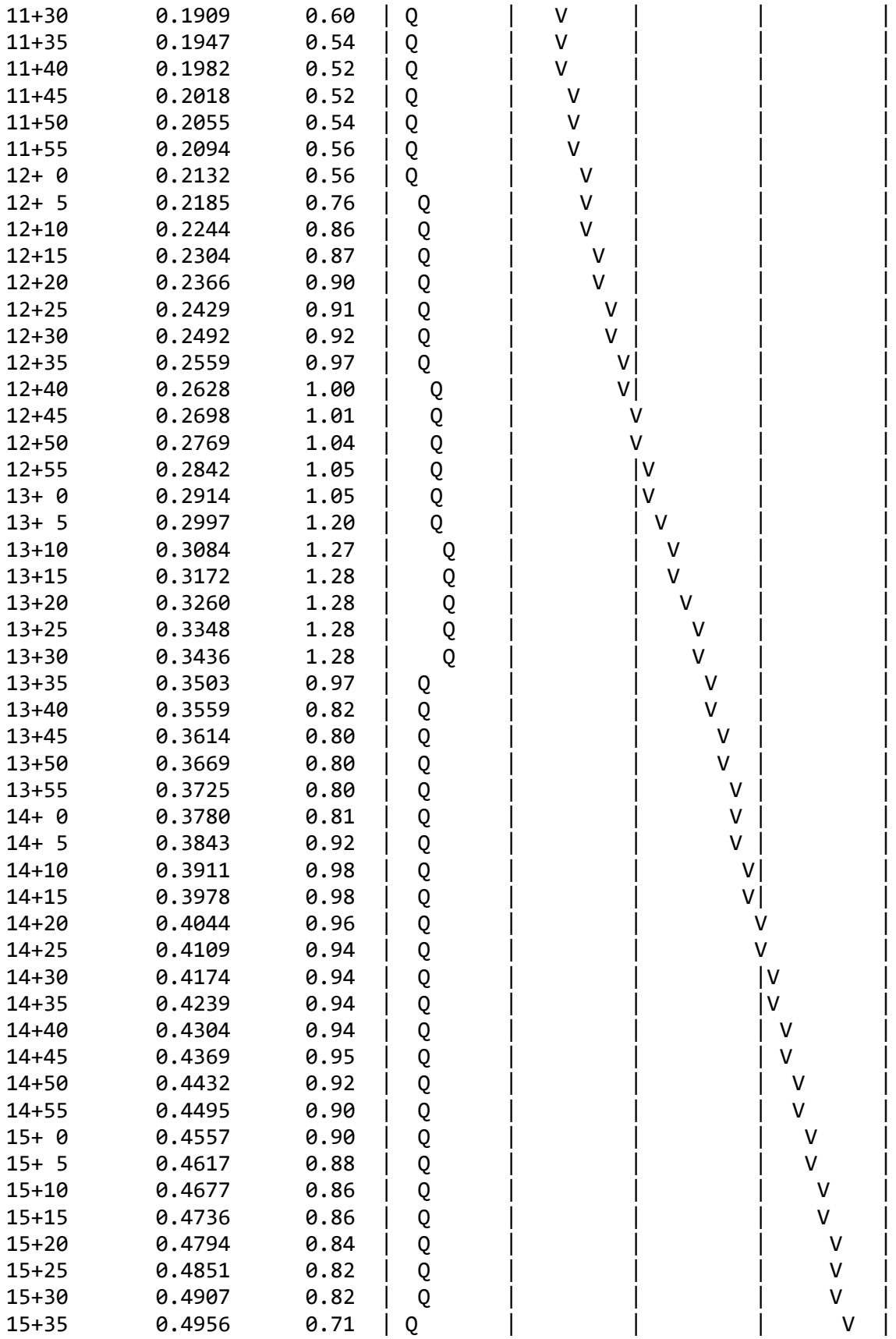
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0001	0.01	Q				
0+15	0.0002	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0004	0.01	Q				
0+35	0.0005	0.01	Q				
0+40	0.0006	0.01	Q				
0+45	0.0007	0.01	Q				
0+50	0.0008	0.02	Q				
0+55	0.0009	0.02	Q				
1+ 0	0.0010	0.02	Q				
1+ 5	0.0011	0.01	Q				
1+10	0.0012	0.01	Q				
1+15	0.0013	0.01	Q				
1+20	0.0014	0.01	Q				
1+25	0.0015	0.01	Q				
1+30	0.0016	0.01	Q				
1+35	0.0017	0.01	Q				
1+40	0.0018	0.01	Q				
1+45	0.0019	0.01	Q				
1+50	0.0020	0.02	Q				
1+55	0.0021	0.02	Q				
2+ 0	0.0022	0.02	Q				
2+ 5	0.0023	0.02	Q				
2+10	0.0024	0.02	Q				
2+15	0.0026	0.02	Q				
2+20	0.0027	0.02	Q				
2+25	0.0028	0.02	Q				
2+30	0.0029	0.02	Q				
2+35	0.0031	0.02	Q				
2+40	0.0032	0.02	Q				
2+45	0.0034	0.02	Q				
2+50	0.0035	0.02	Q				
2+55	0.0037	0.02	Q				
3+ 0	0.0038	0.02	Q				
3+ 5	0.0040	0.02	Q				

3+10	0.0041	0.02	Q				
3+15	0.0043	0.02	Q				
3+20	0.0044	0.02	Q				
3+25	0.0046	0.02	Q				
3+30	0.0047	0.02	Q				
3+35	0.0049	0.02	Q				
3+40	0.0050	0.02	Q				
3+45	0.0052	0.02	Q				
3+50	0.0053	0.02	Q				
3+55	0.0055	0.03	Q				
4+ 0	0.0057	0.03	Q				
4+ 5	0.0059	0.03	Q				
4+10	0.0061	0.03	Q				
4+15	0.0062	0.03	Q				
4+20	0.0064	0.03	Q				
4+25	0.0066	0.03	Q				
4+30	0.0068	0.03	Q				
4+35	0.0071	0.03	Q				
4+40	0.0073	0.03	Q				
4+45	0.0075	0.03	Q				
4+50	0.0077	0.03	Q				
4+55	0.0079	0.03	Q				
5+ 0	0.0082	0.03	Q				
5+ 5	0.0084	0.03	Q				
5+10	0.0086	0.03	Q				
5+15	0.0088	0.03	Q				
5+20	0.0089	0.03	Q				
5+25	0.0092	0.03	Q				
5+30	0.0094	0.03	Q				
5+35	0.0096	0.03	Q				
5+40	0.0098	0.03	Q				
5+45	0.0101	0.03	Q				
5+50	0.0103	0.03	Q				
5+55	0.0106	0.04	Q				
6+ 0	0.0108	0.04	Q				
6+ 5	0.0113	0.07	Q				
6+10	0.0118	0.08	Q				
6+15	0.0124	0.08	Q				
6+20	0.0130	0.09	Q				
6+25	0.0136	0.09	QV				
6+30	0.0142	0.09	QV				
6+35	0.0150	0.12	QV				
6+40	0.0159	0.13	QV				
6+45	0.0169	0.14	QV				
6+50	0.0178	0.14	QV				
6+55	0.0188	0.14	QV				
7+ 0	0.0197	0.14	QV				
7+ 5	0.0207	0.14	QV				
7+10	0.0217	0.14	QV				
7+15	0.0227	0.14	QV				

```
 7+20       0.0239      0.17  QV        |         |         |         |
 7+25       0.0252      0.19  QV        |         |         |         |
 7+30       0.0265      0.19  QV        |         |         |         |
 7+35       0.0280      0.22  Q V       |         |         |         |
 7+40       0.0296      0.24  Q V       |         |         |         |
 7+45       0.0313      0.24  Q V       |         |         |         |
 7+50       0.0331      0.27  |QV       |         |         |         |
 7+55       0.0351      0.28  |QV       |         |         |         |
 8+ 0       0.0371      0.29  |QV       |         |         |         |
 8+ 5       0.0394      0.34  |QV       |         |         |         |
 8+10       0.0420      0.37  |Q V      |         |         |         |
 8+15       0.0446      0.38  |Q V      |         |         |         |
 8+20       0.0472      0.38  |Q V      |         |         |         |
 8+25       0.0498      0.38  |Q V      |         |         |         |
 8+30       0.0525      0.38  |Q V      |         |         |         |
 8+35       0.0553      0.41  |Q  V     |         |         |         |
 8+40       0.0582      0.43  |Q  V     |         |         |         |
 8+45       0.0612      0.43  |Q  V     |         |         |         |
 8+50       0.0643      0.46  |Q  V     |         |         |         |
 8+55       0.0676      0.47  |Q   V    |         |         |         |
 9+ 0       0.0709      0.48  |Q   V    |         |         |         |
 9+ 5       0.0745      0.53  | Q  V    |         |         |         |
 9+10       0.0784      0.56  | Q  V    |         |         |         |
 9+15       0.0823      0.57  | Q   V   |         |         |         |
 9+20       0.0864      0.60  | Q   V   |         |         |         |
 9+25       0.0907      0.61  | Q   V   |         |         |         |
 9+30       0.0949      0.61  | Q    V  |         |         |         |
 9+35       0.0993      0.64  | Q    V  |         |         |         |
 9+40       0.1039      0.66  | Q    V  |         |         |         |
 9+45       0.1084      0.66  | Q     V |         |         |         |
 9+50       0.1132      0.69  | Q     V |         |         |         |
 9+55       0.1180      0.71  | Q     V |         |         |         |
10+ 0       0.1229      0.71  | Q      V|         |         |         |
10+ 5       0.1264      0.51  | Q      V|         |         |         |
10+10       0.1293      0.42  |Q       V|         |         |         |
10+15       0.1321      0.41  |Q       V|         |         |         |
10+20       0.1349      0.41  |Q        V         |         |         |
10+25       0.1377      0.41  |Q        V         |         |         |
10+30       0.1406      0.41  |Q        V         |         |         |
10+35       0.1444      0.55  | Q       V         |         |         |
10+40       0.1487      0.62  | Q       |V        |         |         |
10+45       0.1530      0.63  | Q       |V        |         |         |
10+50       0.1574      0.63  | Q       |V        |         |         |
10+55       0.1618      0.63  | Q       | V       |         |         |
11+ 0       0.1661      0.64  | Q       | V       |         |         |
11+ 5       0.1703      0.61  | Q       | V       |         |         |
11+10       0.1744      0.60  | Q       |  V      |         |         |
11+15       0.1785      0.60  | Q       |  V      |         |         |
11+20       0.1827      0.60  | Q       |  V      |         |         |
11+25       0.1868      0.60  | Q       |   V     |         |         |
```


11+30 0.1909 0.60
11+35 0.1947 0.54
11+40 0.1982 0.52
11+45 0.2018 0.52
11+50 0.2055 0.54
11+55 0.2094 0.56
12+ 0 0.2132 0.56
12+ 5 0.2185 0.76
12+10 0.2244 0.86
12+15 0.2304 0.87
12+20 0.2366 0.90
12+25 0.2429 0.91
12+30 0.2492 0.92
12+35 0.2559 0.97
12+40 0.2628 1.00
12+45 0.2698 1.01
12+50 0.2769 1.04
12+55 0.2842 1.05
13+ 0 0.2914 1.05
13+ 5 0.2997 1.20
13+10 0.3084 1.27
13+15 0.3172 1.28
13+20 0.3260 1.28
13+25 0.3348 1.28
13+30 0.3436 1.28
13+35 0.3503 0.97
13+40 0.3559 0.82
13+45 0.3614 0.80
13+50 0.3669 0.80
13+55 0.3725 0.80
14+ 0 0.3780 0.81
14+ 5 0.3843 0.92
14+10 0.3911 0.98
14+15 0.3978 0.98
14+20 0.4044 0.96
14+25 0.4109 0.94
14+30 0.4174 0.94
14+35 0.4239 0.94
14+40 0.4304 0.94
14+45 0.4369 0.95
14+50 0.4432 0.92
14+55 0.4495 0.90
15+ 0 0.4557 0.90
15+ 5 0.4617 0.88
15+10 0.4677 0.86
15+15 0.4736 0.86
15+20 0.4794 0.84
15+25 0.4851 0.82
15+30 0.4907 0.82
15+35 0.4956 0.71

```
15+40       0.5001      0.66  | Q       |         |         |      V  |
15+45       0.5046      0.65  | Q       |         |         |      V  |
15+50       0.5091      0.65  | Q       |         |         |       V |
15+55       0.5136      0.65  | Q       |         |         |       V |
16+ 0       0.5181      0.65  | Q       |         |         |       V |
16+ 5       0.5198      0.24  Q         |         |         |        V|
16+10       0.5201      0.04  Q         |         |         |        V|
16+15       0.5202      0.02  Q         |         |         |        V|
16+20       0.5203      0.02  Q         |         |         |        V|
16+25       0.5204      0.02  Q         |         |         |        V|
16+30       0.5205      0.02  Q         |         |         |        V|
16+35       0.5206      0.01  Q         |         |         |        V|
16+40       0.5207      0.01  Q         |         |         |        V|
16+45       0.5208      0.01  Q         |         |         |        V|
16+50       0.5209      0.01  Q         |         |         |        V|
16+55       0.5210      0.01  Q         |         |         |        V|
17+ 0       0.5211      0.01  Q         |         |         |        V|
17+ 5       0.5214      0.04  Q         |         |         |        V|
17+10       0.5217      0.05  Q         |         |         |        V|
17+15       0.5221      0.06  Q         |         |         |        V|
17+20       0.5225      0.06  Q         |         |         |        V|
17+25       0.5229      0.06  Q         |         |         |        V|
17+30       0.5233      0.06  Q         |         |         |        V|
17+35       0.5238      0.06  Q         |         |         |        V|
17+40       0.5242      0.06  Q         |         |         |        V|
17+45       0.5246      0.06  Q         |         |         |        V|
17+50       0.5248      0.03  Q         |         |         |        V|
17+55       0.5250      0.02  Q         |         |         |        V|
18+ 0       0.5251      0.02  Q         |         |         |        V|
18+ 5       0.5253      0.02  Q         |         |         |        V|
18+10       0.5254      0.02  Q         |         |         |        V|
18+15       0.5256      0.02  Q         |         |         |        V|
18+20       0.5257      0.02  Q         |         |         |        V|
18+25       0.5259      0.02  Q         |         |         |        V|
18+30       0.5261      0.02  Q         |         |         |        V|
18+35       0.5262      0.02  Q         |         |         |        V|
18+40       0.5263      0.01  Q         |         |         |        V|
18+45       0.5264      0.01  Q         |         |         |        V|
18+50       0.5265      0.01  Q         |         |         |        V|
18+55       0.5265      0.01  Q         |         |         |        V|
19+ 0       0.5266      0.01  Q         |         |         |        V|
19+ 5       0.5267      0.01  Q         |         |         |        V|
19+10       0.5267      0.01  Q         |         |         |        V|
19+15       0.5268      0.01  Q         |         |         |        V|
19+20       0.5270      0.03  Q         |         |         |        V|
19+25       0.5272      0.03  Q         |         |         |        V|
19+30       0.5275      0.03  Q         |         |         |        V|
19+35       0.5276      0.02  Q         |         |         |        V|
19+40       0.5277      0.01  Q         |         |         |        V|
19+45       0.5278      0.01  Q         |         |         |        V|
```

19+50	0.5279	0.01	Q	|	|	|	V|
19+55	0.5279	0.01	Q	|	|	|	V|
20+ 0	0.5280	0.01	Q	|	|	|	V|
20+ 5	0.5281	0.01	Q	|	|	|	V|
20+10	0.5281	0.01	Q	|	|	|	V|
20+15	0.5282	0.01	Q	|	|	|	V|
20+20	0.5283	0.01	Q	|	|	|	V|
20+25	0.5284	0.01	Q	|	|	|	V|
20+30	0.5285	0.01	Q	|	|	|	V|
20+35	0.5286	0.01	Q	|	|	|	V|
20+40	0.5287	0.01	Q	|	|	|	V|
20+45	0.5288	0.01	Q	|	|	|	V|
20+50	0.5288	0.01	Q	|	|	|	V|
20+55	0.5289	0.01	Q	|	|	|	V|
21+ 0	0.5290	0.01	Q	|	|	|	V|
21+ 5	0.5290	0.01	Q	|	|	|	V|
21+10	0.5291	0.01	Q	|	|	|	V|
21+15	0.5292	0.01	Q	|	|	|	V|
21+20	0.5293	0.01	Q	|	|	|	V|
21+25	0.5294	0.01	Q	|	|	|	V|
21+30	0.5294	0.01	Q	|	|	|	V|
21+35	0.5295	0.01	Q	|	|	|	V|
21+40	0.5296	0.01	Q	|	|	|	V|
21+45	0.5297	0.01	Q	|	|	|	V|
21+50	0.5297	0.01	Q	|	|	|	V|
21+55	0.5298	0.01	Q	|	|	|	V|
22+ 0	0.5299	0.01	Q	|	|	|	V|
22+ 5	0.5299	0.01	Q	|	|	|	V|
22+10	0.5300	0.01	Q	|	|	|	V|
22+15	0.5301	0.01	Q	|	|	|	V|
22+20	0.5302	0.01	Q	|	|	|	V|
22+25	0.5303	0.01	Q	|	|	|	V|
22+30	0.5303	0.01	Q	|	|	|	V|
22+35	0.5304	0.01	Q	|	|	|	V|
22+40	0.5304	0.01	Q	|	|	|	V|
22+45	0.5305	0.01	Q	|	|	|	V|
22+50	0.5306	0.01	Q	|	|	|	V|
22+55	0.5306	0.01	Q	|	|	|	V|
23+ 0	0.5307	0.01	Q	|	|	|	V|
23+ 5	0.5307	0.01	Q	|	|	|	V|
23+10	0.5308	0.01	Q	|	|	|	V|
23+15	0.5309	0.01	Q	|	|	|	V|
23+20	0.5309	0.01	Q	|	|	|	V|
23+25	0.5310	0.01	Q	|	|	|	V|
23+30	0.5310	0.01	Q	|	|	|	V|
23+35	0.5311	0.01	Q	|	|	|	V|
23+40	0.5312	0.01	Q	|	|	|	V|
23+45	0.5312	0.01	Q	|	|	|	V|
23+50	0.5313	0.01	Q	|	|	|	V|
23+55	0.5313	0.01	Q	|	|	|	V|

```
   24+ 0       0.5314      0.01  Q         |         |         |        V|
   24+ 5       0.5314      0.00  Q         |         |         |        V|
   24+10       0.5314      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/04/24 File: ONSITEPREE3242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  79.8      0.246     0.000        0.246       1.000      0.246
                                                 Sum (F) =   0.246
Area averaged mean soil loss (F) (In/Hr) =  0.246
Minimum soil loss rate ((In/Hr)) =  0.123
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004

46	3.83	0.20	0.048	(0.364)	0.043	0.005
47	3.92	0.20	0.048	(0.362)	0.043	0.005
48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005
50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010

96	8.00	0.43	0.104	(0.292)	0.094	0.010
97	8.08	0.50	0.120	(0.290)	0.108	0.012
98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012
125	10.42	0.50	0.120	(0.254)	0.108	0.012
126	10.50	0.50	0.120	(0.253)	0.108	0.012
127	10.58	0.67	0.160	(0.251)	0.144	0.016
128	10.67	0.67	0.160	(0.250)	0.144	0.016
129	10.75	0.67	0.160	(0.249)	0.144	0.016
130	10.83	0.67	0.160	(0.248)	0.144	0.016
131	10.92	0.67	0.160	(0.247)	0.144	0.016
132	11.00	0.67	0.160	(0.245)	0.144	0.016
133	11.08	0.63	0.152	(0.244)	0.137	0.015
134	11.17	0.63	0.152	(0.243)	0.137	0.015
135	11.25	0.63	0.152	(0.242)	0.137	0.015
136	11.33	0.63	0.152	(0.241)	0.137	0.015
137	11.42	0.63	0.152	(0.239)	0.137	0.015
138	11.50	0.63	0.152	(0.238)	0.137	0.015
139	11.58	0.57	0.136	(0.237)	0.122	0.014
140	11.67	0.57	0.136	(0.236)	0.122	0.014
141	11.75	0.57	0.136	(0.235)	0.122	0.014
142	11.83	0.60	0.144	(0.233)	0.130	0.014
143	11.92	0.60	0.144	(0.232)	0.130	0.014
144	12.00	0.60	0.144	(0.231)	0.130	0.014
145	12.08	0.83	0.200	(0.230)	0.180	0.020

146	12.17	0.83	0.200	(	0.229)	0.180	0.020
147	12.25	0.83	0.200	(	0.228)	0.180	0.020
148	12.33	0.87	0.208	(	0.227)	0.187	0.021
149	12.42	0.87	0.208	(	0.225)	0.187	0.021
150	12.50	0.87	0.208	(	0.224)	0.187	0.021
151	12.58	0.93	0.224	(	0.223)	0.202	0.022
152	12.67	0.93	0.224	(	0.222)	0.202	0.022
153	12.75	0.93	0.224	(	0.221)	0.202	0.022
154	12.83	0.97	0.232	(	0.220)	0.209	0.023
155	12.92	0.97	0.232	(	0.219)	0.209	0.023
156	13.00	0.97	0.232	(	0.218)	0.209	0.023
157	13.08	1.13	0.272		0.216	(0.245)	0.056
158	13.17	1.13	0.272		0.215	(0.245)	0.057
159	13.25	1.13	0.272		0.214	(0.245)	0.058
160	13.33	1.13	0.272		0.213	(0.245)	0.059
161	13.42	1.13	0.272		0.212	(0.245)	0.060
162	13.50	1.13	0.272		0.211	(0.245)	0.061
163	13.58	0.77	0.184	(	0.210)	0.166	0.018
164	13.67	0.77	0.184	(	0.209)	0.166	0.018
165	13.75	0.77	0.184	(	0.208)	0.166	0.018
166	13.83	0.77	0.184	(	0.207)	0.166	0.018
167	13.92	0.77	0.184	(	0.206)	0.166	0.018
168	14.00	0.77	0.184	(	0.205)	0.166	0.018
169	14.08	0.90	0.216	(	0.204)	0.194	0.022
170	14.17	0.90	0.216	(	0.203)	0.194	0.022
171	14.25	0.90	0.216	(	0.202)	0.194	0.022
172	14.33	0.87	0.208	(	0.200)	0.187	0.021
173	14.42	0.87	0.208	(	0.199)	0.187	0.021
174	14.50	0.87	0.208	(	0.198)	0.187	0.021
175	14.58	0.87	0.208	(	0.197)	0.187	0.021
176	14.67	0.87	0.208	(	0.196)	0.187	0.021
177	14.75	0.87	0.208	(	0.195)	0.187	0.021
178	14.83	0.83	0.200	(	0.194)	0.180	0.020
179	14.92	0.83	0.200	(	0.193)	0.180	0.020
180	15.00	0.83	0.200	(	0.192)	0.180	0.020
181	15.08	0.80	0.192	(	0.191)	0.173	0.019
182	15.17	0.80	0.192	(	0.190)	0.173	0.019
183	15.25	0.80	0.192	(	0.189)	0.173	0.019
184	15.33	0.77	0.184	(	0.188)	0.166	0.018
185	15.42	0.77	0.184	(	0.188)	0.166	0.018
186	15.50	0.77	0.184	(	0.187)	0.166	0.018
187	15.58	0.63	0.152	(	0.186)	0.137	0.015
188	15.67	0.63	0.152	(	0.185)	0.137	0.015
189	15.75	0.63	0.152	(	0.184)	0.137	0.015
190	15.83	0.63	0.152	(	0.183)	0.137	0.015
191	15.92	0.63	0.152	(	0.182)	0.137	0.015
192	16.00	0.63	0.152	(	0.181)	0.137	0.015
193	16.08	0.13	0.032	(	0.180)	0.029	0.003
194	16.17	0.13	0.032	(	0.179)	0.029	0.003
195	16.25	0.13	0.032	(	0.178)	0.029	0.003

196	16.33	0.13	0.032	(0.177)	0.029	0.003
197	16.42	0.13	0.032	(0.176)	0.029	0.003
198	16.50	0.13	0.032	(0.175)	0.029	0.003
199	16.58	0.10	0.024	(0.175)	0.022	0.002
200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002

246	20.50	0.10	0.024	(0.139)	0.022	0.002
247	20.58	0.10	0.024	(0.139)	0.022	0.002
248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002
275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.6

Flood volume = Effective rainfall 0.22(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.0(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.372(Ac.Ft)
Total rainfall = 2.00(In)

Flood volume = 1956.0 Cubic Feet
Total soil loss = 16193.9 Cubic Feet

Peak flow rate of this hydrograph = 0.152(CFS)

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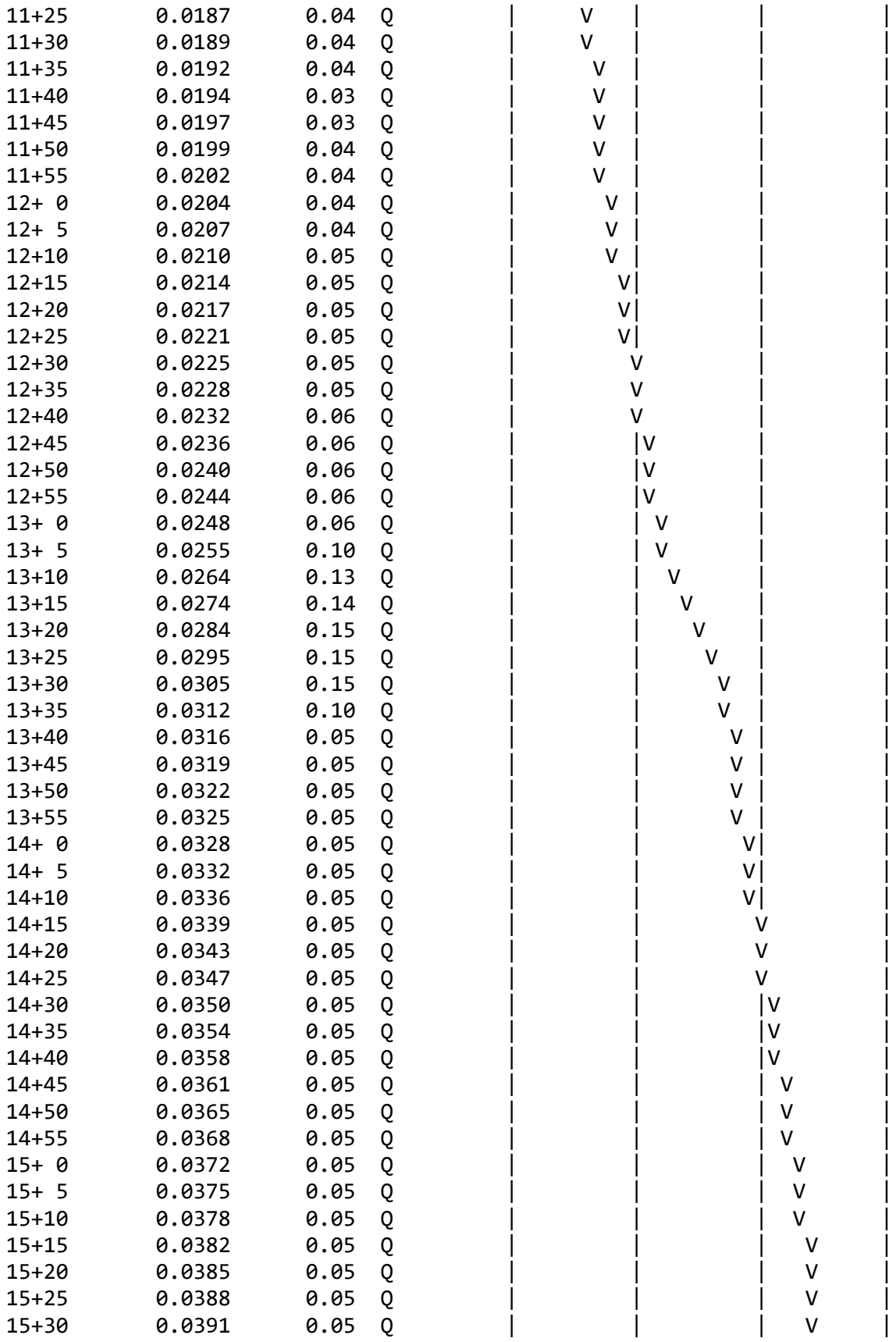
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0000	0.00	Q				
0+15	0.0001	0.00	Q				
0+20	0.0001	0.01	Q				
0+25	0.0001	0.01	Q				
0+30	0.0002	0.01	Q				
0+35	0.0002	0.01	Q				
0+40	0.0003	0.01	Q				
0+45	0.0003	0.01	Q				
0+50	0.0004	0.01	Q				
0+55	0.0004	0.01	Q				
1+ 0	0.0005	0.01	Q				
1+ 5	0.0005	0.01	Q				
1+10	0.0006	0.01	Q				
1+15	0.0006	0.01	Q				
1+20	0.0006	0.01	Q				
1+25	0.0007	0.01	Q				
1+30	0.0007	0.01	Q				
1+35	0.0008	0.01	Q				
1+40	0.0008	0.01	Q				
1+45	0.0009	0.01	Q				
1+50	0.0009	0.01	Q				
1+55	0.0010	0.01	Q				
2+ 0	0.0010	0.01	Q				
2+ 5	0.0011	0.01	Q				
2+10	0.0011	0.01	Q				
2+15	0.0012	0.01	QV				
2+20	0.0012	0.01	QV				
2+25	0.0013	0.01	QV				
2+30	0.0013	0.01	QV				
2+35	0.0014	0.01	QV				
2+40	0.0015	0.01	QV				
2+45	0.0015	0.01	QV				
2+50	0.0016	0.01	QV				
2+55	0.0017	0.01	QV				
3+ 0	0.0018	0.01	QV				

3+ 5	0.0018	0.01	QV	|	|	|	|
3+10	0.0019	0.01	QV	|	|	|	|
3+15	0.0020	0.01	QV	|	|	|	|
3+20	0.0020	0.01	QV	|	|	|	|
3+25	0.0021	0.01	QV	|	|	|	|
3+30	0.0022	0.01	QV	|	|	|	|
3+35	0.0022	0.01	QV	|	|	|	|
3+40	0.0023	0.01	Q V	|	|	|	|
3+45	0.0024	0.01	Q V	|	|	|	|
3+50	0.0025	0.01	Q V	|	|	|	|
3+55	0.0025	0.01	Q V	|	|	|	|
4+ 0	0.0026	0.01	Q V	|	|	|	|
4+ 5	0.0027	0.01	Q V	|	|	|	|
4+10	0.0028	0.01	Q V	|	|	|	|
4+15	0.0029	0.01	Q V	|	|	|	|
4+20	0.0030	0.01	Q V	|	|	|	|
4+25	0.0031	0.01	Q V	|	|	|	|
4+30	0.0032	0.01	Q V	|	|	|	|
4+35	0.0033	0.01	Q V	|	|	|	|
4+40	0.0033	0.01	Q V	|	|	|	|
4+45	0.0034	0.01	Q V	|	|	|	|
4+50	0.0035	0.02	Q V	|	|	|	|
4+55	0.0037	0.02	Q V	|	|	|	|
5+ 0	0.0038	0.02	Q V	|	|	|	|
5+ 5	0.0039	0.01	Q V	|	|	|	|
5+10	0.0040	0.01	Q V	|	|	|	|
5+15	0.0040	0.01	Q V	|	|	|	|
5+20	0.0041	0.01	Q V	|	|	|	|
5+25	0.0042	0.01	Q V	|	|	|	|
5+30	0.0043	0.01	Q V	|	|	|	|
5+35	0.0044	0.02	Q V	|	|	|	|
5+40	0.0045	0.02	Q V	|	|	|	|
5+45	0.0046	0.02	Q V	|	|	|	|
5+50	0.0048	0.02	Q V	|	|	|	|
5+55	0.0049	0.02	Q V	|	|	|	|
6+ 0	0.0050	0.02	Q V	|	|	|	|
6+ 5	0.0051	0.02	Q V	|	|	|	|
6+10	0.0052	0.02	Q V	|	|	|	|
6+15	0.0053	0.02	Q V	|	|	|	|
6+20	0.0055	0.02	Q V	|	|	|	|
6+25	0.0056	0.02	Q V	|	|	|	|
6+30	0.0057	0.02	Q V	|	|	|	|
6+35	0.0059	0.02	Q V	|	|	|	|
6+40	0.0060	0.02	Q V	|	|	|	|
6+45	0.0061	0.02	Q V	|	|	|	|
6+50	0.0063	0.02	Q V	|	|	|	|
6+55	0.0064	0.02	Q V	|	|	|	|
7+ 0	0.0065	0.02	Q V	|	|	|	|
7+ 5	0.0067	0.02	Q V	|	|	|	|
7+10	0.0068	0.02	Q V	|	|	|	|

7+15	0.0070	0.02	Q	V	|	|	|	|
7+20	0.0071	0.02	Q	V	|	|	|	|
7+25	0.0073	0.02	Q	V	|	|	|	|
7+30	0.0074	0.02	Q	V	|	|	|	|
7+35	0.0076	0.02	Q	V	|	|	|	|
7+40	0.0077	0.02	Q	V	|	|	|	|
7+45	0.0079	0.02	Q	V	|	|	|	|
7+50	0.0081	0.03	Q	V	|	|	|	|
7+55	0.0083	0.03	Q	V	|	|	|	|
8+ 0	0.0084	0.03	Q	V	|	|	|	|
8+ 5	0.0086	0.03	Q	V	|	|	|	|
8+10	0.0088	0.03	Q	V	|	|	|	|
8+15	0.0090	0.03	Q	V	|	|	|	|
8+20	0.0093	0.03	Q	V	|	|	|	|
8+25	0.0095	0.03	Q	V	|	|	|	|
8+30	0.0097	0.03	Q	V	|	|	|	|
8+35	0.0099	0.03	Q	V	|	|	|	|
8+40	0.0101	0.03	Q	V	|	|	|	|
8+45	0.0103	0.03	Q	V	|	|	|	|
8+50	0.0106	0.03	Q	V	|	|	|	|
8+55	0.0108	0.03	Q	V	|	|	|	|
9+ 0	0.0110	0.03	Q	V	|	|	|	|
9+ 5	0.0113	0.04	Q	V	|	|	|	|
9+10	0.0115	0.04	Q	V	|	|	|	|
9+15	0.0118	0.04	Q	V	|	|	|	|
9+20	0.0121	0.04	Q	V	|	|	|	|
9+25	0.0124	0.04	Q	|	V	|	|	|
9+30	0.0126	0.04	Q	|	V	|	|	|
9+35	0.0129	0.04	Q	|	V	|	|	|
9+40	0.0132	0.04	Q	|	V	|	|	|
9+45	0.0135	0.04	Q	|	|	V	|	|
9+50	0.0138	0.04	Q	|	|	V	|	|
9+55	0.0141	0.04	Q	|	|	V	|	|
10+ 0	0.0144	0.04	Q	|	|	V	|	|
10+ 5	0.0147	0.04	Q	|	|	|	V	|	|
10+10	0.0149	0.03	Q	|	|	|	V	|	|
10+15	0.0151	0.03	Q	|	|	|	V	|	|
10+20	0.0153	0.03	Q	|	|	|	V	|	|
10+25	0.0155	0.03	Q	|	|	|	V	|	|
10+30	0.0157	0.03	Q	|	|	|	V	|	|
10+35	0.0160	0.04	Q	|	|	|	|	V	|	|
10+40	0.0162	0.04	Q	|	|	|	|	V	|	|
10+45	0.0165	0.04	Q	|	|	|	|	V	|	|
10+50	0.0168	0.04	Q	|	|	|	|	V	|	|
10+55	0.0171	0.04	Q	|	|	|	|	|	V	|	|
11+ 0	0.0173	0.04	Q	|	|	|	|	|	V	|	|
11+ 5	0.0176	0.04	Q	|	|	|	|	|	V	|	|
11+10	0.0179	0.04	Q	|	|	|	|	|	V	|	|
11+15	0.0181	0.04	Q	|	|	|	|	|	|	V	|	|
11+20	0.0184	0.04	Q	|	|	|	|	|	|	V	|	|



15+35	0.0394	0.04	Q	|	|	|	V |
15+40	0.0397	0.04	Q	|	|	|	V |
15+45	0.0400	0.04	Q	|	|	|	V |
15+50	0.0402	0.04	Q	|	|	|	V |
15+55	0.0405	0.04	Q	|	|	|	V |
16+ 0	0.0408	0.04	Q	|	|	|	V |
16+ 5	0.0409	0.02	Q	|	|	|	V |
16+10	0.0410	0.01	Q	|	|	|	V |
16+15	0.0410	0.01	Q	|	|	|	V |
16+20	0.0411	0.01	Q	|	|	|	V |
16+25	0.0411	0.01	Q	|	|	|	V |
16+30	0.0412	0.01	Q	|	|	|	V |
16+35	0.0413	0.01	Q	|	|	|	V |
16+40	0.0413	0.01	Q	|	|	|	V |
16+45	0.0413	0.01	Q	|	|	|	V |
16+50	0.0414	0.01	Q	|	|	|	V |
16+55	0.0414	0.01	Q	|	|	|	V |
17+ 0	0.0415	0.01	Q	|	|	|	V |
17+ 5	0.0415	0.01	Q	|	|	|	V |
17+10	0.0416	0.01	Q	|	|	|	V |
17+15	0.0417	0.01	Q	|	|	|	V |
17+20	0.0417	0.01	Q	|	|	|	V |
17+25	0.0418	0.01	Q	|	|	|	V |
17+30	0.0419	0.01	Q	|	|	|	V |
17+35	0.0419	0.01	Q	|	|	|	V |
17+40	0.0420	0.01	Q	|	|	|	V |
17+45	0.0421	0.01	Q	|	|	|	V |
17+50	0.0421	0.01	Q	|	|	|	V |
17+55	0.0422	0.01	Q	|	|	|	V |
18+ 0	0.0422	0.01	Q	|	|	|	V |
18+ 5	0.0423	0.01	Q	|	|	|	V |
18+10	0.0424	0.01	Q	|	|	|	V |
18+15	0.0424	0.01	Q	|	|	|	V |
18+20	0.0425	0.01	Q	|	|	|	V |
18+25	0.0425	0.01	Q	|	|	|	V |
18+30	0.0426	0.01	Q	|	|	|	V |
18+35	0.0426	0.01	Q	|	|	|	V |
18+40	0.0427	0.01	Q	|	|	|	V |
18+45	0.0427	0.01	Q	|	|	|	V |
18+50	0.0427	0.00	Q	|	|	|	V |
18+55	0.0428	0.00	Q	|	|	|	V |
19+ 0	0.0428	0.00	Q	|	|	|	V |
19+ 5	0.0428	0.01	Q	|	|	|	V |
19+10	0.0429	0.01	Q	|	|	|	V |
19+15	0.0429	0.01	Q	|	|	|	V |
19+20	0.0430	0.01	Q	|	|	|	V |
19+25	0.0430	0.01	Q	|	|	|	V |
19+30	0.0431	0.01	Q	|	|	|	V |
19+35	0.0431	0.01	Q	|	|	|	V |
19+40	0.0432	0.01	Q	|	|	|	V |

19+45	0.0432	0.01	Q	|	|	|	V |
19+50	0.0432	0.00	Q	|	|	|	V |
19+55	0.0433	0.00	Q	|	|	|	V |
20+ 0	0.0433	0.00	Q	|	|	|	V |
20+ 5	0.0433	0.01	Q	|	|	|	V |
20+10	0.0434	0.01	Q	|	|	|	V |
20+15	0.0434	0.01	Q	|	|	|	V |
20+20	0.0435	0.01	Q	|	|	|	V |
20+25	0.0435	0.01	Q	|	|	|	V |
20+30	0.0435	0.01	Q	|	|	|	V |
20+35	0.0436	0.01	Q	|	|	|	V |
20+40	0.0436	0.01	Q	|	|	|	V |
20+45	0.0437	0.01	Q	|	|	|	V |
20+50	0.0437	0.00	Q	|	|	|	V |
20+55	0.0437	0.00	Q	|	|	|	V |
21+ 0	0.0438	0.00	Q	|	|	|	V |
21+ 5	0.0438	0.01	Q	|	|	|	V|
21+10	0.0438	0.01	Q	|	|	|	V|
21+15	0.0439	0.01	Q	|	|	|	V|
21+20	0.0439	0.00	Q	|	|	|	V|
21+25	0.0439	0.00	Q	|	|	|	V|
21+30	0.0440	0.00	Q	|	|	|	V|
21+35	0.0440	0.01	Q	|	|	|	V|
21+40	0.0440	0.01	Q	|	|	|	V|
21+45	0.0441	0.01	Q	|	|	|	V|
21+50	0.0441	0.00	Q	|	|	|	V|
21+55	0.0442	0.00	Q	|	|	|	V|
22+ 0	0.0442	0.00	Q	|	|	|	V|
22+ 5	0.0442	0.01	Q	|	|	|	V|
22+10	0.0443	0.01	Q	|	|	|	V|
22+15	0.0443	0.01	Q	|	|	|	V|
22+20	0.0443	0.00	Q	|	|	|	V|
22+25	0.0444	0.00	Q	|	|	|	V|
22+30	0.0444	0.00	Q	|	|	|	V|
22+35	0.0444	0.00	Q	|	|	|	V|
22+40	0.0444	0.00	Q	|	|	|	V|
22+45	0.0445	0.00	Q	|	|	|	V|
22+50	0.0445	0.00	Q	|	|	|	V|
22+55	0.0445	0.00	Q	|	|	|	V|
23+ 0	0.0446	0.00	Q	|	|	|	V|
23+ 5	0.0446	0.00	Q	|	|	|	V|
23+10	0.0446	0.00	Q	|	|	|	V|
23+15	0.0446	0.00	Q	|	|	|	V|
23+20	0.0447	0.00	Q	|	|	|	V|
23+25	0.0447	0.00	Q	|	|	|	V|
23+30	0.0447	0.00	Q	|	|	|	V|
23+35	0.0447	0.00	Q	|	|	|	V|
23+40	0.0448	0.00	Q	|	|	|	V|
23+45	0.0448	0.00	Q	|	|	|	V|
23+50	0.0448	0.00	Q	|	|	|	V|

```
   23+55       0.0449      0.00  Q         |         |         |        V|
   24+ 0       0.0449      0.00  Q         |         |         |        V|
   24+ 5       0.0449      0.00  Q         |         |         |        V|
   24+10       0.0449      0.00  Q         |         |         |        V|
   24+15       0.0449      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 08/16/23 File: ONSITEPREE3110.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 10-YEAR 1-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            0.50                  1.25

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            1.30                  3.25

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
-----------------------------------------------------------------
```

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	3.30	0.328	0.117	(0.295)	0.211
2	0.17	4.20	0.418	0.117	(0.376)	0.301
3	0.25	4.40	0.438	0.117	(0.394)	0.321
4	0.33	4.80	0.478	0.117	(0.430)	0.361
5	0.42	5.20	0.517	0.117	(0.466)	0.400
6	0.50	6.20	0.617	0.117	(0.555)	0.500
7	0.58	6.80	0.677	0.117	(0.609)	0.560
8	0.67	8.80	0.876	0.117	(0.788)	0.759
9	0.75	13.90	1.383	0.117	(1.245)	1.266
10	0.83	31.40	3.124	0.117	(2.812)	3.007
11	0.92	7.20	0.716	0.117	(0.645)	0.599
12	1.00	3.80	0.378	0.117	(0.340)	0.261
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.71(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.024(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 6462.4 Cubic Feet
Total soil loss = 1061.8 Cubic Feet

Peak flow rate of this hydrograph = 5.406(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	0.0019	0.28	VQ				
0+10	0.0061	0.61	VQ				
0+15	0.0114	0.76	Q				
0+20	0.0173	0.85	QV				
0+25	0.0238	0.95	Q V				
0+30	0.0316	1.13	Q V				
0+35	0.0407	1.32	Q V				
0+40	0.0521	1.66	Q | V				
0+45	0.0697	2.55	Q V				
0+50	0.1069	5.41	|	|	Q V	|	|

```
    0+55       0.1344      4.00  |         |    Q    |         |     V   |
    1+ 0       0.1446      1.48  |    Q    |         |         |       V |
    1+ 5       0.1478      0.47  |Q        |         |         |        V|
    1+10       0.1483      0.07  Q         |         |         |        V|
    1+15       0.1484      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 08/16/23 File: ONSITEPREE3310.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 10-YEAR 3-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            0.80                  2.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.00                  5.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

Flood volume = Effective rainfall 0.95(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.073(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 8579.9 Cubic Feet
Total soil loss = 3160.2 Cubic Feet

Peak flow rate of this hydrograph = 2.714(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	0.0008	0.11	Q				
0+10	0.0021	0.20	Q				
0+15	0.0033	0.17	Q				
0+20	0.0048	0.22	Q				
0+25	0.0068	0.28	|Q				
0+30	0.0092	0.35	|Q				
0+35	0.0115	0.34	|QV				
0+40	0.0140	0.36	|QV				
0+45	0.0168	0.40	|Q V				
0+50	0.0192	0.35	|Q V				
0+55	0.0214	0.32	|Q V				
1+ 0	0.0239	0.37	|Q V				
1+ 5	0.0273	0.49	|Q V				
1+10	0.0311	0.55	| Q V				
1+15	0.0350	0.56	| Q V				
1+20	0.0386	0.52	| Q V				
1+25	0.0428	0.62	| Q V				
1+30	0.0478	0.73	| Q V				
1+35	0.0526	0.69	| Q V				
1+40	0.0575	0.72	| Q |V				
1+45	0.0636	0.88	| Q | V				
1+50	0.0700	0.93	| Q | V				
1+55	0.0761	0.88	| Q | V				
2+ 0	0.0821	0.87	| Q | V				
2+ 5	0.0882	0.90	| Q | V				
2+10	0.0961	1.14	| Q | V				
2+15	0.1063	1.48	| Q |V				
2+20	0.1154	1.32	| Q | V				
2+25	0.1278	1.80	| Q | V				
2+30	0.1442	2.38	| Q| V				
2+35	0.1628	2.71	| Q V				
2+40	0.1794	2.41	| Q| V				
2+45	0.1882	1.27	| Q | V				
2+50	0.1922	0.58	| Q | V				
2+55	0.1952	0.44	|Q | V				
3+ 0	0.1966	0.21	Q | V				
3+ 5	0.1969	0.04	Q | V				
3+10	0.1970	0.01	Q | V				

```
    3+15       0.1970      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 08/16/23 File: ONSITEPREE3610.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 10-YEAR 6-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            1.20                  3.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.80                  7.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

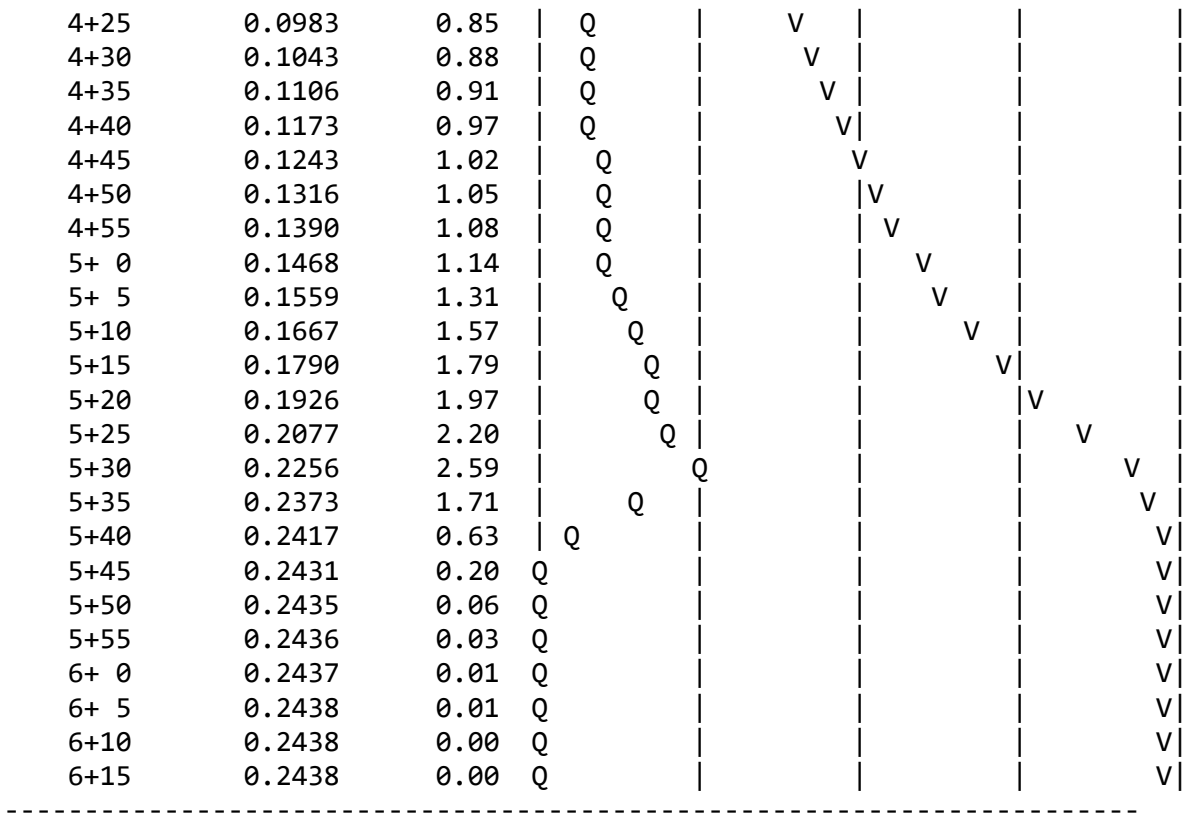
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217

```
46   3.83     1.50      0.334          0.117    (  0.301)        0.217
47   3.92     1.60      0.357          0.117    (  0.321)        0.240
48   4.00     1.60      0.357          0.117    (  0.321)        0.240
49   4.08     1.70      0.379          0.117    (  0.341)        0.262
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       2.5(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.143(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =       10619.1 Cubic Feet
      Total soil loss =        6244.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.590(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      0.01  Q         |         |         |         |
  0+10       0.0003      0.03  Q         |         |         |         |
```

```
0+15       0.0006      0.04  Q          |          |          |          |
0+20       0.0009      0.04  Q          |          |          |          |
0+25       0.0012      0.04  Q          |          |          |          |
0+30       0.0017      0.07  Q          |          |          |          |
0+35       0.0023      0.09  Q          |          |          |          |
0+40       0.0030      0.10  Q          |          |          |          |
0+45       0.0037      0.10  Q          |          |          |          |
0+50       0.0044      0.10  Q          |          |          |          |
0+55       0.0050      0.10  Q          |          |          |          |
1+ 0       0.0059      0.13  Q          |          |          |          |
1+ 5       0.0070      0.15  QV         |          |          |          |
1+10       0.0080      0.15  QV         |          |          |          |
1+15       0.0091      0.15  QV         |          |          |          |
1+20       0.0102      0.15  QV         |          |          |          |
1+25       0.0112      0.15  QV         |          |          |          |
1+30       0.0123      0.15  Q V        |          |          |          |
1+35       0.0134      0.15  Q V        |          |          |          |
1+40       0.0144      0.15  Q V        |          |          |          |
1+45       0.0155      0.15  Q V        |          |          |          |
1+50       0.0166      0.15  Q V        |          |          |          |
1+55       0.0176      0.15  Q V        |          |          |          |
2+ 0       0.0189      0.18  Q  V       |          |          |          |
2+ 5       0.0201      0.18  Q  V       |          |          |          |
2+10       0.0214      0.19  Q  V       |          |          |          |
2+15       0.0228      0.21  Q  V       |          |          |          |
2+20       0.0243      0.21  Q  V       |          |          |          |
2+25       0.0257      0.21  Q   V      |          |          |          |
2+30       0.0272      0.21  Q   V      |          |          |          |
2+35       0.0286      0.21  Q   V      |          |          |          |
2+40       0.0301      0.21  Q   V      |          |          |          |
2+45       0.0317      0.24  Q    V     |          |          |          |
2+50       0.0336      0.26  |Q   V     |          |          |          |
2+55       0.0354      0.27  |Q   V     |          |          |          |
3+ 0       0.0372      0.27  |Q    V    |          |          |          |
3+ 5       0.0391      0.27  |Q    V    |          |          |          |
3+10       0.0411      0.30  |Q    V    |          |          |          |
3+15       0.0433      0.32  |Q     V   |          |          |          |
3+20       0.0455      0.32  |Q     V   |          |          |          |
3+25       0.0480      0.35  |Q     V   |          |          |          |
3+30       0.0508      0.40  |Q      V  |          |          |          |
3+35       0.0539      0.46  |Q      V  |          |          |          |
3+40       0.0573      0.49  |Q       V |          |          |          |
3+45       0.0609      0.52  | Q      V |          |          |          |
3+50       0.0646      0.54  | Q       V          |          |          |
3+55       0.0686      0.58  | Q       |V         |          |          |
4+ 0       0.0727      0.60  | Q       |V         |          |          |
4+ 5       0.0771      0.63  | Q       | V        |          |          |
4+10       0.0818      0.69  | Q       |  V       |          |          |
4+15       0.0869      0.74  | Q       |   V      |          |          |
4+20       0.0924      0.80  |  Q      |    V     |          |          |
```


4+25 0.0983 0.85
4+30 0.1043 0.88
4+35 0.1106 0.91
4+40 0.1173 0.97
4+45 0.1243 1.02
4+50 0.1316 1.05
4+55 0.1390 1.08
5+ 0 0.1468 1.14
5+ 5 0.1559 1.31
5+10 0.1667 1.57
5+15 0.1790 1.79
5+20 0.1926 1.97
5+25 0.2077 2.20
5+30 0.2256 2.59
5+35 0.2373 1.71
5+40 0.2417 0.63
5+45 0.2431 0.20
5+50 0.2435 0.06
5+55 0.2436 0.03
6+ 0 0.2437 0.01
6+ 5 0.2438 0.01
6+10 0.2438 0.00
6+15 0.2438 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 08/16/23 File: ONSITEPREE32410.out

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

Program License Serial Number 4010

English (in-lb) Input Units Used
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English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007

46	3.83	0.20	0.082	(	0.173)		0.073		0.008
47	3.92	0.20	0.082	(	0.172)		0.073		0.008
48	4.00	0.20	0.082	(	0.171)		0.073		0.008
49	4.08	0.20	0.082	(	0.171)		0.073		0.008
50	4.17	0.20	0.082	(	0.170)		0.073		0.008
51	4.25	0.20	0.082	(	0.169)		0.073		0.008
52	4.33	0.23	0.095	(	0.169)		0.086		0.010
53	4.42	0.23	0.095	(	0.168)		0.086		0.010
54	4.50	0.23	0.095	(	0.167)		0.086		0.010
55	4.58	0.23	0.095	(	0.166)		0.086		0.010
56	4.67	0.23	0.095	(	0.166)		0.086		0.010
57	4.75	0.23	0.095	(	0.165)		0.086		0.010
58	4.83	0.27	0.109	(	0.164)		0.098		0.011
59	4.92	0.27	0.109	(	0.164)		0.098		0.011
60	5.00	0.27	0.109	(	0.163)		0.098		0.011
61	5.08	0.20	0.082	(	0.162)		0.073		0.008
62	5.17	0.20	0.082	(	0.161)		0.073		0.008
63	5.25	0.20	0.082	(	0.161)		0.073		0.008
64	5.33	0.23	0.095	(	0.160)		0.086		0.010
65	5.42	0.23	0.095	(	0.159)		0.086		0.010
66	5.50	0.23	0.095	(	0.159)		0.086		0.010
67	5.58	0.27	0.109	(	0.158)		0.098		0.011
68	5.67	0.27	0.109	(	0.157)		0.098		0.011
69	5.75	0.27	0.109	(	0.157)		0.098		0.011
70	5.83	0.27	0.109	(	0.156)		0.098		0.011
71	5.92	0.27	0.109	(	0.155)		0.098		0.011
72	6.00	0.27	0.109	(	0.154)		0.098		0.011
73	6.08	0.30	0.122	(	0.154)		0.110		0.012
74	6.17	0.30	0.122	(	0.153)		0.110		0.012
75	6.25	0.30	0.122	(	0.152)		0.110		0.012
76	6.33	0.30	0.122	(	0.152)		0.110		0.012
77	6.42	0.30	0.122	(	0.151)		0.110		0.012
78	6.50	0.30	0.122	(	0.150)		0.110		0.012
79	6.58	0.33	0.136	(	0.150)		0.122		0.014
80	6.67	0.33	0.136	(	0.149)		0.122		0.014
81	6.75	0.33	0.136	(	0.148)		0.122		0.014
82	6.83	0.33	0.136	(	0.148)		0.122		0.014
83	6.92	0.33	0.136	(	0.147)		0.122		0.014
84	7.00	0.33	0.136	(	0.146)		0.122		0.014
85	7.08	0.33	0.136	(	0.146)		0.122		0.014
86	7.17	0.33	0.136	(	0.145)		0.122		0.014
87	7.25	0.33	0.136	(	0.144)		0.122		0.014
88	7.33	0.37	0.150	(	0.144)		0.135		0.015
89	7.42	0.37	0.150	(	0.143)		0.135		0.015
90	7.50	0.37	0.150	(	0.142)		0.135		0.015
91	7.58	0.40	0.163		0.142	(	0.147)		0.021
92	7.67	0.40	0.163		0.141	(	0.147)		0.022
93	7.75	0.40	0.163		0.140	(	0.147)		0.023
94	7.83	0.43	0.177		0.140	(	0.159)		0.037
95	7.92	0.43	0.177		0.139	(	0.159)		0.038

96	8.00	0.43	0.177	0.138	(	0.159)	0.038
97	8.08	0.50	0.204	0.138	(	0.184)	0.066
98	8.17	0.50	0.204	0.137	(	0.184)	0.067
99	8.25	0.50	0.204	0.137	(	0.184)	0.067
100	8.33	0.50	0.204	0.136	(	0.184)	0.068
101	8.42	0.50	0.204	0.135	(	0.184)	0.069
102	8.50	0.50	0.204	0.135	(	0.184)	0.069
103	8.58	0.53	0.218	0.134	(	0.196)	0.084
104	8.67	0.53	0.218	0.133	(	0.196)	0.084
105	8.75	0.53	0.218	0.133	(	0.196)	0.085
106	8.83	0.57	0.231	0.132	(	0.208)	0.099
107	8.92	0.57	0.231	0.131	(	0.208)	0.100
108	9.00	0.57	0.231	0.131	(	0.208)	0.100
109	9.08	0.63	0.258	0.130	(	0.232)	0.128
110	9.17	0.63	0.258	0.130	(	0.232)	0.129
111	9.25	0.63	0.258	0.129	(	0.232)	0.129
112	9.33	0.67	0.272	0.128	(	0.245)	0.144
113	9.42	0.67	0.272	0.128	(	0.245)	0.144
114	9.50	0.67	0.272	0.127	(	0.245)	0.145
115	9.58	0.70	0.285	0.127	(	0.257)	0.159
116	9.67	0.70	0.285	0.126	(	0.257)	0.160
117	9.75	0.70	0.285	0.125	(	0.257)	0.160
118	9.83	0.73	0.299	0.125	(	0.269)	0.174
119	9.92	0.73	0.299	0.124	(	0.269)	0.175
120	10.00	0.73	0.299	0.124	(	0.269)	0.176
121	10.08	0.50	0.204	0.123	(	0.184)	0.081
122	10.17	0.50	0.204	0.122	(	0.184)	0.082
123	10.25	0.50	0.204	0.122	(	0.184)	0.082
124	10.33	0.50	0.204	0.121	(	0.184)	0.083
125	10.42	0.50	0.204	0.121	(	0.184)	0.083
126	10.50	0.50	0.204	0.120	(	0.184)	0.084
127	10.58	0.67	0.272	0.119	(	0.245)	0.152
128	10.67	0.67	0.272	0.119	(	0.245)	0.153
129	10.75	0.67	0.272	0.118	(	0.245)	0.154
130	10.83	0.67	0.272	0.118	(	0.245)	0.154
131	10.92	0.67	0.272	0.117	(	0.245)	0.155
132	11.00	0.67	0.272	0.117	(	0.245)	0.155
133	11.08	0.63	0.258	0.116	(	0.232)	0.142
134	11.17	0.63	0.258	0.115	(	0.232)	0.143
135	11.25	0.63	0.258	0.115	(	0.232)	0.144
136	11.33	0.63	0.258	0.114	(	0.232)	0.144
137	11.42	0.63	0.258	0.114	(	0.232)	0.145
138	11.50	0.63	0.258	0.113	(	0.232)	0.145
139	11.58	0.57	0.231	0.113	(	0.208)	0.119
140	11.67	0.57	0.231	0.112	(	0.208)	0.119
141	11.75	0.57	0.231	0.111	(	0.208)	0.120
142	11.83	0.60	0.245	0.111	(	0.220)	0.134
143	11.92	0.60	0.245	0.110	(	0.220)	0.134
144	12.00	0.60	0.245	0.110	(	0.220)	0.135
145	12.08	0.83	0.340	0.109	(	0.306)	0.231

146	12.17	0.83	0.340	0.109	(0.306)	0.231
147	12.25	0.83	0.340	0.108	(0.306)	0.232
148	12.33	0.87	0.353	0.108	(0.318)	0.246
149	12.42	0.87	0.353	0.107	(0.318)	0.246
150	12.50	0.87	0.353	0.107	(0.318)	0.247
151	12.58	0.93	0.381	0.106	(0.343)	0.275
152	12.67	0.93	0.381	0.105	(0.343)	0.275
153	12.75	0.93	0.381	0.105	(0.343)	0.276
154	12.83	0.97	0.394	0.104	(0.355)	0.290
155	12.92	0.97	0.394	0.104	(0.355)	0.290
156	13.00	0.97	0.394	0.103	(0.355)	0.291
157	13.08	1.13	0.462	0.103	(0.416)	0.359
158	13.17	1.13	0.462	0.102	(0.416)	0.360
159	13.25	1.13	0.462	0.102	(0.416)	0.360
160	13.33	1.13	0.462	0.101	(0.416)	0.361
161	13.42	1.13	0.462	0.101	(0.416)	0.362
162	13.50	1.13	0.462	0.100	(0.416)	0.362
163	13.58	0.77	0.313	0.100	(0.281)	0.213
164	13.67	0.77	0.313	0.099	(0.281)	0.213
165	13.75	0.77	0.313	0.099	(0.281)	0.214
166	13.83	0.77	0.313	0.098	(0.281)	0.215
167	13.92	0.77	0.313	0.098	(0.281)	0.215
168	14.00	0.77	0.313	0.097	(0.281)	0.216
169	14.08	0.90	0.367	0.097	(0.330)	0.270
170	14.17	0.90	0.367	0.096	(0.330)	0.271
171	14.25	0.90	0.367	0.096	(0.330)	0.271
172	14.33	0.87	0.353	0.095	(0.318)	0.258
173	14.42	0.87	0.353	0.095	(0.318)	0.259
174	14.50	0.87	0.353	0.094	(0.318)	0.259
175	14.58	0.87	0.353	0.094	(0.318)	0.260
176	14.67	0.87	0.353	0.093	(0.318)	0.260
177	14.75	0.87	0.353	0.093	(0.318)	0.261
178	14.83	0.83	0.340	0.092	(0.306)	0.248
179	14.92	0.83	0.340	0.092	(0.306)	0.248
180	15.00	0.83	0.340	0.091	(0.306)	0.248
181	15.08	0.80	0.326	0.091	(0.294)	0.235
182	15.17	0.80	0.326	0.090	(0.294)	0.236
183	15.25	0.80	0.326	0.090	(0.294)	0.236
184	15.33	0.77	0.313	0.090	(0.281)	0.223
185	15.42	0.77	0.313	0.089	(0.281)	0.224
186	15.50	0.77	0.313	0.089	(0.281)	0.224
187	15.58	0.63	0.258	0.088	(0.232)	0.170
188	15.67	0.63	0.258	0.088	(0.232)	0.171
189	15.75	0.63	0.258	0.087	(0.232)	0.171
190	15.83	0.63	0.258	0.087	(0.232)	0.172
191	15.92	0.63	0.258	0.086	(0.232)	0.172
192	16.00	0.63	0.258	0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049	0.005
194	16.17	0.13	0.054	(0.085)	0.049	0.005
195	16.25	0.13	0.054	(0.085)	0.049	0.005

196	16.33	0.13	0.054	(0.084)	0.049	0.005
197	16.42	0.13	0.054	(0.084)	0.049	0.005
198	16.50	0.13	0.054	(0.083)	0.049	0.005
199	16.58	0.10	0.041	(0.083)	0.037	0.004
200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004

246	20.50	0.10	0.041	(0.066)	0.037	0.004
247	20.58	0.10	0.041	(0.066)	0.037	0.004
248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003
275	22.92	0.07	0.027	(0.060)	0.024	0.003
276	23.00	0.07	0.027	(0.060)	0.024	0.003
277	23.08	0.07	0.027	(0.060)	0.024	0.003
278	23.17	0.07	0.027	(0.059)	0.024	0.003
279	23.25	0.07	0.027	(0.059)	0.024	0.003
280	23.33	0.07	0.027	(0.059)	0.024	0.003
281	23.42	0.07	0.027	(0.059)	0.024	0.003
282	23.50	0.07	0.027	(0.059)	0.024	0.003
283	23.58	0.07	0.027	(0.059)	0.024	0.003
284	23.67	0.07	0.027	(0.059)	0.024	0.003
285	23.75	0.07	0.027	(0.059)	0.024	0.003
286	23.83	0.07	0.027	(0.059)	0.024	0.003
287	23.92	0.07	0.027	(0.059)	0.024	0.003
288	24.00	0.07	0.027	(0.059)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 0.374(Ac.Ft)
Total rainfall = 3.40(In)

Flood volume = 14538.9 Cubic Feet
Total soil loss = 16304.9 Cubic Feet

Peak flow rate of this hydrograph = 0.912(CFS)

++

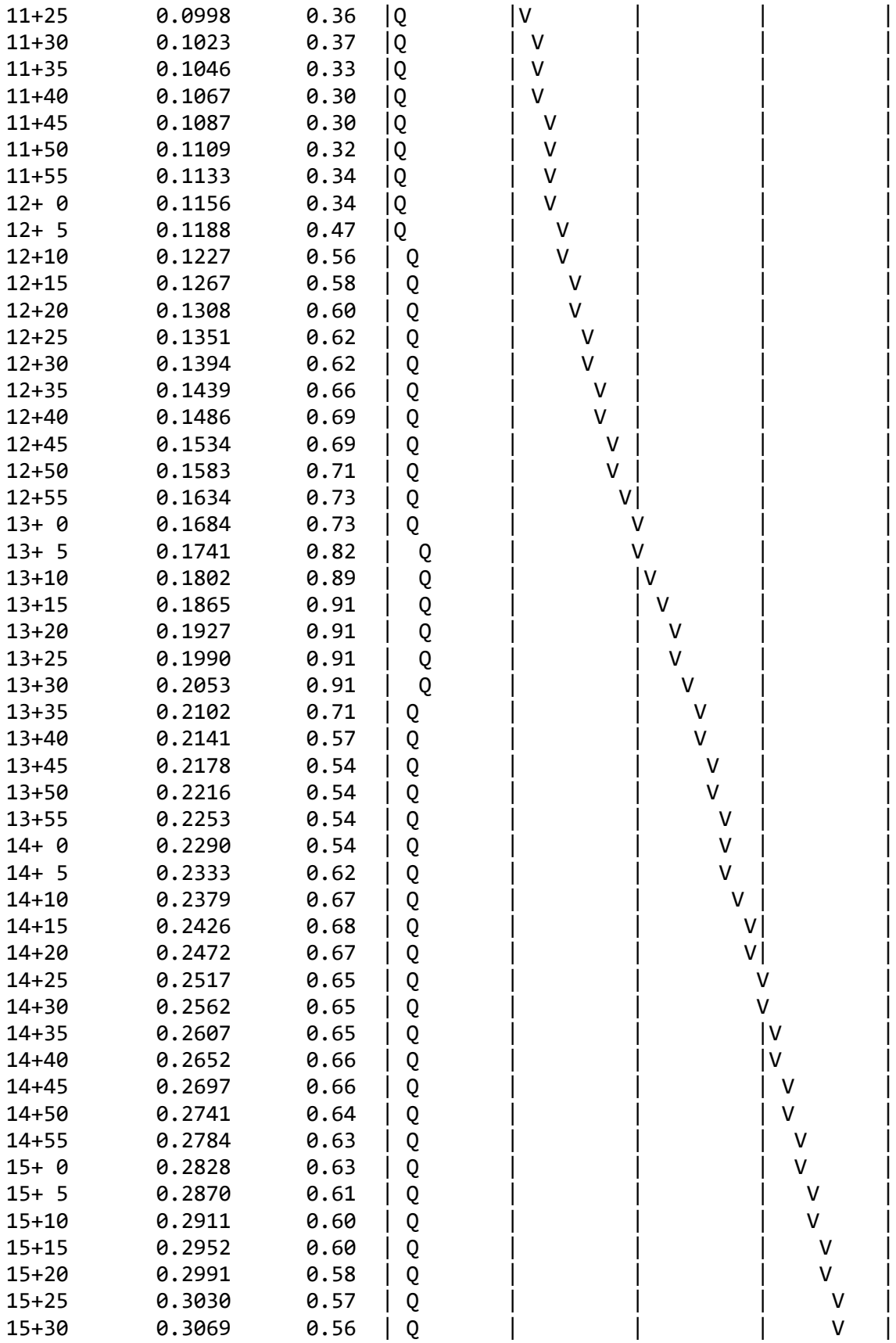
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0002	0.01	Q				
0+30	0.0003	0.01	Q				
0+35	0.0004	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0005	0.01	Q				
0+50	0.0006	0.01	Q				
0+55	0.0007	0.01	Q				
1+ 0	0.0008	0.01	Q				
1+ 5	0.0009	0.01	Q				
1+10	0.0010	0.01	Q				
1+15	0.0010	0.01	Q				
1+20	0.0011	0.01	Q				
1+25	0.0012	0.01	Q				
1+30	0.0012	0.01	Q				
1+35	0.0013	0.01	Q				
1+40	0.0014	0.01	Q				
1+45	0.0014	0.01	Q				
1+50	0.0015	0.01	Q				
1+55	0.0016	0.01	Q				
2+ 0	0.0017	0.01	Q				
2+ 5	0.0018	0.01	Q				
2+10	0.0019	0.01	Q				
2+15	0.0020	0.01	Q				
2+20	0.0021	0.01	Q				
2+25	0.0022	0.01	Q				
2+30	0.0023	0.01	Q				
2+35	0.0024	0.02	Q				
2+40	0.0025	0.02	Q				
2+45	0.0026	0.02	Q				
2+50	0.0027	0.02	Q				
2+55	0.0029	0.02	Q				
3+ 0	0.0030	0.02	Q				

3+ 5	0.0031	0.02	Q				
3+10	0.0032	0.02	Q				
3+15	0.0033	0.02	Q				
3+20	0.0035	0.02	Q				
3+25	0.0036	0.02	Q				
3+30	0.0037	0.02	Q				
3+35	0.0038	0.02	Q				
3+40	0.0039	0.02	Q				
3+45	0.0040	0.02	Q				
3+50	0.0042	0.02	Q				
3+55	0.0043	0.02	Q				
4+ 0	0.0045	0.02	Q				
4+ 5	0.0046	0.02	Q				
4+10	0.0047	0.02	Q				
4+15	0.0049	0.02	Q				
4+20	0.0050	0.02	Q				
4+25	0.0052	0.02	Q				
4+30	0.0054	0.02	Q				
4+35	0.0055	0.02	Q				
4+40	0.0057	0.02	Q				
4+45	0.0059	0.02	Q				
4+50	0.0060	0.03	Q				
4+55	0.0062	0.03	Q				
5+ 0	0.0064	0.03	Q				
5+ 5	0.0066	0.02	Q				
5+10	0.0067	0.02	Q				
5+15	0.0069	0.02	Q				
5+20	0.0070	0.02	Q				
5+25	0.0072	0.02	Q				
5+30	0.0073	0.02	Q				
5+35	0.0075	0.03	Q				
5+40	0.0077	0.03	Q				
5+45	0.0079	0.03	Q				
5+50	0.0081	0.03	Q				
5+55	0.0083	0.03	Q				
6+ 0	0.0085	0.03	QV				
6+ 5	0.0087	0.03	QV				
6+10	0.0089	0.03	QV				
6+15	0.0091	0.03	QV				
6+20	0.0093	0.03	QV				
6+25	0.0095	0.03	QV				
6+30	0.0097	0.03	QV				
6+35	0.0099	0.03	QV				
6+40	0.0102	0.03	QV				
6+45	0.0104	0.03	QV				
6+50	0.0107	0.03	QV				
6+55	0.0109	0.03	QV				
7+ 0	0.0111	0.03	QV				
7+ 5	0.0114	0.03	QV				
7+10	0.0116	0.03	QV				

7+15	0.0118	0.03	QV	|	|	|	|
7+20	0.0121	0.04	QV	|	|	|	|
7+25	0.0123	0.04	QV	|	|	|	|
7+30	0.0126	0.04	QV	|	|	|	|
7+35	0.0129	0.05	QV	|	|	|	|
7+40	0.0133	0.05	QV	|	|	|	|
7+45	0.0137	0.06	QV	|	|	|	|
7+50	0.0142	0.08	QV	|	|	|	|
7+55	0.0148	0.09	QV	|	|	|	|
8+ 0	0.0155	0.10	QV	|	|	|	|
8+ 5	0.0164	0.13	QV	|	|	|	|
8+10	0.0175	0.16	Q V	|	|	|	|
8+15	0.0187	0.17	Q V	|	|	|	|
8+20	0.0198	0.17	Q V	|	|	|	|
8+25	0.0210	0.17	Q V	|	|	|	|
8+30	0.0222	0.17	Q V	|	|	|	|
8+35	0.0236	0.19	Q V	|	|	|	|
8+40	0.0250	0.21	Q V	|	|	|	|
8+45	0.0265	0.21	Q V	|	|	|	|
8+50	0.0281	0.23	Q V	|	|	|	|
8+55	0.0298	0.25	Q V	|	|	|	|
9+ 0	0.0315	0.25	|Q V	|	|	|	|
9+ 5	0.0335	0.29	|Q V	|	|	|	|
9+10	0.0357	0.32	|Q V	|	|	|	|
9+15	0.0379	0.32	|Q V	|	|	|	|
9+20	0.0403	0.34	|Q V	|	|	|	|
9+25	0.0428	0.36	|Q V	|	|	|	|
9+30	0.0453	0.36	|Q V	|	|	|	|
9+35	0.0479	0.38	|Q V	|	|	|	|
9+40	0.0507	0.40	|Q V	|	|	|	|
9+45	0.0534	0.40	|Q V	|	|	|	|
9+50	0.0563	0.42	|Q V	|	|	|	|
9+55	0.0593	0.44	|Q V	|	|	|	|
10+ 0	0.0624	0.44	|Q V	|	|	|	|
10+ 5	0.0646	0.32	|Q V	|	|	|	|
10+10	0.0661	0.22	Q V	|	|	|	|
10+15	0.0676	0.21	Q V	|	|	|	|
10+20	0.0690	0.21	Q V	|	|	|	|
10+25	0.0704	0.21	Q V	|	|	|	|
10+30	0.0719	0.21	Q V	|	|	|	|
10+35	0.0740	0.30	|Q V	|	|	|	|
10+40	0.0765	0.37	|Q V|	|	|	|	|
10+45	0.0792	0.38	|Q V|	|	|	|	|
10+50	0.0818	0.39	|Q V|	|	|	|	|
10+55	0.0845	0.39	|Q V	|	|	|	|
11+ 0	0.0872	0.39	|Q V	|	|	|	|
11+ 5	0.0898	0.37	|Q V	|	|	|	|
11+10	0.0923	0.36	|Q |V	|	|	|	|
11+15	0.0948	0.36	|Q |V	|	|	|	|
11+20	0.0973	0.36	|Q |V	|	|	|	|



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15+35       0.3103      0.49  |Q        |         |         |      V  |
15+40       0.3134      0.44  |Q        |         |         |      V  |
15+45       0.3163      0.43  |Q        |         |         |      V  |
15+50       0.3193      0.43  |Q        |         |         |       V |
15+55       0.3223      0.43  |Q        |         |         |       V |
16+ 0       0.3253      0.43  |Q        |         |         |       V |
16+ 5       0.3267      0.21  Q         |         |         |        V|
16+10       0.3271      0.05  Q         |         |         |        V|
16+15       0.3272      0.02  Q         |         |         |        V|
16+20       0.3273      0.01  Q         |         |         |        V|
16+25       0.3274      0.01  Q         |         |         |        V|
16+30       0.3275      0.01  Q         |         |         |        V|
16+35       0.3276      0.01  Q         |         |         |        V|
16+40       0.3276      0.01  Q         |         |         |        V|
16+45       0.3277      0.01  Q         |         |         |        V|
16+50       0.3278      0.01  Q         |         |         |        V|
16+55       0.3279      0.01  Q         |         |         |        V|
17+ 0       0.3279      0.01  Q         |         |         |        V|
17+ 5       0.3280      0.01  Q         |         |         |        V|
17+10       0.3281      0.02  Q         |         |         |        V|
17+15       0.3282      0.02  Q         |         |         |        V|
17+20       0.3284      0.02  Q         |         |         |        V|
17+25       0.3285      0.02  Q         |         |         |        V|
17+30       0.3286      0.02  Q         |         |         |        V|
17+35       0.3287      0.02  Q         |         |         |        V|
17+40       0.3288      0.02  Q         |         |         |        V|
17+45       0.3290      0.02  Q         |         |         |        V|
17+50       0.3291      0.02  Q         |         |         |        V|
17+55       0.3292      0.01  Q         |         |         |        V|
18+ 0       0.3293      0.01  Q         |         |         |        V|
18+ 5       0.3293      0.01  Q         |         |         |        V|
18+10       0.3294      0.01  Q         |         |         |        V|
18+15       0.3295      0.01  Q         |         |         |        V|
18+20       0.3296      0.01  Q         |         |         |        V|
18+25       0.3297      0.01  Q         |         |         |        V|
18+30       0.3298      0.01  Q         |         |         |        V|
18+35       0.3299      0.01  Q         |         |         |        V|
18+40       0.3300      0.01  Q         |         |         |        V|
18+45       0.3300      0.01  Q         |         |         |        V|
18+50       0.3301      0.01  Q         |         |         |        V|
18+55       0.3302      0.01  Q         |         |         |        V|
19+ 0       0.3302      0.01  Q         |         |         |        V|
19+ 5       0.3303      0.01  Q         |         |         |        V|
19+10       0.3303      0.01  Q         |         |         |        V|
19+15       0.3304      0.01  Q         |         |         |        V|
19+20       0.3305      0.01  Q         |         |         |        V|
19+25       0.3306      0.01  Q         |         |         |        V|
19+30       0.3307      0.01  Q         |         |         |        V|
19+35       0.3308      0.01  Q         |         |         |        V|
19+40       0.3308      0.01  Q         |         |         |        V|
```

19+45	0.3309	0.01	Q	|	|	|	V|
19+50	0.3310	0.01	Q	|	|	|	V|
19+55	0.3310	0.01	Q	|	|	|	V|
20+ 0	0.3311	0.01	Q	|	|	|	V|
20+ 5	0.3311	0.01	Q	|	|	|	V|
20+10	0.3312	0.01	Q	|	|	|	V|
20+15	0.3312	0.01	Q	|	|	|	V|
20+20	0.3313	0.01	Q	|	|	|	V|
20+25	0.3314	0.01	Q	|	|	|	V|
20+30	0.3315	0.01	Q	|	|	|	V|
20+35	0.3315	0.01	Q	|	|	|	V|
20+40	0.3316	0.01	Q	|	|	|	V|
20+45	0.3317	0.01	Q	|	|	|	V|
20+50	0.3317	0.01	Q	|	|	|	V|
20+55	0.3318	0.01	Q	|	|	|	V|
21+ 0	0.3318	0.01	Q	|	|	|	V|
21+ 5	0.3319	0.01	Q	|	|	|	V|
21+10	0.3320	0.01	Q	|	|	|	V|
21+15	0.3320	0.01	Q	|	|	|	V|
21+20	0.3321	0.01	Q	|	|	|	V|
21+25	0.3321	0.01	Q	|	|	|	V|
21+30	0.3322	0.01	Q	|	|	|	V|
21+35	0.3322	0.01	Q	|	|	|	V|
21+40	0.3323	0.01	Q	|	|	|	V|
21+45	0.3324	0.01	Q	|	|	|	V|
21+50	0.3324	0.01	Q	|	|	|	V|
21+55	0.3325	0.01	Q	|	|	|	V|
22+ 0	0.3325	0.01	Q	|	|	|	V|
22+ 5	0.3326	0.01	Q	|	|	|	V|
22+10	0.3327	0.01	Q	|	|	|	V|
22+15	0.3327	0.01	Q	|	|	|	V|
22+20	0.3328	0.01	Q	|	|	|	V|
22+25	0.3328	0.01	Q	|	|	|	V|
22+30	0.3329	0.01	Q	|	|	|	V|
22+35	0.3329	0.01	Q	|	|	|	V|
22+40	0.3330	0.01	Q	|	|	|	V|
22+45	0.3330	0.01	Q	|	|	|	V|
22+50	0.3331	0.01	Q	|	|	|	V|
22+55	0.3331	0.01	Q	|	|	|	V|
23+ 0	0.3332	0.01	Q	|	|	|	V|
23+ 5	0.3332	0.01	Q	|	|	|	V|
23+10	0.3333	0.01	Q	|	|	|	V|
23+15	0.3333	0.01	Q	|	|	|	V|
23+20	0.3334	0.01	Q	|	|	|	V|
23+25	0.3334	0.01	Q	|	|	|	V|
23+30	0.3335	0.01	Q	|	|	|	V|
23+35	0.3335	0.01	Q	|	|	|	V|
23+40	0.3336	0.01	Q	|	|	|	V|
23+45	0.3336	0.01	Q	|	|	|	V|
23+50	0.3336	0.01	Q	|	|	|	V|

```
   23+55       0.3337      0.01  Q         |         |         |        V|
   24+ 0       0.3337      0.01  Q         |         |         |        V|
   24+ 5       0.3338      0.00  Q         |         |         |        V|
   24+10       0.3338      0.00  Q         |         |         |        V|
   24+15       0.3338      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/16/23 File: ONSITEPREE31100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 100-YEAR 1-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            0.50                  1.25

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            1.30                  3.25

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
-----------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.235)	1.256
9	0.75	13.90	2.168	0.117	(1.952)	2.051
10	0.83	31.40	4.898	0.117	(4.408)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.534)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

Flood volume = Effective rainfall 1.18(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.024(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 10735.5 Cubic Feet
Total soil loss = 1061.8 Cubic Feet

Peak flow rate of this hydrograph = 8.644(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	0.0037	0.53	V Q	|	|	|	|
0+10	0.0113	1.11	|V Q	|	|	|	|
0+15	0.0206	1.36	| V Q	|	|	|	|
0+20	0.0310	1.51	| VQ	|	|	|	|
0+25	0.0425	1.66	| Q	|	|	|	|
0+30	0.0558	1.94	| Q V	|	|	|	|
0+35	0.0712	2.23	| Q |V	|	|	|	|
0+40	0.0903	2.77	| |Q V	|	|	|	|
0+45	0.1190	4.16	| | Q V	|	|	|	|
0+50	0.1785	8.64	| |	|	| V	| Q	|

```
    0+55       0.2228      6.43  |         |         |    Q    |     V   |
    1+ 0       0.2399      2.49  |        Q|         |         |       V |
    1+ 5       0.2455      0.81  |  Q      |         |         |        V|
    1+10       0.2463      0.12  Q         |         |         |        V|
    1+15       0.2465      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 08/16/23 File: ONSITEPREE33100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 100-YEAR 3-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            0.80                    2.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.00                    5.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0				Sum = 19.8

Flood volume = Effective rainfall 1.65(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.073(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 14964.5 Cubic Feet
Total soil loss = 3185.3 Cubic Feet

Peak flow rate of this hydrograph = 4.356(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	0.0018	0.26	VQ | | | |
0+10	0.0049	0.45	VQ | | | |
0+15	0.0078	0.42	VQ | | | |
0+20	0.0113	0.51	|VQ | | | |
0+25	0.0154	0.60	|VQ | | | |
0+30	0.0203	0.71	| Q | | | |
0+35	0.0250	0.68	| Q | | | |
0+40	0.0299	0.72	| QV | | | |
0+45	0.0353	0.78	| QV | | | |
0+50	0.0401	0.70	| Q V | | | |
0+55	0.0446	0.66	| Q V | | | |
1+ 0	0.0497	0.73	| Q V | | | |
1+ 5	0.0560	0.91	| Q V | | | |
1+10	0.0630	1.01	| Q V | | | |
1+15	0.0701	1.03	| Q V | | | |
1+20	0.0768	0.97	| Q V | | | |
1+25	0.0845	1.12	| Q V| | | |
1+30	0.0933	1.28	| Q V | | |
1+35	0.1018	1.23	| Q |V | | |
1+40	0.1105	1.27	| Q | V | | |
1+45	0.1210	1.52	| Q | V | | |
1+50	0.1320	1.61	| Q | V | | |
1+55	0.1425	1.52	| Q | V | | |
2+ 0	0.1529	1.50	| Q | V | | |
2+ 5	0.1635	1.55	| Q | V| | |
2+10	0.1768	1.93	| Q | V | |
2+15	0.1937	2.45	| Q| | V | |
2+20	0.2088	2.20	| Q | | V | |
2+25	0.2291	2.95	| |Q | | V | |
2+30	0.2555	3.83	| | Q | | V| |
2+35	0.2855	4.36	| | Q | | V |
2+40	0.3122	3.88	| | Q | | V |
2+45	0.3269	2.13	| Q | | | V |
2+50	0.3342	1.06	| Q | | | V |
2+55	0.3400	0.84	| Q | | | V|
3+ 0	0.3428	0.41	|Q | | | V|
3+ 5	0.3434	0.09	Q | | | V|
3+10	0.3435	0.02	Q | | | V|

```
    3+15       0.3435      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 08/16/23 File: ONSITEPREE36100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 100-YEAR 6-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            1.20                   3.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.80                   7.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

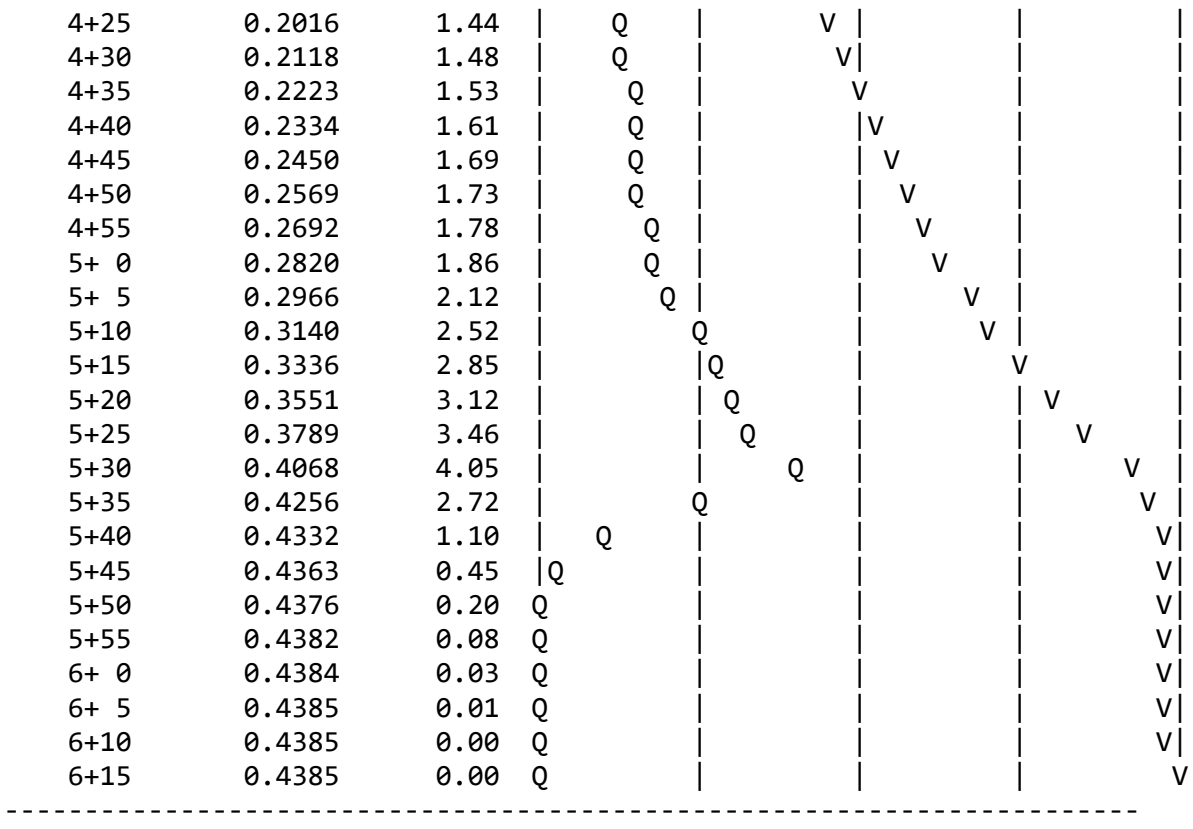
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387

```
46   3.83     1.50      0.504          0.117    (  0.454)        0.387
47   3.92     1.60      0.538          0.117    (  0.484)        0.421
48   4.00     1.60      0.538          0.117    (  0.484)        0.421
49   4.08     1.70      0.571          0.117    (  0.514)        0.454
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
      Flood volume = Effective rainfall      2.10(In)
       times area       2.5(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
      Total soil loss =      0.70(In)
      Total soil loss =     0.145(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       19101.8 Cubic Feet
      Total soil loss =        6308.0 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      4.052(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       0.0005      0.07  Q         |         |         |         |
  0+10       0.0016      0.16  Q         |         |         |         |
```

```
0+15       0.0030      0.20  Q         |         |         |         |
0+20       0.0045      0.21  Q         |         |         |         |
0+25       0.0059      0.21  Q         |         |         |         |
0+30       0.0077      0.26  VQ        |         |         |         |
0+35       0.0097      0.29  VQ        |         |         |         |
0+40       0.0118      0.30  |Q        |         |         |         |
0+45       0.0138      0.30  |Q        |         |         |         |
0+50       0.0159      0.30  |Q        |         |         |         |
0+55       0.0179      0.30  |Q        |         |         |         |
1+ 0       0.0203      0.34  |Q        |         |         |         |
1+ 5       0.0229      0.38  |QV       |         |         |         |
1+10       0.0255      0.38  |QV       |         |         |         |
1+15       0.0281      0.38  |QV       |         |         |         |
1+20       0.0308      0.38  |QV       |         |         |         |
1+25       0.0334      0.38  |Q V      |         |         |         |
1+30       0.0360      0.38  |Q V      |         |         |         |
1+35       0.0387      0.38  |Q V      |         |         |         |
1+40       0.0413      0.38  |Q V      |         |         |         |
1+45       0.0439      0.38  |Q  V     |         |         |         |
1+50       0.0466      0.38  |Q  V     |         |         |         |
1+55       0.0492      0.38  |Q  V     |         |         |         |
2+ 0       0.0522      0.43  |Q  V     |         |         |         |
2+ 5       0.0550      0.42  |Q   V    |         |         |         |
2+10       0.0580      0.43  |Q   V    |         |         |         |
2+15       0.0612      0.46  |Q   V    |         |         |         |
2+20       0.0644      0.47  |Q   V    |         |         |         |
2+25       0.0676      0.47  |Q    V   |         |         |         |
2+30       0.0708      0.47  |Q    V   |         |         |         |
2+35       0.0740      0.47  |Q    V   |         |         |         |
2+40       0.0773      0.47  |Q     V  |         |         |         |
2+45       0.0808      0.51  | Q    V  |         |         |         |
2+50       0.0845      0.55  | Q    V  |         |         |         |
2+55       0.0883      0.55  | Q     V |         |         |         |
3+ 0       0.0921      0.55  | Q     V |         |         |         |
3+ 5       0.0959      0.55  | Q     V |         |         |         |
3+10       0.1001      0.60  | Q      V|         |         |         |
3+15       0.1044      0.63  | Q      V|         |         |         |
3+20       0.1088      0.64  | Q      V|         |         |         |
3+25       0.1135      0.68  | Q       V         |         |         |
3+30       0.1187      0.76  |  Q      V         |         |         |
3+35       0.1245      0.84  |  Q      |V        |         |         |
3+40       0.1306      0.88  |  Q      |V        |         |         |
3+45       0.1370      0.93  |  Q      | V       |         |         |
3+50       0.1437      0.97  |  Q      |  V      |         |         |
3+55       0.1507      1.02  |   Q     |  V      |         |         |
4+ 0       0.1580      1.05  |   Q     |   V     |         |         |
4+ 5       0.1656      1.10  |   Q     |    V    |         |         |
4+10       0.1737      1.18  |   Q     |    V    |         |         |
4+15       0.1824      1.27  |    Q    |     V   |         |         |
4+20       0.1917      1.35  |    Q    |      V  |         |         |
```


4+25 0.2016 1.44
4+30 0.2118 1.48
4+35 0.2223 1.53
4+40 0.2334 1.61
4+45 0.2450 1.69
4+50 0.2569 1.73
4+55 0.2692 1.78
5+ 0 0.2820 1.86
5+ 5 0.2966 2.12
5+10 0.3140 2.52
5+15 0.3336 2.85
5+20 0.3551 3.12
5+25 0.3789 3.46
5+30 0.4068 4.05
5+35 0.4256 2.72
5+40 0.4332 1.10
5+45 0.4363 0.45
5+50 0.4376 0.20
5+55 0.4382 0.08
6+ 0 0.4384 0.03
6+ 5 0.4385 0.01
6+10 0.4385 0.00
6+15 0.4385 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 08/16/23 File: ONSITEPREE324100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 495.00(Ft.)
Length along longest watercourse measured to centroid = 179.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.034 Mi.
Difference in elevation = 14.00(Ft.)
Slope along watercourse = 149.3333 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.031 Hr.
Lag time = 1.88 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           91.00         0.000
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        266.529         52.963              1.334
    2   0.167        533.057         39.051              0.984
    3   0.250        799.586          6.511              0.164
    4   0.333       1066.114          1.475              0.037
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------
```

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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011

46	3.83	0.20	0.130	(0.173)	0.117	0.013
47	3.92	0.20	0.130	(0.172)	0.117	0.013
48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013
50	4.17	0.20	0.130	(0.170)	0.117	0.013
51	4.25	0.20	0.130	(0.169)	0.117	0.013
52	4.33	0.23	0.151	(0.169)	0.136	0.015
53	4.42	0.23	0.151	(0.168)	0.136	0.015
54	4.50	0.23	0.151	(0.167)	0.136	0.015
55	4.58	0.23	0.151	(0.166)	0.136	0.015
56	4.67	0.23	0.151	(0.166)	0.136	0.015
57	4.75	0.23	0.151	(0.165)	0.136	0.015
58	4.83	0.27	0.173	(0.164)	0.156	0.017
59	4.92	0.27	0.173	(0.164)	0.156	0.017
60	5.00	0.27	0.173	(0.163)	0.156	0.017
61	5.08	0.20	0.130	(0.162)	0.117	0.013
62	5.17	0.20	0.130	(0.161)	0.117	0.013
63	5.25	0.20	0.130	(0.161)	0.117	0.013
64	5.33	0.23	0.151	(0.160)	0.136	0.015
65	5.42	0.23	0.151	(0.159)	0.136	0.015
66	5.50	0.23	0.151	(0.159)	0.136	0.015
67	5.58	0.27	0.173	(0.158)	0.156	0.017
68	5.67	0.27	0.173	(0.157)	0.156	0.017
69	5.75	0.27	0.173	(0.157)	0.156	0.017
70	5.83	0.27	0.173	(0.156)	0.156	0.017
71	5.92	0.27	0.173	0.155	(0.156)	0.018
72	6.00	0.27	0.173	0.154	(0.156)	0.018
73	6.08	0.30	0.194	0.154	(0.175)	0.041
74	6.17	0.30	0.194	0.153	(0.175)	0.041
75	6.25	0.30	0.194	0.152	(0.175)	0.042
76	6.33	0.30	0.194	0.152	(0.175)	0.043
77	6.42	0.30	0.194	0.151	(0.175)	0.043
78	6.50	0.30	0.194	0.150	(0.175)	0.044
79	6.58	0.33	0.216	0.150	(0.194)	0.066
80	6.67	0.33	0.216	0.149	(0.194)	0.067
81	6.75	0.33	0.216	0.148	(0.194)	0.068
82	6.83	0.33	0.216	0.148	(0.194)	0.068
83	6.92	0.33	0.216	0.147	(0.194)	0.069
84	7.00	0.33	0.216	0.146	(0.194)	0.070
85	7.08	0.33	0.216	0.146	(0.194)	0.070
86	7.17	0.33	0.216	0.145	(0.194)	0.071
87	7.25	0.33	0.216	0.144	(0.194)	0.072
88	7.33	0.37	0.238	0.144	(0.214)	0.094
89	7.42	0.37	0.238	0.143	(0.214)	0.095
90	7.50	0.37	0.238	0.142	(0.214)	0.095
91	7.58	0.40	0.259	0.142	(0.233)	0.117
92	7.67	0.40	0.259	0.141	(0.233)	0.118
93	7.75	0.40	0.259	0.140	(0.233)	0.119
94	7.83	0.43	0.281	0.140	(0.253)	0.141
95	7.92	0.43	0.281	0.139	(0.253)	0.142

96	8.00	0.43	0.281	0.138	(	0.253)	0.142
97	8.08	0.50	0.324	0.138	(	0.292)	0.186
98	8.17	0.50	0.324	0.137	(	0.292)	0.187
99	8.25	0.50	0.324	0.137	(	0.292)	0.187
100	8.33	0.50	0.324	0.136	(	0.292)	0.188
101	8.42	0.50	0.324	0.135	(	0.292)	0.189
102	8.50	0.50	0.324	0.135	(	0.292)	0.189
103	8.58	0.53	0.346	0.134	(	0.311)	0.212
104	8.67	0.53	0.346	0.133	(	0.311)	0.212
105	8.75	0.53	0.346	0.133	(	0.311)	0.213
106	8.83	0.57	0.367	0.132	(	0.330)	0.235
107	8.92	0.57	0.367	0.131	(	0.330)	0.236
108	9.00	0.57	0.367	0.131	(	0.330)	0.236
109	9.08	0.63	0.410	0.130	(	0.369)	0.280
110	9.17	0.63	0.410	0.130	(	0.369)	0.281
111	9.25	0.63	0.410	0.129	(	0.369)	0.281
112	9.33	0.67	0.432	0.128	(	0.389)	0.304
113	9.42	0.67	0.432	0.128	(	0.389)	0.304
114	9.50	0.67	0.432	0.127	(	0.389)	0.305
115	9.58	0.70	0.454	0.127	(	0.408)	0.327
116	9.67	0.70	0.454	0.126	(	0.408)	0.328
117	9.75	0.70	0.454	0.125	(	0.408)	0.328
118	9.83	0.73	0.475	0.125	(	0.428)	0.350
119	9.92	0.73	0.475	0.124	(	0.428)	0.351
120	10.00	0.73	0.475	0.124	(	0.428)	0.352
121	10.08	0.50	0.324	0.123	(	0.292)	0.201
122	10.17	0.50	0.324	0.122	(	0.292)	0.202
123	10.25	0.50	0.324	0.122	(	0.292)	0.202
124	10.33	0.50	0.324	0.121	(	0.292)	0.203
125	10.42	0.50	0.324	0.121	(	0.292)	0.203
126	10.50	0.50	0.324	0.120	(	0.292)	0.204
127	10.58	0.67	0.432	0.119	(	0.389)	0.313
128	10.67	0.67	0.432	0.119	(	0.389)	0.313
129	10.75	0.67	0.432	0.118	(	0.389)	0.314
130	10.83	0.67	0.432	0.118	(	0.389)	0.314
131	10.92	0.67	0.432	0.117	(	0.389)	0.315
132	11.00	0.67	0.432	0.117	(	0.389)	0.315
133	11.08	0.63	0.410	0.116	(	0.369)	0.294
134	11.17	0.63	0.410	0.115	(	0.369)	0.295
135	11.25	0.63	0.410	0.115	(	0.369)	0.296
136	11.33	0.63	0.410	0.114	(	0.369)	0.296
137	11.42	0.63	0.410	0.114	(	0.369)	0.297
138	11.50	0.63	0.410	0.113	(	0.369)	0.297
139	11.58	0.57	0.367	0.113	(	0.330)	0.255
140	11.67	0.57	0.367	0.112	(	0.330)	0.255
141	11.75	0.57	0.367	0.111	(	0.330)	0.256
142	11.83	0.60	0.389	0.111	(	0.350)	0.278
143	11.92	0.60	0.389	0.110	(	0.350)	0.278
144	12.00	0.60	0.389	0.110	(	0.350)	0.279
145	12.08	0.83	0.540	0.109	(	0.486)	0.431

146	12.17	0.83	0.540	0.109	(0.486)	0.431
147	12.25	0.83	0.540	0.108	(0.486)	0.432
148	12.33	0.87	0.562	0.108	(0.505)	0.454
149	12.42	0.87	0.562	0.107	(0.505)	0.455
150	12.50	0.87	0.562	0.107	(0.505)	0.455
151	12.58	0.93	0.605	0.106	(0.544)	0.499
152	12.67	0.93	0.605	0.105	(0.544)	0.499
153	12.75	0.93	0.605	0.105	(0.544)	0.500
154	12.83	0.97	0.626	0.104	(0.564)	0.522
155	12.92	0.97	0.626	0.104	(0.564)	0.523
156	13.00	0.97	0.626	0.103	(0.564)	0.523
157	13.08	1.13	0.734	0.103	(0.661)	0.632
158	13.17	1.13	0.734	0.102	(0.661)	0.632
159	13.25	1.13	0.734	0.102	(0.661)	0.633
160	13.33	1.13	0.734	0.101	(0.661)	0.633
161	13.42	1.13	0.734	0.101	(0.661)	0.634
162	13.50	1.13	0.734	0.100	(0.661)	0.634
163	13.58	0.77	0.497	0.100	(0.447)	0.397
164	13.67	0.77	0.497	0.099	(0.447)	0.398
165	13.75	0.77	0.497	0.099	(0.447)	0.398
166	13.83	0.77	0.497	0.098	(0.447)	0.399
167	13.92	0.77	0.497	0.098	(0.447)	0.399
168	14.00	0.77	0.497	0.097	(0.447)	0.400
169	14.08	0.90	0.583	0.097	(0.525)	0.487
170	14.17	0.90	0.583	0.096	(0.525)	0.487
171	14.25	0.90	0.583	0.096	(0.525)	0.487
172	14.33	0.87	0.562	0.095	(0.505)	0.466
173	14.42	0.87	0.562	0.095	(0.505)	0.467
174	14.50	0.87	0.562	0.094	(0.505)	0.467
175	14.58	0.87	0.562	0.094	(0.505)	0.468
176	14.67	0.87	0.562	0.093	(0.505)	0.468
177	14.75	0.87	0.562	0.093	(0.505)	0.469
178	14.83	0.83	0.540	0.092	(0.486)	0.448
179	14.92	0.83	0.540	0.092	(0.486)	0.448
180	15.00	0.83	0.540	0.091	(0.486)	0.449
181	15.08	0.80	0.518	0.091	(0.467)	0.427
182	15.17	0.80	0.518	0.090	(0.467)	0.428
183	15.25	0.80	0.518	0.090	(0.467)	0.428
184	15.33	0.77	0.497	0.090	(0.447)	0.407
185	15.42	0.77	0.497	0.089	(0.447)	0.408
186	15.50	0.77	0.497	0.089	(0.447)	0.408
187	15.58	0.63	0.410	0.088	(0.369)	0.322
188	15.67	0.63	0.410	0.088	(0.369)	0.323
189	15.75	0.63	0.410	0.087	(0.369)	0.323
190	15.83	0.63	0.410	0.087	(0.369)	0.324
191	15.92	0.63	0.410	0.086	(0.369)	0.324
192	16.00	0.63	0.410	0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078	0.009
194	16.17	0.13	0.086	(0.085)	0.078	0.009
195	16.25	0.13	0.086	(0.085)	0.078	0.009

196	16.33	0.13	0.086	(	0.084)	0.078		0.009
197	16.42	0.13	0.086	(	0.084)	0.078		0.009
198	16.50	0.13	0.086	(	0.083)	0.078		0.009
199	16.58	0.10	0.065	(	0.083)	0.058		0.006
200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006

246	20.50	0.10	0.065	(0.066)	0.058	0.006
247	20.58	0.10	0.065	(0.066)	0.058	0.006
248	20.67	0.10	0.065	(0.066)	0.058	0.006
249	20.75	0.10	0.065	(0.065)	0.058	0.006
250	20.83	0.07	0.043	(0.065)	0.039	0.004
251	20.92	0.07	0.043	(0.065)	0.039	0.004
252	21.00	0.07	0.043	(0.065)	0.039	0.004
253	21.08	0.10	0.065	(0.064)	0.058	0.006
254	21.17	0.10	0.065	(0.064)	0.058	0.006
255	21.25	0.10	0.065	(0.064)	0.058	0.006
256	21.33	0.07	0.043	(0.064)	0.039	0.004
257	21.42	0.07	0.043	(0.063)	0.039	0.004
258	21.50	0.07	0.043	(0.063)	0.039	0.004
259	21.58	0.10	0.065	(0.063)	0.058	0.006
260	21.67	0.10	0.065	(0.063)	0.058	0.006
261	21.75	0.10	0.065	(0.062)	0.058	0.006
262	21.83	0.07	0.043	(0.062)	0.039	0.004
263	21.92	0.07	0.043	(0.062)	0.039	0.004
264	22.00	0.07	0.043	(0.062)	0.039	0.004
265	22.08	0.10	0.065	(0.062)	0.058	0.006
266	22.17	0.10	0.065	(0.061)	0.058	0.006
267	22.25	0.10	0.065	(0.061)	0.058	0.006
268	22.33	0.07	0.043	(0.061)	0.039	0.004
269	22.42	0.07	0.043	(0.061)	0.039	0.004
270	22.50	0.07	0.043	(0.061)	0.039	0.004
271	22.58	0.07	0.043	(0.060)	0.039	0.004
272	22.67	0.07	0.043	(0.060)	0.039	0.004
273	22.75	0.07	0.043	(0.060)	0.039	0.004
274	22.83	0.07	0.043	(0.060)	0.039	0.004
275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 38.3

Flood volume = Effective rainfall 3.19(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.461(Ac.Ft)
Total rainfall = 5.40(In)

Flood volume = 28935.8 Cubic Feet
Total soil loss = 20069.0 Cubic Feet

Peak flow rate of this hydrograph = 1.598(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	0.0001	0.01	Q				
0+15	0.0002	0.01	Q				
0+20	0.0003	0.01	Q				
0+25	0.0004	0.02	Q				
0+30	0.0005	0.02	Q				
0+35	0.0006	0.02	Q				
0+40	0.0007	0.02	Q				
0+45	0.0008	0.02	Q				
0+50	0.0010	0.02	Q				
0+55	0.0011	0.02	Q				
1+ 0	0.0013	0.02	Q				
1+ 5	0.0014	0.02	Q				
1+10	0.0015	0.02	Q				
1+15	0.0016	0.02	Q				
1+20	0.0017	0.02	Q				
1+25	0.0018	0.02	Q				
1+30	0.0020	0.02	Q				
1+35	0.0021	0.02	Q				
1+40	0.0022	0.02	Q				
1+45	0.0023	0.02	Q				
1+50	0.0024	0.02	Q				
1+55	0.0026	0.02	Q				
2+ 0	0.0027	0.02	Q				
2+ 5	0.0029	0.02	Q				
2+10	0.0030	0.02	Q				
2+15	0.0032	0.02	Q				
2+20	0.0033	0.02	Q				
2+25	0.0035	0.02	Q				
2+30	0.0036	0.02	Q				
2+35	0.0038	0.02	Q				
2+40	0.0040	0.03	Q				
2+45	0.0042	0.03	Q				
2+50	0.0044	0.03	Q				
2+55	0.0045	0.03	Q				
3+ 0	0.0047	0.03	Q				

3+ 5	0.0049	0.03	Q				
3+10	0.0051	0.03	Q				
3+15	0.0053	0.03	Q				
3+20	0.0055	0.03	Q				
3+25	0.0057	0.03	Q				
3+30	0.0059	0.03	Q				
3+35	0.0060	0.03	Q				
3+40	0.0062	0.03	Q				
3+45	0.0064	0.03	Q				
3+50	0.0066	0.03	Q				
3+55	0.0068	0.03	Q				
4+ 0	0.0071	0.03	Q				
4+ 5	0.0073	0.03	Q				
4+10	0.0075	0.03	Q				
4+15	0.0077	0.03	Q				
4+20	0.0080	0.04	Q				
4+25	0.0083	0.04	Q				
4+30	0.0085	0.04	Q				
4+35	0.0088	0.04	Q				
4+40	0.0090	0.04	Q				
4+45	0.0093	0.04	Q				
4+50	0.0096	0.04	Q				
4+55	0.0099	0.04	Q				
5+ 0	0.0102	0.04	Q				
5+ 5	0.0104	0.04	Q				
5+10	0.0107	0.03	Q				
5+15	0.0109	0.03	Q				
5+20	0.0111	0.04	Q				
5+25	0.0114	0.04	Q				
5+30	0.0117	0.04	Q				
5+35	0.0119	0.04	Q				
5+40	0.0122	0.04	Q				
5+45	0.0125	0.04	Q				
5+50	0.0128	0.04	Q				
5+55	0.0131	0.04	Q				
6+ 0	0.0135	0.05	Q				
6+ 5	0.0140	0.08	Q				
6+10	0.0147	0.10	Q				
6+15	0.0154	0.10	Q				
6+20	0.0161	0.11	Q				
6+25	0.0169	0.11	QV				
6+30	0.0176	0.11	QV				
6+35	0.0186	0.14	QV				
6+40	0.0197	0.16	QV				
6+45	0.0209	0.17	QV				
6+50	0.0221	0.17	QV				
6+55	0.0232	0.17	QV				
7+ 0	0.0245	0.17	QV				
7+ 5	0.0257	0.18	QV				
7+10	0.0269	0.18	QV				

7+15	0.0281	0.18	QV	|	|	|	|
7+20	0.0296	0.21	QV	|	|	|	|
7+25	0.0312	0.23	QV	|	|	|	|
7+30	0.0328	0.24	QV	|	|	|	|
7+35	0.0347	0.27	|QV	|	|	|	|
7+40	0.0367	0.29	|QV	|	|	|	|
7+45	0.0387	0.30	|QV	|	|	|	|
7+50	0.0410	0.33	|QV	|	|	|	|
7+55	0.0434	0.35	|QV	|	|	|	|
8+ 0	0.0459	0.36	|QV	|	|	|	|
8+ 5	0.0488	0.42	|QV	|	|	|	|
8+10	0.0519	0.46	|Q V	|	|	|	|
8+15	0.0552	0.47	|Q V	|	|	|	|
8+20	0.0584	0.47	|Q V	|	|	|	|
8+25	0.0617	0.47	|Q V	|	|	|	|
8+30	0.0650	0.48	|Q V	|	|	|	|
8+35	0.0685	0.51	| Q V	|	|	|	|
8+40	0.0721	0.53	| Q V	|	|	|	|
8+45	0.0758	0.53	| Q V	|	|	|	|
8+50	0.0797	0.57	| Q V	|	|	|	|
8+55	0.0838	0.59	| Q V	|	|	|	|
9+ 0	0.0879	0.59	| Q V	|	|	|	|
9+ 5	0.0924	0.65	| Q V	|	|	|	|
9+10	0.0972	0.70	| Q V	|	|	|	|
9+15	0.1020	0.71	| Q V	|	|	|	|
9+20	0.1071	0.74	| Q V	|	|	|	|
9+25	0.1124	0.76	| Q V	|	|	|	|
9+30	0.1177	0.77	| Q V	|	|	|	|
9+35	0.1232	0.80	| Q V	|	|	|	|
9+40	0.1288	0.82	| Q V	|	|	|	|
9+45	0.1345	0.83	| Q V |	|	|	|
9+50	0.1404	0.86	| Q V |	|	|	|
9+55	0.1465	0.88	| Q V |	|	|	|
10+ 0	0.1525	0.88	| Q V|	|	|	|
10+ 5	0.1573	0.69	| Q V|	|	|	|
10+10	0.1610	0.54	| Q V|	|	|	|
10+15	0.1645	0.51	| Q V|	|	|	|
10+20	0.1680	0.51	| Q V	|	|	|	|
10+25	0.1716	0.51	| Q V	|	|	|	|
10+30	0.1751	0.51	| Q V	|	|	|	|
10+35	0.1796	0.66	| Q V	|	|	|	|
10+40	0.1849	0.77	| Q |V	|	|	|	|
10+45	0.1903	0.79	| Q |V	|	|	|	|
10+50	0.1958	0.79	| Q |V	|	|	|	|
10+55	0.2012	0.79	| Q | V	|	|	|	|
11+ 0	0.2067	0.79	| Q | V	|	|	|	|
11+ 5	0.2120	0.77	| Q | V	|	|	|	|
11+10	0.2171	0.75	| Q | V	|	|	|	|
11+15	0.2223	0.75	| Q | V	|	|	|	|
11+20	0.2274	0.75	| Q | V	|	|	|	|

11+25	0.2326	0.75	Q	V			
11+30	0.2377	0.75	Q	V			
11+35	0.2425	0.69	Q	V			
11+40	0.2470	0.65	Q	V			
11+45	0.2514	0.65	Q	V			
11+50	0.2561	0.67	Q	V			
11+55	0.2609	0.70	Q	V			
12+ 0	0.2657	0.70	Q	V			
12+ 5	0.2719	0.91	Q	V			
12+10	0.2792	1.06	Q	V			
12+15	0.2867	1.08	Q	V			
12+20	0.2944	1.12	Q	V			
12+25	0.3022	1.14	Q	V			
12+30	0.3101	1.15	Q	V			
12+35	0.3184	1.21	Q	V			
12+40	0.3270	1.25	Q	V			
12+45	0.3357	1.26	Q	V			
12+50	0.3445	1.29	Q	V			
12+55	0.3536	1.31	Q	V			
13+ 0	0.3627	1.32	Q	V			
13+ 5	0.3727	1.46	Q	V			
13+10	0.3836	1.57	Q	V			
13+15	0.3945	1.59	Q	V			
13+20	0.4055	1.60	Q	V			
13+25	0.4165	1.60	Q	V			
13+30	0.4275	1.60	Q	V			
13+35	0.4363	1.28	Q	V			
13+40	0.4435	1.05	Q	V			
13+45	0.4505	1.01	Q	V			
13+50	0.4574	1.00	Q	V			
13+55	0.4644	1.01	Q	V			
14+ 0	0.4713	1.01	Q	V			
14+ 5	0.4790	1.12	Q	V			
14+10	0.4874	1.21	Q	V			
14+15	0.4958	1.22	Q	V			
14+20	0.5041	1.20	Q	V			
14+25	0.5122	1.18	Q	V			
14+30	0.5203	1.18	Q	V			
14+35	0.5284	1.18	Q	V			
14+40	0.5365	1.18	Q	V			
14+45	0.5447	1.18	Q	V			
14+50	0.5526	1.15	Q	V			
14+55	0.5604	1.13	Q	V			
15+ 0	0.5682	1.13	Q	V			
15+ 5	0.5758	1.10	Q	V			
15+10	0.5833	1.08	Q	V			
15+15	0.5907	1.08	Q	V			
15+20	0.5980	1.05	Q	V			
15+25	0.6051	1.03	Q	V			
15+30	0.6121	1.03	Q	V			

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15+35       0.6184      0.91  |  Q      |         |         |       V  |
15+40       0.6242      0.83  |  Q      |         |         |       V  |
15+45       0.6298      0.82  |  Q      |         |         |       V  |
15+50       0.6354      0.82  |  Q      |         |         |        V |
15+55       0.6410      0.82  |  Q      |         |         |        V |
16+ 0       0.6466      0.82  |  Q      |         |         |        V |
16+ 5       0.6494      0.40  |Q        |         |         |         V|
16+10       0.6500      0.09  Q         |         |         |         V|
16+15       0.6502      0.03  Q         |         |         |         V|
16+20       0.6503      0.02  Q         |         |         |         V|
16+25       0.6505      0.02  Q         |         |         |         V|
16+30       0.6506      0.02  Q         |         |         |         V|
16+35       0.6508      0.02  Q         |         |         |         V|
16+40       0.6509      0.02  Q         |         |         |         V|
16+45       0.6510      0.02  Q         |         |         |         V|
16+50       0.6511      0.02  Q         |         |         |         V|
16+55       0.6512      0.02  Q         |         |         |         V|
17+ 0       0.6513      0.02  Q         |         |         |         V|
17+ 5       0.6516      0.04  Q         |         |         |         V|
17+10       0.6521      0.07  Q         |         |         |         V|
17+15       0.6526      0.07  Q         |         |         |         V|
17+20       0.6531      0.07  Q         |         |         |         V|
17+25       0.6536      0.07  Q         |         |         |         V|
17+30       0.6541      0.07  Q         |         |         |         V|
17+35       0.6546      0.08  Q         |         |         |         V|
17+40       0.6551      0.08  Q         |         |         |         V|
17+45       0.6557      0.08  Q         |         |         |         V|
17+50       0.6560      0.05  Q         |         |         |         V|
17+55       0.6562      0.03  Q         |         |         |         V|
18+ 0       0.6564      0.03  Q         |         |         |         V|
18+ 5       0.6566      0.03  Q         |         |         |         V|
18+10       0.6568      0.03  Q         |         |         |         V|
18+15       0.6569      0.03  Q         |         |         |         V|
18+20       0.6571      0.03  Q         |         |         |         V|
18+25       0.6574      0.03  Q         |         |         |         V|
18+30       0.6576      0.03  Q         |         |         |         V|
18+35       0.6577      0.02  Q         |         |         |         V|
18+40       0.6578      0.02  Q         |         |         |         V|
18+45       0.6580      0.02  Q         |         |         |         V|
18+50       0.6581      0.01  Q         |         |         |         V|
18+55       0.6581      0.01  Q         |         |         |         V|
19+ 0       0.6582      0.01  Q         |         |         |         V|
19+ 5       0.6583      0.01  Q         |         |         |         V|
19+10       0.6584      0.02  Q         |         |         |         V|
19+15       0.6585      0.02  Q         |         |         |         V|
19+20       0.6587      0.03  Q         |         |         |         V|
19+25       0.6590      0.04  Q         |         |         |         V|
19+30       0.6593      0.04  Q         |         |         |         V|
19+35       0.6595      0.03  Q         |         |         |         V|
19+40       0.6596      0.02  Q         |         |         |         V|
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19+45	0.6597	0.02	Q	|	|	|	V|
19+50	0.6598	0.01	Q	|	|	|	V|
19+55	0.6599	0.01	Q	|	|	|	V|
20+ 0	0.6600	0.01	Q	|	|	|	V|
20+ 5	0.6601	0.01	Q	|	|	|	V|
20+10	0.6602	0.02	Q	|	|	|	V|
20+15	0.6603	0.02	Q	|	|	|	V|
20+20	0.6604	0.02	Q	|	|	|	V|
20+25	0.6605	0.02	Q	|	|	|	V|
20+30	0.6606	0.02	Q	|	|	|	V|
20+35	0.6607	0.02	Q	|	|	|	V|
20+40	0.6608	0.02	Q	|	|	|	V|
20+45	0.6609	0.02	Q	|	|	|	V|
20+50	0.6610	0.01	Q	|	|	|	V|
20+55	0.6611	0.01	Q	|	|	|	V|
21+ 0	0.6612	0.01	Q	|	|	|	V|
21+ 5	0.6613	0.01	Q	|	|	|	V|
21+10	0.6614	0.02	Q	|	|	|	V|
21+15	0.6615	0.02	Q	|	|	|	V|
21+20	0.6616	0.01	Q	|	|	|	V|
21+25	0.6617	0.01	Q	|	|	|	V|
21+30	0.6618	0.01	Q	|	|	|	V|
21+35	0.6619	0.01	Q	|	|	|	V|
21+40	0.6620	0.02	Q	|	|	|	V|
21+45	0.6621	0.02	Q	|	|	|	V|
21+50	0.6622	0.01	Q	|	|	|	V|
21+55	0.6622	0.01	Q	|	|	|	V|
22+ 0	0.6623	0.01	Q	|	|	|	V|
22+ 5	0.6624	0.01	Q	|	|	|	V|
22+10	0.6625	0.02	Q	|	|	|	V|
22+15	0.6626	0.02	Q	|	|	|	V|
22+20	0.6627	0.01	Q	|	|	|	V|
22+25	0.6628	0.01	Q	|	|	|	V|
22+30	0.6629	0.01	Q	|	|	|	V|
22+35	0.6630	0.01	Q	|	|	|	V|
22+40	0.6630	0.01	Q	|	|	|	V|
22+45	0.6631	0.01	Q	|	|	|	V|
22+50	0.6632	0.01	Q	|	|	|	V|
22+55	0.6633	0.01	Q	|	|	|	V|
23+ 0	0.6633	0.01	Q	|	|	|	V|
23+ 5	0.6634	0.01	Q	|	|	|	V|
23+10	0.6635	0.01	Q	|	|	|	V|
23+15	0.6636	0.01	Q	|	|	|	V|
23+20	0.6636	0.01	Q	|	|	|	V|
23+25	0.6637	0.01	Q	|	|	|	V|
23+30	0.6638	0.01	Q	|	|	|	V|
23+35	0.6639	0.01	Q	|	|	|	V|
23+40	0.6639	0.01	Q	|	|	|	V|
23+45	0.6640	0.01	Q	|	|	|	V|
23+50	0.6641	0.01	Q	|	|	|	V|

```
   23+55       0.6642      0.01  Q         |         |         |        V|
   24+ 0       0.6642      0.01  Q         |         |         |        V|
   24+ 5       0.6643      0.01  Q         |         |         |        V|
   24+10       0.6643      0.00  Q         |         |         |        V|
   24+15       0.6643      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 03/12/24 File: ONSITEPREE4242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

91.0	79.8	0.246	0.000	0.246	1.000	0.246
					Sum (F) =	0.246

Area averaged mean soil loss (F) (In/Hr) = 0.246
Minimum soil loss rate ((In/Hr)) = 0.123
(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	1058.907	100.000	0.605
		Sum = 100.000	Sum= 0.605

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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004
46	3.83	0.20	0.048	(0.364)	0.043	0.005
47	3.92	0.20	0.048	(0.362)	0.043	0.005
48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005

50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010
96	8.00	0.43	0.104	(0.292)	0.094	0.010
97	8.08	0.50	0.120	(0.290)	0.108	0.012
98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012

125	10.42	0.50	0.120	(	0.254)		0.108		0.012
126	10.50	0.50	0.120	(	0.253)		0.108		0.012
127	10.58	0.67	0.160	(	0.251)		0.144		0.016
128	10.67	0.67	0.160	(	0.250)		0.144		0.016
129	10.75	0.67	0.160	(	0.249)		0.144		0.016
130	10.83	0.67	0.160	(	0.248)		0.144		0.016
131	10.92	0.67	0.160	(	0.247)		0.144		0.016
132	11.00	0.67	0.160	(	0.245)		0.144		0.016
133	11.08	0.63	0.152	(	0.244)		0.137		0.015
134	11.17	0.63	0.152	(	0.243)		0.137		0.015
135	11.25	0.63	0.152	(	0.242)		0.137		0.015
136	11.33	0.63	0.152	(	0.241)		0.137		0.015
137	11.42	0.63	0.152	(	0.239)		0.137		0.015
138	11.50	0.63	0.152	(	0.238)		0.137		0.015
139	11.58	0.57	0.136	(	0.237)		0.122		0.014
140	11.67	0.57	0.136	(	0.236)		0.122		0.014
141	11.75	0.57	0.136	(	0.235)		0.122		0.014
142	11.83	0.60	0.144	(	0.233)		0.130		0.014
143	11.92	0.60	0.144	(	0.232)		0.130		0.014
144	12.00	0.60	0.144	(	0.231)		0.130		0.014
145	12.08	0.83	0.200	(	0.230)		0.180		0.020
146	12.17	0.83	0.200	(	0.229)		0.180		0.020
147	12.25	0.83	0.200	(	0.228)		0.180		0.020
148	12.33	0.87	0.208	(	0.227)		0.187		0.021
149	12.42	0.87	0.208	(	0.225)		0.187		0.021
150	12.50	0.87	0.208	(	0.224)		0.187		0.021
151	12.58	0.93	0.224	(	0.223)		0.202		0.022
152	12.67	0.93	0.224	(	0.222)		0.202		0.022
153	12.75	0.93	0.224	(	0.221)		0.202		0.022
154	12.83	0.97	0.232	(	0.220)		0.209		0.023
155	12.92	0.97	0.232	(	0.219)		0.209		0.023
156	13.00	0.97	0.232	(	0.218)		0.209		0.023
157	13.08	1.13	0.272		0.216	(	0.245)		0.056
158	13.17	1.13	0.272		0.215	(	0.245)		0.057
159	13.25	1.13	0.272		0.214	(	0.245)		0.058
160	13.33	1.13	0.272		0.213	(	0.245)		0.059
161	13.42	1.13	0.272		0.212	(	0.245)		0.060
162	13.50	1.13	0.272		0.211	(	0.245)		0.061
163	13.58	0.77	0.184	(	0.210)		0.166		0.018
164	13.67	0.77	0.184	(	0.209)		0.166		0.018
165	13.75	0.77	0.184	(	0.208)		0.166		0.018
166	13.83	0.77	0.184	(	0.207)		0.166		0.018
167	13.92	0.77	0.184	(	0.206)		0.166		0.018
168	14.00	0.77	0.184	(	0.205)		0.166		0.018
169	14.08	0.90	0.216	(	0.204)		0.194		0.022
170	14.17	0.90	0.216	(	0.203)		0.194		0.022
171	14.25	0.90	0.216	(	0.202)		0.194		0.022
172	14.33	0.87	0.208	(	0.200)		0.187		0.021
173	14.42	0.87	0.208	(	0.199)		0.187		0.021
174	14.50	0.87	0.208	(	0.198)		0.187		0.021
175	14.58	0.87	0.208	(	0.197)		0.187		0.021
176	14.67	0.87	0.208	(	0.196)		0.187		0.021
177	14.75	0.87	0.208	(	0.195)		0.187		0.021
178	14.83	0.83	0.200	(	0.194)		0.180		0.020
179	14.92	0.83	0.200	(	0.193)		0.180		0.020
180	15.00	0.83	0.200	(	0.192)		0.180		0.020
181	15.08	0.80	0.192	(	0.191)		0.173		0.019
182	15.17	0.80	0.192	(	0.190)		0.173		0.019
183	15.25	0.80	0.192	(	0.189)		0.173		0.019
184	15.33	0.77	0.184	(	0.188)		0.166		0.018
185	15.42	0.77	0.184	(	0.188)		0.166		0.018
186	15.50	0.77	0.184	(	0.187)		0.166		0.018
187	15.58	0.63	0.152	(	0.186)		0.137		0.015
188	15.67	0.63	0.152	(	0.185)		0.137		0.015
189	15.75	0.63	0.152	(	0.184)		0.137		0.015
190	15.83	0.63	0.152	(	0.183)		0.137		0.015
191	15.92	0.63	0.152	(	0.182)		0.137		0.015
192	16.00	0.63	0.152	(	0.181)		0.137		0.015
193	16.08	0.13	0.032	(	0.180)		0.029		0.003
194	16.17	0.13	0.032	(	0.179)		0.029		0.003
195	16.25	0.13	0.032	(	0.178)		0.029		0.003
196	16.33	0.13	0.032	(	0.177)		0.029		0.003
197	16.42	0.13	0.032	(	0.176)		0.029		0.003
198	16.50	0.13	0.032	(	0.175)		0.029		0.003
199	16.58	0.10	0.024	(	0.175)		0.022		0.002

200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002
246	20.50	0.10	0.024	(0.139)	0.022	0.002
247	20.58	0.10	0.024	(0.139)	0.022	0.002
248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002

275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.6

Flood volume = Effective rainfall 0.22(In)
times area 0.6(Ac.)/[(In)/(Ft.)] = 0.0(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.089(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 469.4 Cubic Feet
Total soil loss = 3886.6 Cubic Feet

Peak flow rate of this hydrograph = 0.037(CFS)

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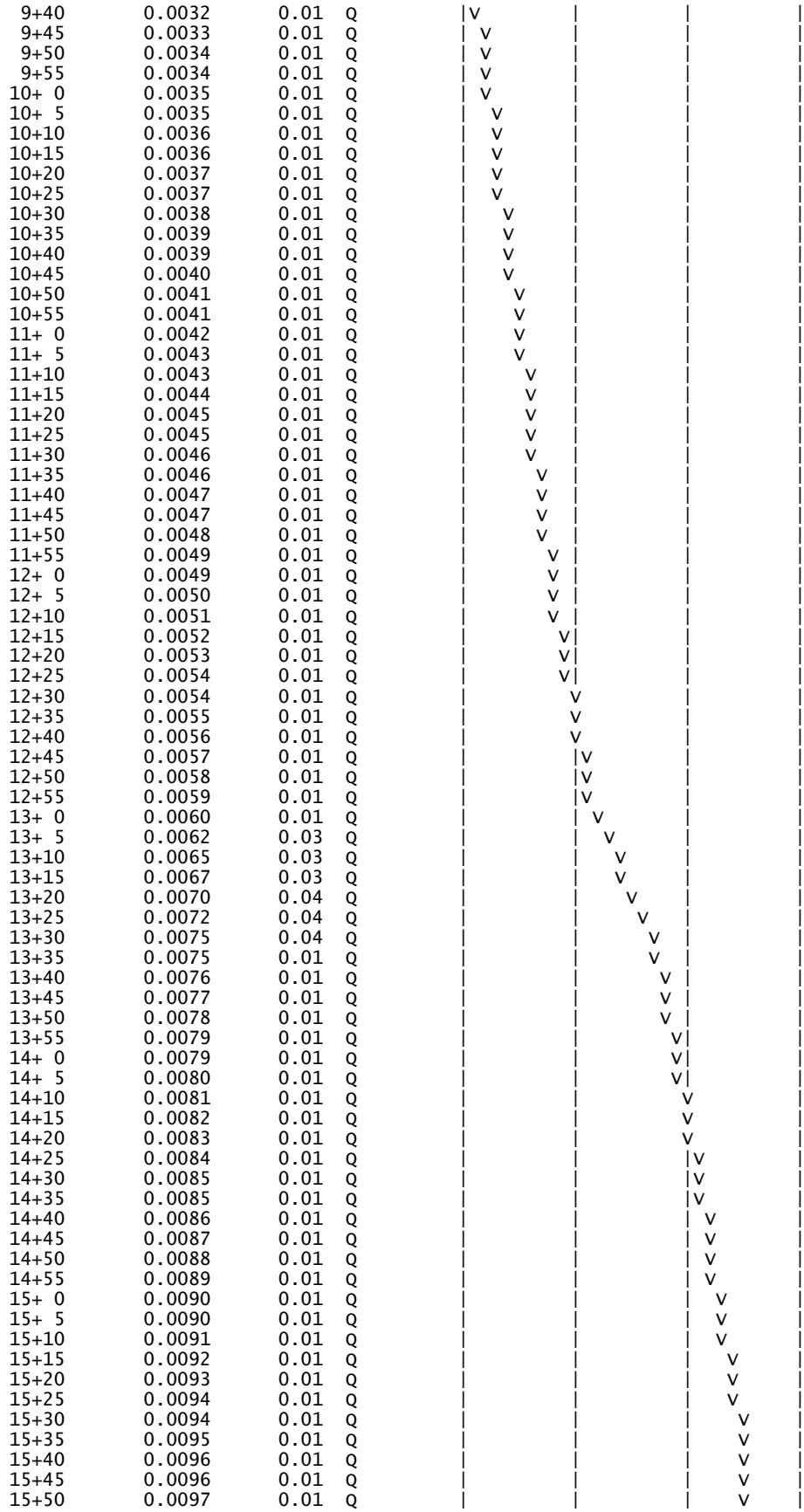
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0000	0.00	Q				
0+15	0.0000	0.00	Q				
0+20	0.0000	0.00	Q				
0+25	0.0000	0.00	Q				
0+30	0.0000	0.00	Q				
0+35	0.0001	0.00	Q				
0+40	0.0001	0.00	Q				
0+45	0.0001	0.00	Q				
0+50	0.0001	0.00	Q				
0+55	0.0001	0.00	Q				
1+ 0	0.0001	0.00	Q				
1+ 5	0.0001	0.00	Q				
1+10	0.0001	0.00	Q				
1+15	0.0001	0.00	Q				
1+20	0.0002	0.00	Q				
1+25	0.0002	0.00	Q				
1+30	0.0002	0.00	Q				
1+35	0.0002	0.00	Q				
1+40	0.0002	0.00	Q				
1+45	0.0002	0.00	Q				
1+50	0.0002	0.00	Q				
1+55	0.0002	0.00	Q				
2+ 0	0.0002	0.00	Q				
2+ 5	0.0003	0.00	Q				
2+10	0.0003	0.00	QV				
2+15	0.0003	0.00	QV				
2+20	0.0003	0.00	QV				
2+25	0.0003	0.00	QV				
2+30	0.0003	0.00	QV				
2+35	0.0003	0.00	QV				
2+40	0.0004	0.00	QV				
2+45	0.0004	0.00	QV				
2+50	0.0004	0.00	QV				
2+55	0.0004	0.00	QV				
3+ 0	0.0004	0.00	QV				
3+ 5	0.0004	0.00	QV				
3+10	0.0005	0.00	QV				
3+15	0.0005	0.00	QV				
3+20	0.0005	0.00	QV				

```
3+25       0.0005      0.00  QV         |          |          |          |
3+30       0.0005      0.00  QV         |          |          |          |
3+35       0.0005      0.00  Q V        |          |          |          |
3+40       0.0006      0.00  Q V        |          |          |          |
3+45       0.0006      0.00  Q V        |          |          |          |
3+50       0.0006      0.00  Q V        |          |          |          |
3+55       0.0006      0.00  Q V        |          |          |          |
4+ 0       0.0006      0.00  Q V        |          |          |          |
4+ 5       0.0007      0.00  Q V        |          |          |          |
4+10       0.0007      0.00  Q V        |          |          |          |
4+15       0.0007      0.00  Q V        |          |          |          |
4+20       0.0007      0.00  Q V        |          |          |          |
4+25       0.0007      0.00  Q V        |          |          |          |
4+30       0.0008      0.00  Q V        |          |          |          |
4+35       0.0008      0.00  Q V        |          |          |          |
4+40       0.0008      0.00  Q  V       |          |          |          |
4+45       0.0008      0.00  Q  V       |          |          |          |
4+50       0.0009      0.00  Q  V       |          |          |          |
4+55       0.0009      0.00  Q  V       |          |          |          |
5+ 0       0.0009      0.00  Q  V       |          |          |          |
5+ 5       0.0009      0.00  Q  V       |          |          |          |
5+10       0.0010      0.00  Q  V       |          |          |          |
5+15       0.0010      0.00  Q  V       |          |          |          |
5+20       0.0010      0.00  Q  V       |          |          |          |
5+25       0.0010      0.00  Q  V       |          |          |          |
5+30       0.0010      0.00  Q  V       |          |          |          |
5+35       0.0011      0.00  Q  V       |          |          |          |
5+40       0.0011      0.00  Q   V      |          |          |          |
5+45       0.0011      0.00  Q   V      |          |          |          |
5+50       0.0012      0.00  Q   V      |          |          |          |
5+55       0.0012      0.00  Q   V      |          |          |          |
6+ 0       0.0012      0.00  Q   V      |          |          |          |
6+ 5       0.0012      0.00  Q   V      |          |          |          |
6+10       0.0013      0.00  Q   V      |          |          |          |
6+15       0.0013      0.00  Q   V      |          |          |          |
6+20       0.0013      0.00  Q   V      |          |          |          |
6+25       0.0014      0.00  Q    V     |          |          |          |
6+30       0.0014      0.00  Q    V     |          |          |          |
6+35       0.0014      0.00  Q    V     |          |          |          |
6+40       0.0015      0.00  Q    V     |          |          |          |
6+45       0.0015      0.00  Q    V     |          |          |          |
6+50       0.0015      0.00  Q    V     |          |          |          |
6+55       0.0016      0.00  Q    V     |          |          |          |
7+ 0       0.0016      0.00  Q    V     |          |          |          |
7+ 5       0.0016      0.00  Q     V    |          |          |          |
7+10       0.0017      0.00  Q     V    |          |          |          |
7+15       0.0017      0.00  Q     V    |          |          |          |
7+20       0.0017      0.01  Q     V    |          |          |          |
7+25       0.0018      0.01  Q     V    |          |          |          |
7+30       0.0018      0.01  Q     V    |          |          |          |
7+35       0.0018      0.01  Q     V    |          |          |          |
7+40       0.0019      0.01  Q     V    |          |          |          |
7+45       0.0019      0.01  Q      V   |          |          |          |
7+50       0.0020      0.01  Q      V   |          |          |          |
7+55       0.0020      0.01  Q      V   |          |          |          |
8+ 0       0.0020      0.01  Q      V   |          |          |          |
8+ 5       0.0021      0.01  Q      V   |          |          |          |
8+10       0.0021      0.01  Q      V   |          |          |          |
8+15       0.0022      0.01  Q       V  |          |          |          |
8+20       0.0022      0.01  Q       V  |          |          |          |
8+25       0.0023      0.01  Q       V  |          |          |          |
8+30       0.0023      0.01  Q       V  |          |          |          |
8+35       0.0024      0.01  Q       V  |          |          |          |
8+40       0.0025      0.01  Q        V|          |          |          |
8+45       0.0025      0.01  Q        V|          |          |          |
8+50       0.0026      0.01  Q        V|          |          |          |
8+55       0.0026      0.01  Q        V|          |          |          |
9+ 0       0.0027      0.01  Q        V|          |          |          |
9+ 5       0.0027      0.01  Q         V         |          |          |
9+10       0.0028      0.01  Q         V         |          |          |
9+15       0.0029      0.01  Q         V         |          |          |
9+20       0.0029      0.01  Q         V         |          |          |
9+25       0.0030      0.01  Q         |V        |          |          |
9+30       0.0031      0.01  Q         |V        |          |          |
9+35       0.0031      0.01  Q         |V        |          |          |
```



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15+55       0.0098      0.01  Q          |          |          |     V    |
16+ 0       0.0098      0.01  Q          |          |          |     V    |
16+ 5       0.0098      0.00  Q          |          |          |     V    |
16+10       0.0098      0.00  Q          |          |          |     V    |
16+15       0.0099      0.00  Q          |          |          |     V    |
16+20       0.0099      0.00  Q          |          |          |     V    |
16+25       0.0099      0.00  Q          |          |          |     V    |
16+30       0.0099      0.00  Q          |          |          |     V    |
16+35       0.0099      0.00  Q          |          |          |     V    |
16+40       0.0099      0.00  Q          |          |          |     V    |
16+45       0.0099      0.00  Q          |          |          |     V    |
16+50       0.0099      0.00  Q          |          |          |     V    |
16+55       0.0099      0.00  Q          |          |          |     V    |
17+ 0       0.0100      0.00  Q          |          |          |     V    |
17+ 5       0.0100      0.00  Q          |          |          |      V   |
17+10       0.0100      0.00  Q          |          |          |      V   |
17+15       0.0100      0.00  Q          |          |          |      V   |
17+20       0.0100      0.00  Q          |          |          |      V   |
17+25       0.0100      0.00  Q          |          |          |      V   |
17+30       0.0101      0.00  Q          |          |          |      V   |
17+35       0.0101      0.00  Q          |          |          |      V   |
17+40       0.0101      0.00  Q          |          |          |      V   |
17+45       0.0101      0.00  Q          |          |          |      V   |
17+50       0.0101      0.00  Q          |          |          |      V   |
17+55       0.0101      0.00  Q          |          |          |      V   |
18+ 0       0.0101      0.00  Q          |          |          |      V   |
18+ 5       0.0102      0.00  Q          |          |          |      V   |
18+10       0.0102      0.00  Q          |          |          |      V   |
18+15       0.0102      0.00  Q          |          |          |      V   |
18+20       0.0102      0.00  Q          |          |          |      V   |
18+25       0.0102      0.00  Q          |          |          |      V   |
18+30       0.0102      0.00  Q          |          |          |      V   |
18+35       0.0102      0.00  Q          |          |          |      V   |
18+40       0.0102      0.00  Q          |          |          |       V  |
18+45       0.0103      0.00  Q          |          |          |       V  |
18+50       0.0103      0.00  Q          |          |          |       V  |
18+55       0.0103      0.00  Q          |          |          |       V  |
19+ 0       0.0103      0.00  Q          |          |          |       V  |
19+ 5       0.0103      0.00  Q          |          |          |       V  |
19+10       0.0103      0.00  Q          |          |          |       V  |
19+15       0.0103      0.00  Q          |          |          |       V  |
19+20       0.0103      0.00  Q          |          |          |       V  |
19+25       0.0103      0.00  Q          |          |          |       V  |
19+30       0.0103      0.00  Q          |          |          |       V  |
19+35       0.0104      0.00  Q          |          |          |       V  |
19+40       0.0104      0.00  Q          |          |          |       V  |
19+45       0.0104      0.00  Q          |          |          |       V  |
19+50       0.0104      0.00  Q          |          |          |       V  |
19+55       0.0104      0.00  Q          |          |          |       V  |
20+ 0       0.0104      0.00  Q          |          |          |       V  |
20+ 5       0.0104      0.00  Q          |          |          |       V  |
20+10       0.0104      0.00  Q          |          |          |       V  |
20+15       0.0104      0.00  Q          |          |          |       V  |
20+20       0.0104      0.00  Q          |          |          |       V  |
20+25       0.0104      0.00  Q          |          |          |       V  |
20+30       0.0105      0.00  Q          |          |          |       V  |
20+35       0.0105      0.00  Q          |          |          |       V  |
20+40       0.0105      0.00  Q          |          |          |       V  |
20+45       0.0105      0.00  Q          |          |          |       V  |
20+50       0.0105      0.00  Q          |          |          |       V  |
20+55       0.0105      0.00  Q          |          |          |       V  |
21+ 0       0.0105      0.00  Q          |          |          |       V  |
21+ 5       0.0105      0.00  Q          |          |          |        V |
21+10       0.0105      0.00  Q          |          |          |        V |
21+15       0.0105      0.00  Q          |          |          |        V |
21+20       0.0105      0.00  Q          |          |          |        V |
21+25       0.0106      0.00  Q          |          |          |        V |
21+30       0.0106      0.00  Q          |          |          |        V |
21+35       0.0106      0.00  Q          |          |          |        V |
21+40       0.0106      0.00  Q          |          |          |        V |
21+45       0.0106      0.00  Q          |          |          |        V |
21+50       0.0106      0.00  Q          |          |          |        V |
21+55       0.0106      0.00  Q          |          |          |        V |
22+ 0       0.0106      0.00  Q          |          |          |        V |
22+ 5       0.0106      0.00  Q          |          |          |        V |
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   22+10       0.0106      0.00  Q         |         |         |         v|
   22+15       0.0106      0.00  Q         |         |         |         v|
   22+20       0.0106      0.00  Q         |         |         |         v|
   22+25       0.0107      0.00  Q         |         |         |         v|
   22+30       0.0107      0.00  Q         |         |         |         v|
   22+35       0.0107      0.00  Q         |         |         |         v|
   22+40       0.0107      0.00  Q         |         |         |         v|
   22+45       0.0107      0.00  Q         |         |         |         v|
   22+50       0.0107      0.00  Q         |         |         |         v|
   22+55       0.0107      0.00  Q         |         |         |         v|
   23+ 0       0.0107      0.00  Q         |         |         |         v|
   23+ 5       0.0107      0.00  Q         |         |         |         v|
   23+10       0.0107      0.00  Q         |         |         |         v|
   23+15       0.0107      0.00  Q         |         |         |         v|
   23+20       0.0107      0.00  Q         |         |         |         v|
   23+25       0.0107      0.00  Q         |         |         |         v|
   23+30       0.0107      0.00  Q         |         |         |         v|
   23+35       0.0107      0.00  Q         |         |         |         v|
   23+40       0.0108      0.00  Q         |         |         |         v|
   23+45       0.0108      0.00  Q         |         |         |         v|
   23+50       0.0108      0.00  Q         |         |         |         v|
   23+55       0.0108      0.00  Q         |         |         |         v|
   24+ 0       0.0108      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 03/12/24 File: ONSITEPREE4110.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	0.50	0.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	1.30	0.78

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 0.829(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 0.829(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                        Sum (F) =   0.117
      Area averaged mean soil loss (F) (In/Hr) =  0.117
      Minimum soil loss rate ((In/Hr)) =  0.059
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.900
      ------------------------------------------------------------------------
      Slope of intensity-duration curve for a 1 hour storm =0.5500
      ------------------------------------------------------------------------

                  U n i t  H y d r o g r a p h
                         VALLEY S-Curve
      ------------------------------------------------------------------------
                  Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083       1058.907        100.000             0.605
                                  Sum = 100.000   Sum=        0.605
-----------------------------------------------------------------------------


 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   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low         (In/Hr)
    1   0.08     3.30      0.328          0.117    (  0.295)        0.211
    2   0.17     4.20      0.418          0.117    (  0.376)        0.301
    3   0.25     4.40      0.438          0.117    (  0.394)        0.321
    4   0.33     4.80      0.478          0.117    (  0.430)        0.361
    5   0.42     5.20      0.517          0.117    (  0.466)        0.400
    6   0.50     6.20      0.617          0.117    (  0.555)        0.500
    7   0.58     6.80      0.677          0.117    (  0.609)        0.560
    8   0.67     8.80      0.876          0.117    (  0.788)        0.759
    9   0.75    13.90      1.383          0.117    (  1.245)        1.266
   10   0.83    31.40      3.124          0.117    (  2.812)        3.007
   11   0.92     7.20      0.716          0.117    (  0.645)        0.599
   12   1.00     3.80      0.378          0.117    (  0.340)        0.261
                (Loss Rate Not Used)
      Sum =     100.0                                  Sum =     8.5
        Flood volume = Effective rainfall      0.71(In)
         times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
        Total soil loss =      0.12(In)
        Total soil loss =     0.006(Ac.Ft)
        Total rainfall =      0.83(In)
        Flood volume =        1551.0 Cubic Feet
        Total soil loss =         254.8 Cubic Feet
        ------------------------------------------------------------------------
         Peak flow rate of this hydrograph =      1.819(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       0.0009      0.13  Q         |         |         |         |
    0+10       0.0021      0.18  Q V       |         |         |         |
    0+15       0.0035      0.19  Q  V      |         |         |         |
    0+20       0.0050      0.22  Q    V    |         |         |         |
    0+25       0.0066      0.24  Q      V  |         |         |         |
    0+30       0.0087      0.30  |Q       V|         |         |         |
    0+35       0.0111      0.34  |Q        | V       |         |         |
    0+40       0.0142      0.46  |Q        |    V    |         |         |
    0+45       0.0195      0.77  |  Q      |         |V        |         |
    0+50       0.0320      1.82  |      Q  |         |         |    V    |
    0+55       0.0345      0.36  |Q        |         |         |       V |
    1+ 0       0.0356      0.16  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 03/12/24 File: ONSITEPREE4310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	0.80	0.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.00	1.20

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.800(In)
Area Averaged 100-Year Rainfall = 2.000(In)

Point rain (area averaged) = 1.294(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.294(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                        Sum (F) =    0.117
      Area averaged mean soil loss (F) (In/Hr) =  0.117
      Minimum soil loss rate ((In/Hr)) =  0.059
      (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   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                           Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083       1058.907        100.000             0.605
                                  Sum = 100.000    Sum=       0.605
------------------------------------------------------------------------
```

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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

```
   Flood volume = Effective rainfall      0.95(In)
    times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
   Total soil loss =      0.35(In)
   Total soil loss =     0.017(Ac.Ft)
   Total rainfall =      1.29(In)
   Flood volume =        2059.2 Cubic Feet
   Total soil loss =         758.5 Cubic Feet
   ------------------------------------------------------------------------
    Peak flow rate of this hydrograph =      0.699(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	0.05	Q				
0+10	0.0007	0.05	Q				
0+15	0.0009	0.03	Q				
0+20	0.0014	0.07	QV				
0+25	0.0019	0.07	QV				
0+30	0.0026	0.10	Q V				
0+35	0.0031	0.07	Q V				
0+40	0.0037	0.10	Q V				
0+45	0.0044	0.10	Q V				
0+50	0.0049	0.07	Q V				
0+55	0.0054	0.08	Q V				
1+ 0	0.0061	0.10	Q V				
1+ 5	0.0071	0.14	Q V				
1+10	0.0080	0.14	Q V				
1+15	0.0089	0.14	Q V				
1+20	0.0097	0.12	Q V				
1+25	0.0109	0.17	Q V				
1+30	0.0122	0.18	Q V				
1+35	0.0132	0.15	Q V				
1+40	0.0145	0.18	Q V				
1+45	0.0162	0.24	Q V				
1+50	0.0177	0.22	Q V				
1+55	0.0191	0.20	Q V				
2+ 0	0.0205	0.21	Q V				
2+ 5	0.0220	0.22	Q V				
2+10	0.0243	0.32	Q V				
2+15	0.0270	0.40	Q V				
2+20	0.0288	0.26	Q V				
2+25	0.0327	0.57	Q V				
2+30	0.0369	0.61	Q V				
2+35	0.0417	0.70	Q V				
2+40	0.0451	0.48	Q V				
2+45	0.0459	0.12	Q V				
2+50	0.0466	0.10	Q V				
2+55	0.0472	0.10	Q V				
3+ 0	0.0473	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 03/12/24 File: ONSITEPREE4610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	1.20	0.72

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.80	1.68

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.200(In)
Area Averaged 100-Year Rainfall = 2.800(In)

Point rain (area averaged) = 1.858(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.858(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

91.0	91.0	0.117	0.000	0.117	1.000	0.117
					Sum (F) =	0.117

Area averaged mean soil loss (F) (In/Hr) = 0.117
Minimum soil loss rate ((In/Hr)) = 0.059
(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

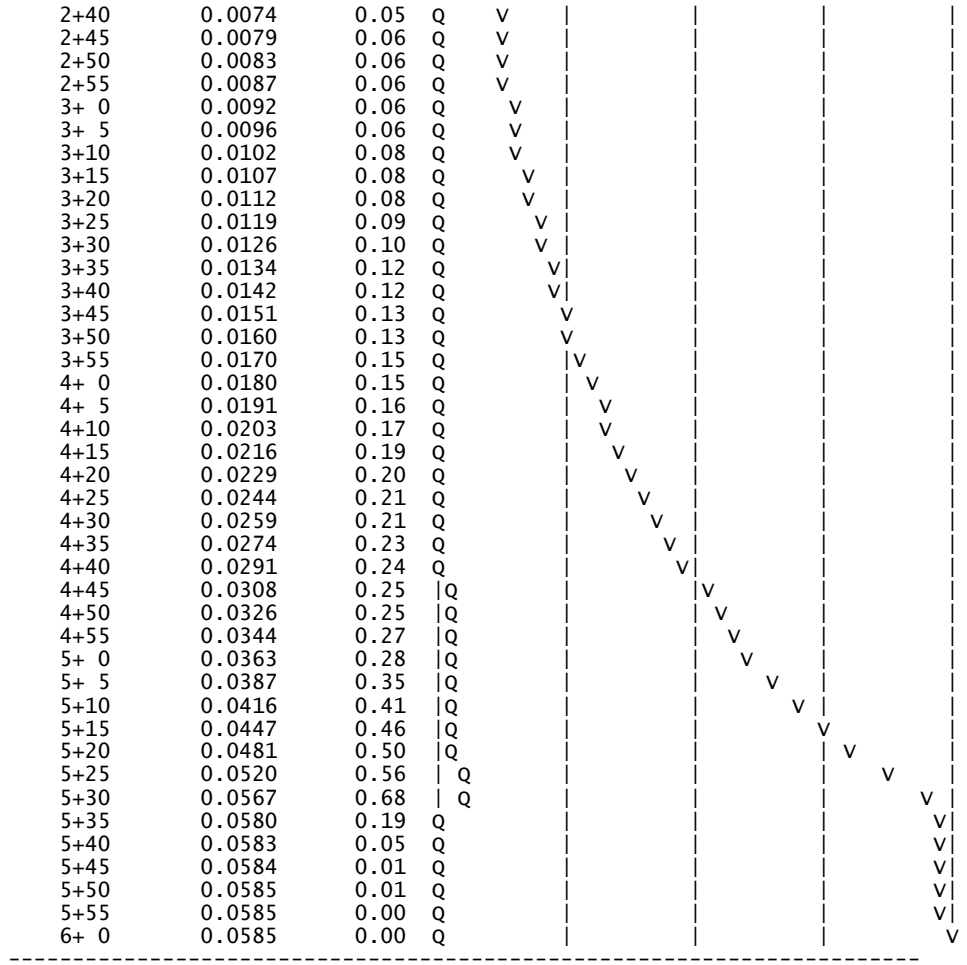
Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1 0.083	1058.907	100.000	0.605
		Sum = 100.000	Sum= 0.605

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	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217
46	3.83	1.50	0.334	0.117	(0.301)	0.217
47	3.92	1.60	0.357	0.117	(0.321)	0.240
48	4.00	1.60	0.357	0.117	(0.321)	0.240
49	4.08	1.70	0.379	0.117	(0.341)	0.262

```
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
              (Loss Rate Not Used)
   Sum =     100.0                                   Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.034(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        2548.6 Cubic Feet
      Total soil loss =        1498.7 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.685(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       0.0000      0.01  Q          |         |         |         |
  0+10       0.0001      0.01  Q          |         |         |         |
  0+15       0.0002      0.01  Q          |         |         |         |
  0+20       0.0003      0.01  Q          |         |         |         |
  0+25       0.0003      0.01  Q          |         |         |         |
  0+30       0.0005      0.02  Q          |         |         |         |
  0+35       0.0007      0.02  Q          |         |         |         |
  0+40       0.0008      0.02  Q          |         |         |         |
  0+45       0.0010      0.02  Q          |         |         |         |
  0+50       0.0011      0.02  Q          |         |         |         |
  0+55       0.0013      0.02  Q          |         |         |         |
  1+ 0       0.0016      0.04  QV         |         |         |         |
  1+ 5       0.0018      0.04  QV         |         |         |         |
  1+10       0.0021      0.04  QV         |         |         |         |
  1+15       0.0023      0.04  QV         |         |         |         |
  1+20       0.0026      0.04  QV         |         |         |         |
  1+25       0.0028      0.04  QV         |         |         |         |
  1+30       0.0031      0.04  Q V        |         |         |         |
  1+35       0.0034      0.04  Q V        |         |         |         |
  1+40       0.0036      0.04  Q V        |         |         |         |
  1+45       0.0039      0.04  Q V        |         |         |         |
  1+50       0.0041      0.04  Q V        |         |         |         |
  1+55       0.0044      0.04  Q V        |         |         |         |
  2+ 0       0.0047      0.05  Q  V       |         |         |         |
  2+ 5       0.0050      0.04  Q  V       |         |         |         |
  2+10       0.0053      0.05  Q  V       |         |         |         |
  2+15       0.0057      0.05  Q  V       |         |         |         |
  2+20       0.0060      0.05  Q   V      |         |         |         |
  2+25       0.0064      0.05  Q   V      |         |         |         |
  2+30       0.0067      0.05  Q   V      |         |         |         |
  2+35       0.0071      0.05  Q   V      |         |         |         |
```


2+40 0.0074 0.05
2+45 0.0079 0.06
2+50 0.0083 0.06
2+55 0.0087 0.06
3+ 0 0.0092 0.06
3+ 5 0.0096 0.06
3+10 0.0102 0.08
3+15 0.0107 0.08
3+20 0.0112 0.08
3+25 0.0119 0.09
3+30 0.0126 0.10
3+35 0.0134 0.12
3+40 0.0142 0.12
3+45 0.0151 0.13
3+50 0.0160 0.13
3+55 0.0170 0.15
4+ 0 0.0180 0.15
4+ 5 0.0191 0.16
4+10 0.0203 0.17
4+15 0.0216 0.19
4+20 0.0229 0.20
4+25 0.0244 0.21
4+30 0.0259 0.21
4+35 0.0274 0.23
4+40 0.0291 0.24
4+45 0.0308 0.25
4+50 0.0326 0.25
4+55 0.0344 0.27
5+ 0 0.0363 0.28
5+ 5 0.0387 0.35
5+10 0.0416 0.41
5+15 0.0447 0.46
5+20 0.0481 0.50
5+25 0.0520 0.56
5+30 0.0567 0.68
5+35 0.0580 0.19
5+40 0.0583 0.05
5+45 0.0584 0.01
5+50 0.0585 0.01
5+55 0.0585 0.00
6+ 0 0.0585 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 03/12/24 File: ONSITEPREE42410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 3.399(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.399(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

91.0	91.0	0.117	0.000	0.117	1.000	0.117
					Sum (F) =	0.117

Area averaged mean soil loss (F) (In/Hr) = 0.117
Minimum soil loss rate ((In/Hr)) = 0.059
(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	1058.907	100.000	0.605
		Sum = 100.000 Sum=	0.605

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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007
46	3.83	0.20	0.082	(0.173)	0.073	0.008
47	3.92	0.20	0.082	(0.172)	0.073	0.008
48	4.00	0.20	0.082	(0.171)	0.073	0.008
49	4.08	0.20	0.082	(0.171)	0.073	0.008

50	4.17	0.20	0.082	(	0.170)	0.073		0.008
51	4.25	0.20	0.082	(	0.169)	0.073		0.008
52	4.33	0.23	0.095	(	0.169)	0.086		0.010
53	4.42	0.23	0.095	(	0.168)	0.086		0.010
54	4.50	0.23	0.095	(	0.167)	0.086		0.010
55	4.58	0.23	0.095	(	0.166)	0.086		0.010
56	4.67	0.23	0.095	(	0.166)	0.086		0.010
57	4.75	0.23	0.095	(	0.165)	0.086		0.010
58	4.83	0.27	0.109	(	0.164)	0.098		0.011
59	4.92	0.27	0.109	(	0.164)	0.098		0.011
60	5.00	0.27	0.109	(	0.163)	0.098		0.011
61	5.08	0.20	0.082	(	0.162)	0.073		0.008
62	5.17	0.20	0.082	(	0.161)	0.073		0.008
63	5.25	0.20	0.082	(	0.161)	0.073		0.008
64	5.33	0.23	0.095	(	0.160)	0.086		0.010
65	5.42	0.23	0.095	(	0.159)	0.086		0.010
66	5.50	0.23	0.095	(	0.159)	0.086		0.010
67	5.58	0.27	0.109	(	0.158)	0.098		0.011
68	5.67	0.27	0.109	(	0.157)	0.098		0.011
69	5.75	0.27	0.109	(	0.157)	0.098		0.011
70	5.83	0.27	0.109	(	0.156)	0.098		0.011
71	5.92	0.27	0.109	(	0.155)	0.098		0.011
72	6.00	0.27	0.109	(	0.154)	0.098		0.011
73	6.08	0.30	0.122	(	0.154)	0.110		0.012
74	6.17	0.30	0.122	(	0.153)	0.110		0.012
75	6.25	0.30	0.122	(	0.152)	0.110		0.012
76	6.33	0.30	0.122	(	0.152)	0.110		0.012
77	6.42	0.30	0.122	(	0.151)	0.110		0.012
78	6.50	0.30	0.122	(	0.150)	0.110		0.012
79	6.58	0.33	0.136	(	0.150)	0.122		0.014
80	6.67	0.33	0.136	(	0.149)	0.122		0.014
81	6.75	0.33	0.136	(	0.148)	0.122		0.014
82	6.83	0.33	0.136	(	0.148)	0.122		0.014
83	6.92	0.33	0.136	(	0.147)	0.122		0.014
84	7.00	0.33	0.136	(	0.146)	0.122		0.014
85	7.08	0.33	0.136	(	0.146)	0.122		0.014
86	7.17	0.33	0.136	(	0.145)	0.122		0.014
87	7.25	0.33	0.136	(	0.144)	0.122		0.014
88	7.33	0.37	0.150	(	0.144)	0.135		0.015
89	7.42	0.37	0.150	(	0.143)	0.135		0.015
90	7.50	0.37	0.150	(	0.142)	0.135		0.015
91	7.58	0.40	0.163		0.142	(	0.147)	0.021
92	7.67	0.40	0.163		0.141	(	0.147)	0.022
93	7.75	0.40	0.163		0.140	(	0.147)	0.023
94	7.83	0.43	0.177		0.140	(	0.159)	0.037
95	7.92	0.43	0.177		0.139	(	0.159)	0.038
96	8.00	0.43	0.177		0.138	(	0.159)	0.038
97	8.08	0.50	0.204		0.138	(	0.184)	0.066
98	8.17	0.50	0.204		0.137	(	0.184)	0.067
99	8.25	0.50	0.204		0.137	(	0.184)	0.067
100	8.33	0.50	0.204		0.136	(	0.184)	0.068
101	8.42	0.50	0.204		0.135	(	0.184)	0.069
102	8.50	0.50	0.204		0.135	(	0.184)	0.069
103	8.58	0.53	0.218		0.134	(	0.196)	0.084
104	8.67	0.53	0.218		0.133	(	0.196)	0.084
105	8.75	0.53	0.218		0.133	(	0.196)	0.085
106	8.83	0.57	0.231		0.132	(	0.208)	0.099
107	8.92	0.57	0.231		0.131	(	0.208)	0.100
108	9.00	0.57	0.231		0.131	(	0.208)	0.100
109	9.08	0.63	0.258		0.130	(	0.232)	0.128
110	9.17	0.63	0.258		0.130	(	0.232)	0.129
111	9.25	0.63	0.258		0.129	(	0.232)	0.129
112	9.33	0.67	0.272		0.128	(	0.245)	0.144
113	9.42	0.67	0.272		0.128	(	0.245)	0.144
114	9.50	0.67	0.272		0.127	(	0.245)	0.145
115	9.58	0.70	0.285		0.127	(	0.257)	0.159
116	9.67	0.70	0.285		0.126	(	0.257)	0.160
117	9.75	0.70	0.285		0.125	(	0.257)	0.160
118	9.83	0.73	0.299		0.125	(	0.269)	0.174
119	9.92	0.73	0.299		0.124	(	0.269)	0.175
120	10.00	0.73	0.299		0.124	(	0.269)	0.176
121	10.08	0.50	0.204		0.123	(	0.184)	0.081
122	10.17	0.50	0.204		0.122	(	0.184)	0.082
123	10.25	0.50	0.204		0.122	(	0.184)	0.082
124	10.33	0.50	0.204		0.121	(	0.184)	0.083

125	10.42	0.50	0.204		0.121	(0.184)	0.083
126	10.50	0.50	0.204		0.120	(0.184)	0.084
127	10.58	0.67	0.272		0.119	(0.245)	0.152
128	10.67	0.67	0.272		0.119	(0.245)	0.153
129	10.75	0.67	0.272		0.118	(0.245)	0.154
130	10.83	0.67	0.272		0.118	(0.245)	0.154
131	10.92	0.67	0.272		0.117	(0.245)	0.155
132	11.00	0.67	0.272		0.117	(0.245)	0.155
133	11.08	0.63	0.258		0.116	(0.232)	0.142
134	11.17	0.63	0.258		0.115	(0.232)	0.143
135	11.25	0.63	0.258		0.115	(0.232)	0.144
136	11.33	0.63	0.258		0.114	(0.232)	0.144
137	11.42	0.63	0.258		0.114	(0.232)	0.145
138	11.50	0.63	0.258		0.113	(0.232)	0.145
139	11.58	0.57	0.231		0.113	(0.208)	0.119
140	11.67	0.57	0.231		0.112	(0.208)	0.119
141	11.75	0.57	0.231		0.111	(0.208)	0.120
142	11.83	0.60	0.245		0.111	(0.220)	0.134
143	11.92	0.60	0.245		0.110	(0.220)	0.134
144	12.00	0.60	0.245		0.110	(0.220)	0.135
145	12.08	0.83	0.340		0.109	(0.306)	0.231
146	12.17	0.83	0.340		0.109	(0.306)	0.231
147	12.25	0.83	0.340		0.108	(0.306)	0.232
148	12.33	0.87	0.353		0.108	(0.318)	0.246
149	12.42	0.87	0.353		0.107	(0.318)	0.246
150	12.50	0.87	0.353		0.107	(0.318)	0.247
151	12.58	0.93	0.381		0.106	(0.343)	0.275
152	12.67	0.93	0.381		0.105	(0.343)	0.275
153	12.75	0.93	0.381		0.105	(0.343)	0.276
154	12.83	0.97	0.394		0.104	(0.355)	0.290
155	12.92	0.97	0.394		0.104	(0.355)	0.290
156	13.00	0.97	0.394		0.103	(0.355)	0.291
157	13.08	1.13	0.462		0.103	(0.416)	0.359
158	13.17	1.13	0.462		0.102	(0.416)	0.360
159	13.25	1.13	0.462		0.102	(0.416)	0.360
160	13.33	1.13	0.462		0.101	(0.416)	0.361
161	13.42	1.13	0.462		0.101	(0.416)	0.362
162	13.50	1.13	0.462		0.100	(0.416)	0.362
163	13.58	0.77	0.313		0.100	(0.281)	0.213
164	13.67	0.77	0.313		0.099	(0.281)	0.213
165	13.75	0.77	0.313		0.099	(0.281)	0.214
166	13.83	0.77	0.313		0.098	(0.281)	0.215
167	13.92	0.77	0.313		0.098	(0.281)	0.215
168	14.00	0.77	0.313		0.097	(0.281)	0.216
169	14.08	0.90	0.367		0.097	(0.330)	0.270
170	14.17	0.90	0.367		0.096	(0.330)	0.271
171	14.25	0.90	0.367		0.096	(0.330)	0.271
172	14.33	0.87	0.353		0.095	(0.318)	0.258
173	14.42	0.87	0.353		0.095	(0.318)	0.259
174	14.50	0.87	0.353		0.094	(0.318)	0.259
175	14.58	0.87	0.353		0.094	(0.318)	0.260
176	14.67	0.87	0.353		0.093	(0.318)	0.260
177	14.75	0.87	0.353		0.093	(0.318)	0.261
178	14.83	0.83	0.340		0.092	(0.306)	0.248
179	14.92	0.83	0.340		0.092	(0.306)	0.248
180	15.00	0.83	0.340		0.091	(0.306)	0.248
181	15.08	0.80	0.326		0.091	(0.294)	0.235
182	15.17	0.80	0.326		0.090	(0.294)	0.236
183	15.25	0.80	0.326		0.090	(0.294)	0.236
184	15.33	0.77	0.313		0.090	(0.281)	0.223
185	15.42	0.77	0.313		0.089	(0.281)	0.224
186	15.50	0.77	0.313		0.089	(0.281)	0.224
187	15.58	0.63	0.258		0.088	(0.232)	0.170
188	15.67	0.63	0.258		0.088	(0.232)	0.171
189	15.75	0.63	0.258		0.087	(0.232)	0.171
190	15.83	0.63	0.258		0.087	(0.232)	0.172
191	15.92	0.63	0.258		0.086	(0.232)	0.172
192	16.00	0.63	0.258		0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049		0.005
194	16.17	0.13	0.054	(0.085)	0.049		0.005
195	16.25	0.13	0.054	(0.085)	0.049		0.005
196	16.33	0.13	0.054	(0.084)	0.049		0.005
197	16.42	0.13	0.054	(0.084)	0.049		0.005
198	16.50	0.13	0.054	(0.083)	0.049		0.005
199	16.58	0.10	0.041	(0.083)	0.037		0.004

200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004
246	20.50	0.10	0.041	(0.066)	0.037	0.004
247	20.58	0.10	0.041	(0.066)	0.037	0.004
248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003

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275  22.92     0.07      0.027       (  0.060)       0.024        0.003
276  23.00     0.07      0.027       (  0.060)       0.024        0.003
277  23.08     0.07      0.027       (  0.060)       0.024        0.003
278  23.17     0.07      0.027       (  0.059)       0.024        0.003
279  23.25     0.07      0.027       (  0.059)       0.024        0.003
280  23.33     0.07      0.027       (  0.059)       0.024        0.003
281  23.42     0.07      0.027       (  0.059)       0.024        0.003
282  23.50     0.07      0.027       (  0.059)       0.024        0.003
283  23.58     0.07      0.027       (  0.059)       0.024        0.003
284  23.67     0.07      0.027       (  0.059)       0.024        0.003
285  23.75     0.07      0.027       (  0.059)       0.024        0.003
286  23.83     0.07      0.027       (  0.059)       0.024        0.003
287  23.92     0.07      0.027       (  0.059)       0.024        0.003
288  24.00     0.07      0.027       (  0.059)       0.024        0.003
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    19.2
      Flood volume = Effective rainfall      1.60(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      1.80(In)
      Total soil loss =     0.090(Ac.Ft)
      Total rainfall =      3.40(In)
      Flood volume =        3489.4 Cubic Feet
      Total soil loss =        3913.2 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.219(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0000      0.00  Q         |         |         |         |
   0+15       0.0000      0.00  Q         |         |         |         |
   0+20       0.0001      0.00  Q         |         |         |         |
   0+25       0.0001      0.00  Q         |         |         |         |
   0+30       0.0001      0.00  Q         |         |         |         |
   0+35       0.0001      0.00  Q         |         |         |         |
   0+40       0.0001      0.00  Q         |         |         |         |
   0+45       0.0001      0.00  Q         |         |         |         |
   0+50       0.0002      0.00  Q         |         |         |         |
   0+55       0.0002      0.00  Q         |         |         |         |
   1+ 0       0.0002      0.00  Q         |         |         |         |
   1+ 5       0.0002      0.00  Q         |         |         |         |
   1+10       0.0002      0.00  Q         |         |         |         |
   1+15       0.0003      0.00  Q         |         |         |         |
   1+20       0.0003      0.00  Q         |         |         |         |
   1+25       0.0003      0.00  Q         |         |         |         |
   1+30       0.0003      0.00  Q         |         |         |         |
   1+35       0.0003      0.00  Q         |         |         |         |
   1+40       0.0003      0.00  Q         |         |         |         |
   1+45       0.0004      0.00  Q         |         |         |         |
   1+50       0.0004      0.00  Q         |         |         |         |
   1+55       0.0004      0.00  Q         |         |         |         |
   2+ 0       0.0004      0.00  Q         |         |         |         |
   2+ 5       0.0004      0.00  Q         |         |         |         |
   2+10       0.0005      0.00  Q         |         |         |         |
   2+15       0.0005      0.00  Q         |         |         |         |
   2+20       0.0005      0.00  Q         |         |         |         |
   2+25       0.0005      0.00  Q         |         |         |         |
   2+30       0.0006      0.00  Q         |         |         |         |
   2+35       0.0006      0.00  Q         |         |         |         |
   2+40       0.0006      0.00  Q         |         |         |         |
   2+45       0.0006      0.00  Q         |         |         |         |
   2+50       0.0007      0.00  Q         |         |         |         |
   2+55       0.0007      0.00  Q         |         |         |         |
   3+ 0       0.0007      0.00  Q         |         |         |         |
   3+ 5       0.0008      0.00  Q         |         |         |         |
   3+10       0.0008      0.00  Q         |         |         |         |
   3+15       0.0008      0.00  Q         |         |         |         |
   3+20       0.0008      0.00  Q         |         |         |         |
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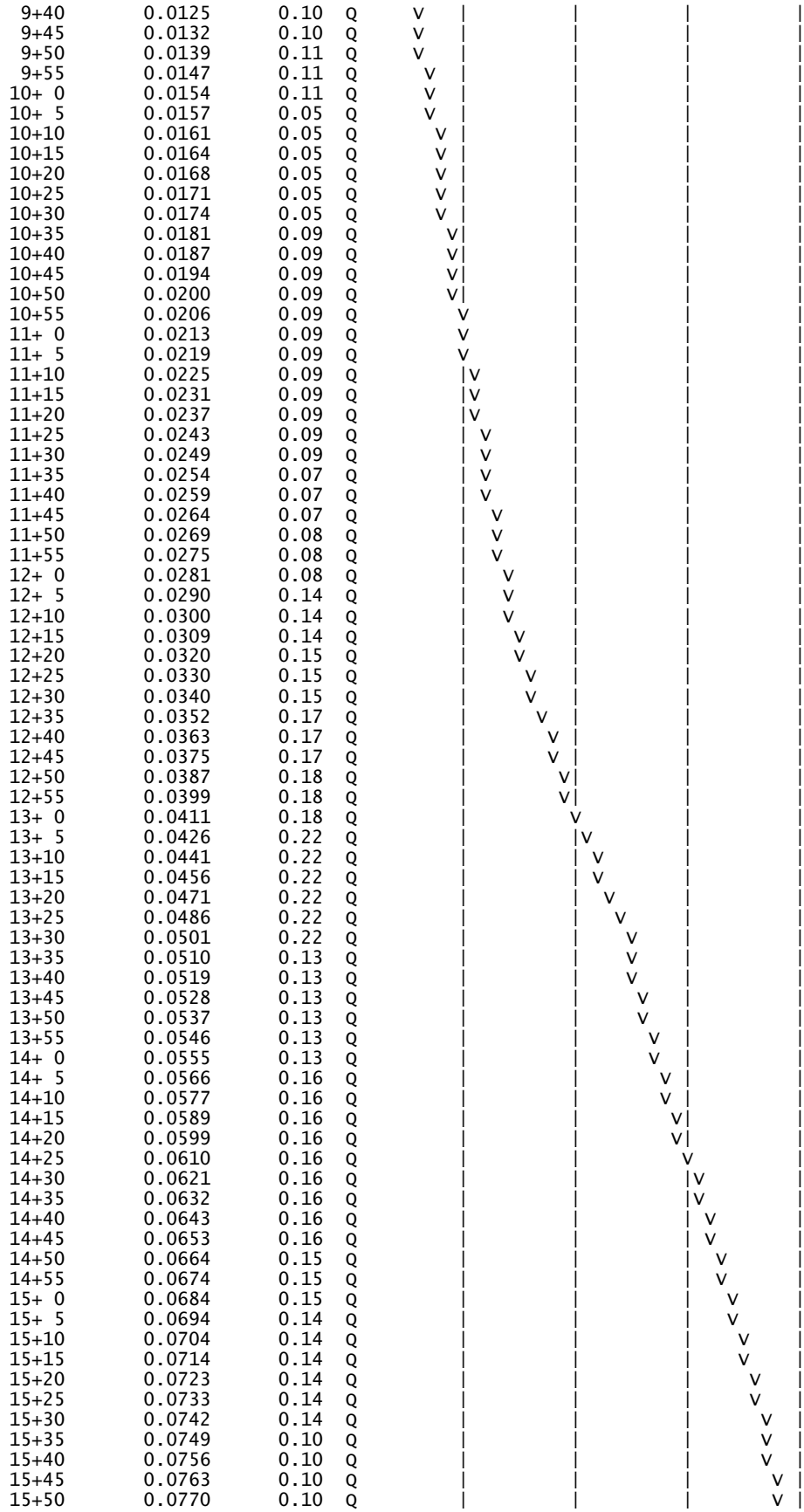
3+25       0.0009      0.00  Q          |          |          |          |
3+30       0.0009      0.00  Q          |          |          |          |
3+35       0.0009      0.00  Q          |          |          |          |
3+40       0.0010      0.00  Q          |          |          |          |
3+45       0.0010      0.00  Q          |          |          |          |
3+50       0.0010      0.00  Q          |          |          |          |
3+55       0.0011      0.00  Q          |          |          |          |
4+ 0       0.0011      0.00  Q          |          |          |          |
4+ 5       0.0011      0.00  Q          |          |          |          |
4+10       0.0012      0.00  Q          |          |          |          |
4+15       0.0012      0.00  Q          |          |          |          |
4+20       0.0012      0.01  Q          |          |          |          |
4+25       0.0013      0.01  Q          |          |          |          |
4+30       0.0013      0.01  Q          |          |          |          |
4+35       0.0013      0.01  Q          |          |          |          |
4+40       0.0014      0.01  Q          |          |          |          |
4+45       0.0014      0.01  Q          |          |          |          |
4+50       0.0015      0.01  Q          |          |          |          |
4+55       0.0015      0.01  Q          |          |          |          |
5+ 0       0.0016      0.01  Q          |          |          |          |
5+ 5       0.0016      0.00  Q          |          |          |          |
5+10       0.0016      0.00  Q          |          |          |          |
5+15       0.0017      0.00  Q          |          |          |          |
5+20       0.0017      0.01  Q          |          |          |          |
5+25       0.0017      0.01  Q          |          |          |          |
5+30       0.0018      0.01  Q          |          |          |          |
5+35       0.0018      0.01  Q          |          |          |          |
5+40       0.0019      0.01  Q          |          |          |          |
5+45       0.0019      0.01  Q          |          |          |          |
5+50       0.0020      0.01  Q          |          |          |          |
5+55       0.0020      0.01  QV         |          |          |          |
6+ 0       0.0021      0.01  QV         |          |          |          |
6+ 5       0.0021      0.01  QV         |          |          |          |
6+10       0.0022      0.01  QV         |          |          |          |
6+15       0.0022      0.01  QV         |          |          |          |
6+20       0.0023      0.01  QV         |          |          |          |
6+25       0.0023      0.01  QV         |          |          |          |
6+30       0.0024      0.01  QV         |          |          |          |
6+35       0.0024      0.01  QV         |          |          |          |
6+40       0.0025      0.01  QV         |          |          |          |
6+45       0.0025      0.01  QV         |          |          |          |
6+50       0.0026      0.01  QV         |          |          |          |
6+55       0.0026      0.01  QV         |          |          |          |
7+ 0       0.0027      0.01  QV         |          |          |          |
7+ 5       0.0028      0.01  QV         |          |          |          |
7+10       0.0028      0.01  QV         |          |          |          |
7+15       0.0029      0.01  QV         |          |          |          |
7+20       0.0029      0.01  QV         |          |          |          |
7+25       0.0030      0.01  QV         |          |          |          |
7+30       0.0031      0.01  QV         |          |          |          |
7+35       0.0031      0.01  QV         |          |          |          |
7+40       0.0032      0.01  QV         |          |          |          |
7+45       0.0033      0.01  QV         |          |          |          |
7+50       0.0035      0.02  QV         |          |          |          |
7+55       0.0036      0.02  QV         |          |          |          |
8+ 0       0.0038      0.02  QV         |          |          |          |
8+ 5       0.0041      0.04  Q V        |          |          |          |
8+10       0.0044      0.04  Q V        |          |          |          |
8+15       0.0046      0.04  Q V        |          |          |          |
8+20       0.0049      0.04  Q V        |          |          |          |
8+25       0.0052      0.04  Q V        |          |          |          |
8+30       0.0055      0.04  Q V        |          |          |          |
8+35       0.0058      0.05  Q V        |          |          |          |
8+40       0.0062      0.05  Q  V       |          |          |          |
8+45       0.0065      0.05  Q  V       |          |          |          |
8+50       0.0070      0.06  Q  V       |          |          |          |
8+55       0.0074      0.06  Q  V       |          |          |          |
9+ 0       0.0078      0.06  Q  V       |          |          |          |
9+ 5       0.0083      0.08  Q   V      |          |          |          |
9+10       0.0089      0.08  Q   V      |          |          |          |
9+15       0.0094      0.08  Q   V      |          |          |          |
9+20       0.0100      0.09  Q   V      |          |          |          |
9+25       0.0106      0.09  Q    V     |          |          |          |
9+30       0.0112      0.09  Q    V     |          |          |          |
9+35       0.0119      0.10  Q    V     |          |          |          |
```



15+55	0.0778	0.10	Q	|	|	|	V |
16+ 0	0.0785	0.10	Q	|	|	|	V|
16+ 5	0.0785	0.00	Q	|	|	|	V|
16+10	0.0785	0.00	Q	|	|	|	V|
16+15	0.0785	0.00	Q	|	|	|	V|
16+20	0.0786	0.00	Q	|	|	|	V|
16+25	0.0786	0.00	Q	|	|	|	V|
16+30	0.0786	0.00	Q	|	|	|	V|
16+35	0.0786	0.00	Q	|	|	|	V|
16+40	0.0786	0.00	Q	|	|	|	V|
16+45	0.0787	0.00	Q	|	|	|	V|
16+50	0.0787	0.00	Q	|	|	|	V|
16+55	0.0787	0.00	Q	|	|	|	V|
17+ 0	0.0787	0.00	Q	|	|	|	V|
17+ 5	0.0787	0.00	Q	|	|	|	V|
17+10	0.0788	0.00	Q	|	|	|	V|
17+15	0.0788	0.00	Q	|	|	|	V|
17+20	0.0788	0.00	Q	|	|	|	V|
17+25	0.0789	0.00	Q	|	|	|	V|
17+30	0.0789	0.00	Q	|	|	|	V|
17+35	0.0789	0.00	Q	|	|	|	V|
17+40	0.0789	0.00	Q	|	|	|	V|
17+45	0.0790	0.00	Q	|	|	|	V|
17+50	0.0790	0.00	Q	|	|	|	V|
17+55	0.0790	0.00	Q	|	|	|	V|
18+ 0	0.0790	0.00	Q	|	|	|	V|
18+ 5	0.0791	0.00	Q	|	|	|	V|
18+10	0.0791	0.00	Q	|	|	|	V|
18+15	0.0791	0.00	Q	|	|	|	V|
18+20	0.0791	0.00	Q	|	|	|	V|
18+25	0.0791	0.00	Q	|	|	|	V|
18+30	0.0792	0.00	Q	|	|	|	V|
18+35	0.0792	0.00	Q	|	|	|	V|
18+40	0.0792	0.00	Q	|	|	|	V|
18+45	0.0792	0.00	Q	|	|	|	V|
18+50	0.0792	0.00	Q	|	|	|	V|
18+55	0.0792	0.00	Q	|	|	|	V|
19+ 0	0.0793	0.00	Q	|	|	|	V|
19+ 5	0.0793	0.00	Q	|	|	|	V|
19+10	0.0793	0.00	Q	|	|	|	V|
19+15	0.0793	0.00	Q	|	|	|	V|
19+20	0.0793	0.00	Q	|	|	|	V|
19+25	0.0794	0.00	Q	|	|	|	V|
19+30	0.0794	0.00	Q	|	|	|	V|
19+35	0.0794	0.00	Q	|	|	|	V|
19+40	0.0794	0.00	Q	|	|	|	V|
19+45	0.0794	0.00	Q	|	|	|	V|
19+50	0.0794	0.00	Q	|	|	|	V|
19+55	0.0794	0.00	Q	|	|	|	V|
20+ 0	0.0795	0.00	Q	|	|	|	V|
20+ 5	0.0795	0.00	Q	|	|	|	V|
20+10	0.0795	0.00	Q	|	|	|	V|
20+15	0.0795	0.00	Q	|	|	|	V|
20+20	0.0795	0.00	Q	|	|	|	V|
20+25	0.0795	0.00	Q	|	|	|	V|
20+30	0.0796	0.00	Q	|	|	|	V|
20+35	0.0796	0.00	Q	|	|	|	V|
20+40	0.0796	0.00	Q	|	|	|	V|
20+45	0.0796	0.00	Q	|	|	|	V|
20+50	0.0796	0.00	Q	|	|	|	V|
20+55	0.0796	0.00	Q	|	|	|	V|
21+ 0	0.0796	0.00	Q	|	|	|	V|
21+ 5	0.0797	0.00	Q	|	|	|	V|
21+10	0.0797	0.00	Q	|	|	|	V|
21+15	0.0797	0.00	Q	|	|	|	V|
21+20	0.0797	0.00	Q	|	|	|	V|
21+25	0.0797	0.00	Q	|	|	|	V|
21+30	0.0797	0.00	Q	|	|	|	V|
21+35	0.0797	0.00	Q	|	|	|	V|
21+40	0.0798	0.00	Q	|	|	|	V|
21+45	0.0798	0.00	Q	|	|	|	V|
21+50	0.0798	0.00	Q	|	|	|	V|
21+55	0.0798	0.00	Q	|	|	|	V|
22+ 0	0.0798	0.00	Q	|	|	|	V|
22+ 5	0.0798	0.00	Q	|	|	|	V|

22+10	0.0798	0.00	Q	|	|	|	v|
22+15	0.0799	0.00	Q	|	|	|	v|
22+20	0.0799	0.00	Q	|	|	|	v|
22+25	0.0799	0.00	Q	|	|	|	v|
22+30	0.0799	0.00	Q	|	|	|	v|
22+35	0.0799	0.00	Q	|	|	|	v|
22+40	0.0799	0.00	Q	|	|	|	v|
22+45	0.0799	0.00	Q	|	|	|	v|
22+50	0.0799	0.00	Q	|	|	|	v|
22+55	0.0800	0.00	Q	|	|	|	v|
23+ 0	0.0800	0.00	Q	|	|	|	v|
23+ 5	0.0800	0.00	Q	|	|	|	v|
23+10	0.0800	0.00	Q	|	|	|	v|
23+15	0.0800	0.00	Q	|	|	|	v|
23+20	0.0800	0.00	Q	|	|	|	v|
23+25	0.0800	0.00	Q	|	|	|	v|
23+30	0.0800	0.00	Q	|	|	|	v|
23+35	0.0800	0.00	Q	|	|	|	v|
23+40	0.0801	0.00	Q	|	|	|	v|
23+45	0.0801	0.00	Q	|	|	|	v|
23+50	0.0801	0.00	Q	|	|	|	v|
23+55	0.0801	0.00	Q	|	|	|	v|
24+ 0	0.0801	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 03/12/24 File: ONSITEPREE41100.out

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

Program License Serial Number 6585

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	0.50	0.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	1.30	0.78

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 1.300(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.300(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                        Sum (F) =   0.117
      Area averaged mean soil loss (F) (In/Hr) =  0.117
      Minimum soil loss rate ((In/Hr)) =  0.059
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.900
      ------------------------------------------------------------------------
      Slope of intensity-duration curve for a 1 hour storm =0.5500
      ------------------------------------------------------------------------

                  U n i t  H y d r o g r a p h
                         VALLEY S-Curve
      ------------------------------------------------------------------------
                  Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083       1058.907        100.000             0.605
                                  Sum = 100.000   Sum=        0.605
-------------------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.236)	1.256
9	0.75	13.90	2.168	0.117	(1.952)	2.051
10	0.83	31.40	4.898	0.117	(4.409)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.534)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

```
      Flood volume = Effective rainfall      1.18(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      0.12(In)
      Total soil loss =     0.006(Ac.Ft)
      Total rainfall =      1.30(In)
      Flood volume =        2576.6 Cubic Feet
      Total soil loss =         254.8 Cubic Feet
      ------------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.893(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       0.0017      0.24  QV        |         |         |         |
   0+10       0.0039      0.33  |QV       |         |         |         |
   0+15       0.0063      0.34  |Q  V     |         |         |         |
   0+20       0.0089      0.38  |Q    V   |         |         |         |
   0+25       0.0118      0.42  |Q     V  |         |         |         |
   0+30       0.0153      0.51  | Q       V         |         |         |
   0+35       0.0193      0.57  | Q       |  V      |         |         |
   0+40       0.0245      0.76  |  Q      |     V   |         |         |
   0+45       0.0331      1.24  |   Q     |         | V       |         |
   0+50       0.0530      2.89  |         |Q        |         |    V    |
   0+55       0.0572      0.61  | Q       |         |         |       V |
   1+ 0       0.0591      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 03/12/24 File: ONSITEPREE43100.out

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

Program License Serial Number 6585

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	0.80	0.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.00	1.20

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.800(In)
Area Averaged 100-Year Rainfall = 2.000(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                        Sum (F) =    0.117
      Area averaged mean soil loss (F) (In/Hr) =  0.117
      Minimum soil loss rate ((In/Hr)) =  0.059
      (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   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                           Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083       1058.907        100.000             0.605
                                  Sum = 100.000    Sum=       0.605
------------------------------------------------------------------------
```

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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	19.8

```
   Flood volume = Effective rainfall      1.65(In)
    times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
   Total soil loss =      0.35(In)
   Total soil loss =     0.018(Ac.Ft)
   Total rainfall =      2.00(In)
   Flood volume =        3591.5 Cubic Feet
   Total soil loss =         764.5 Cubic Feet
   ------------------------------------------------------------------------
    Peak flow rate of this hydrograph =      1.120(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	0.0008	0.12	Q				
0+10	0.0016	0.12	Q				
0+15	0.0022	0.09	QV				
0+20	0.0032	0.15	QV				
0+25	0.0043	0.15	Q V				
0+30	0.0056	0.19	Q V				
0+35	0.0066	0.15	Q V				
0+40	0.0079	0.19	Q V				
0+45	0.0092	0.19	Q V				
0+50	0.0102	0.15	Q V				
0+55	0.0113	0.16	Q V				
1+ 0	0.0126	0.19	Q V				
1+ 5	0.0144	0.25	Q V				
1+10	0.0161	0.25	Q V				
1+15	0.0178	0.25	Q V				
1+20	0.0193	0.22	Q V				
1+25	0.0214	0.31	Q V				
1+30	0.0236	0.32	Q V				
1+35	0.0255	0.28	Q V				
1+40	0.0277	0.32	Q V				
1+45	0.0306	0.41	Q V				
1+50	0.0332	0.38	Q V				
1+55	0.0356	0.35	Q V				
2+ 0	0.0381	0.36	Q V				
2+ 5	0.0407	0.38	Q V				
2+10	0.0444	0.54	Q V				
2+15	0.0489	0.66	Q V				
2+20	0.0519	0.44	Q V				
2+25	0.0583	0.92	Q V				
2+30	0.0651	0.99	Q V				
2+35	0.0728	1.12	Q V				
2+40	0.0782	0.79	Q V				
2+45	0.0797	0.22	Q V				
2+50	0.0810	0.19	Q V				
2+55	0.0823	0.19	Q V				
3+ 0	0.0824	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 03/12/24 File: ONSITEPREE46100.out

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

Program License Serial Number 6585

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	1.20	0.72

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.80	1.68

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.200(In)
Area Averaged 100-Year Rainfall = 2.800(In)

Point rain (area averaged) = 2.800(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

91.0	91.0	0.117	0.000	0.117	1.000	0.117
					Sum (F) =	0.117

Area averaged mean soil loss (F) (In/Hr) = 0.117
Minimum soil loss rate ((In/Hr)) = 0.059
(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

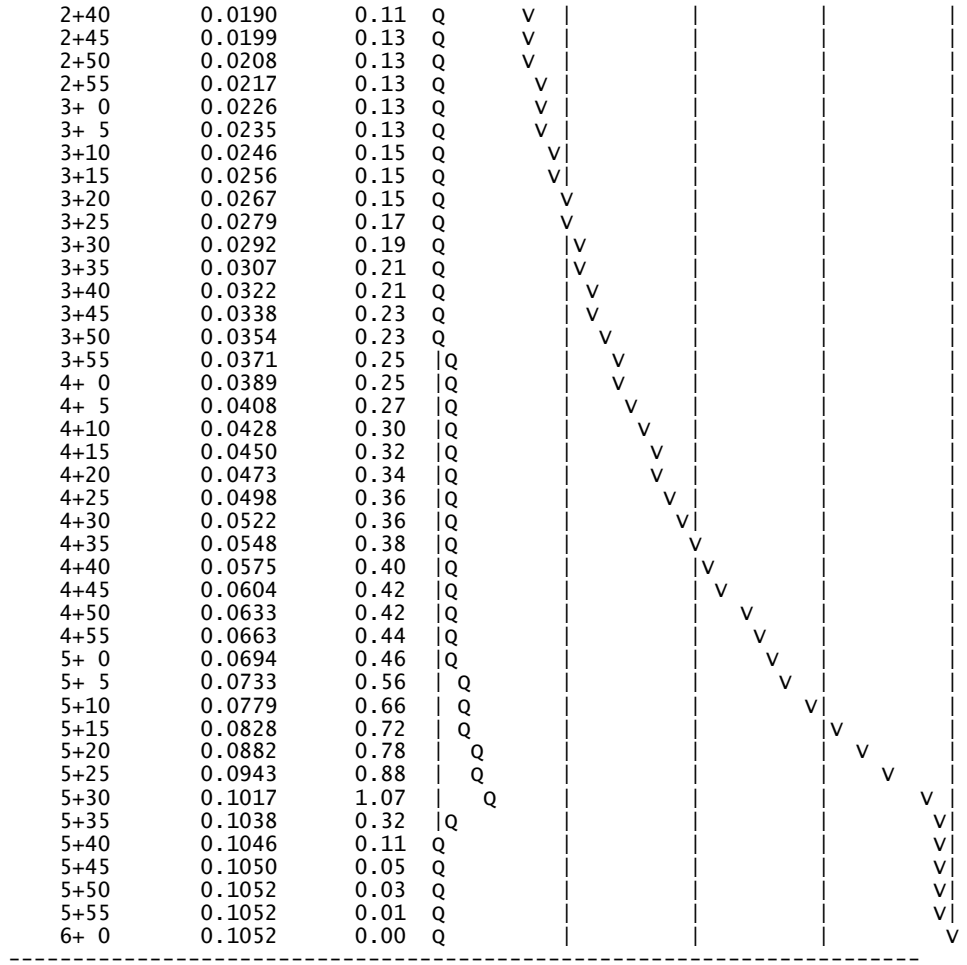
Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1 0.083	1058.907	100.000	0.605
	Sum =	100.000 Sum=	0.605

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	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387
46	3.83	1.50	0.504	0.117	(0.454)	0.387
47	3.92	1.60	0.538	0.117	(0.484)	0.421
48	4.00	1.60	0.538	0.117	(0.484)	0.421
49	4.08	1.70	0.571	0.117	(0.514)	0.454

```
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
     Flood volume = Effective rainfall      2.10(In)
      times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
     Total soil loss =      0.70(In)
     Total soil loss =     0.035(Ac.Ft)
     Total rainfall =      2.80(In)
     Flood volume =        4584.5 Cubic Feet
     Total soil loss =        1513.9 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      1.068(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       0.0006      0.05  Q          |         |         |         |
  0+15       0.0009      0.05  Q          |         |         |         |
  0+20       0.0013      0.05  Q          |         |         |         |
  0+25       0.0016      0.05  Q          |         |         |         |
  0+30       0.0021      0.07  Q          |         |         |         |
  0+35       0.0026      0.07  Q          |         |         |         |
  0+40       0.0031      0.07  QV         |         |         |         |
  0+45       0.0036      0.07  QV         |         |         |         |
  0+50       0.0041      0.07  QV         |         |         |         |
  0+55       0.0046      0.07  QV         |         |         |         |
  1+ 0       0.0052      0.09  QV         |         |         |         |
  1+ 5       0.0058      0.09  Q V        |         |         |         |
  1+10       0.0065      0.09  Q V        |         |         |         |
  1+15       0.0071      0.09  Q V        |         |         |         |
  1+20       0.0077      0.09  Q V        |         |         |         |
  1+25       0.0084      0.09  Q  V       |         |         |         |
  1+30       0.0090      0.09  Q  V       |         |         |         |
  1+35       0.0096      0.09  Q  V       |         |         |         |
  1+40       0.0103      0.09  Q  V       |         |         |         |
  1+45       0.0109      0.09  Q   V      |         |         |         |
  1+50       0.0115      0.09  Q   V      |         |         |         |
  1+55       0.0122      0.09  Q   V      |         |         |         |
  2+ 0       0.0129      0.11  Q   V      |         |         |         |
  2+ 5       0.0136      0.09  Q    V     |         |         |         |
  2+10       0.0143      0.11  Q    V     |         |         |         |
  2+15       0.0151      0.11  Q    V     |         |         |         |
  2+20       0.0159      0.11  Q     V    |         |         |         |
  2+25       0.0167      0.11  Q     V    |         |         |         |
  2+30       0.0174      0.11  Q     V    |         |         |         |
  2+35       0.0182      0.11  Q     V    |         |         |         |
```


2+40 0.0190 0.11
2+45 0.0199 0.13
2+50 0.0208 0.13
2+55 0.0217 0.13
3+ 0 0.0226 0.13
3+ 5 0.0235 0.13
3+10 0.0246 0.15
3+15 0.0256 0.15
3+20 0.0267 0.15
3+25 0.0279 0.17
3+30 0.0292 0.19
3+35 0.0307 0.21
3+40 0.0322 0.21
3+45 0.0338 0.23
3+50 0.0354 0.23
3+55 0.0371 0.25
4+ 0 0.0389 0.25
4+ 5 0.0408 0.27
4+10 0.0428 0.30
4+15 0.0450 0.32
4+20 0.0473 0.34
4+25 0.0498 0.36
4+30 0.0522 0.36
4+35 0.0548 0.38
4+40 0.0575 0.40
4+45 0.0604 0.42
4+50 0.0633 0.42
4+55 0.0663 0.44
5+ 0 0.0694 0.46
5+ 5 0.0733 0.56
5+10 0.0779 0.66
5+15 0.0828 0.72
5+20 0.0882 0.78
5+25 0.0943 0.88
5+30 0.1017 1.07
5+35 0.1038 0.32
5+40 0.1046 0.11
5+45 0.1050 0.05
5+50 0.1052 0.03
5+55 0.1052 0.01
6+ 0 0.1052 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 03/12/24 File: ONSITEPREE424100.out

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

Program License Serial Number 6585

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 181.00(Ft.)
Length along longest watercourse measured to centroid = 25.00(Ft.)
Length along longest watercourse = 0.034 Mi.
Length along longest watercourse measured to centroid = 0.005 Mi.
Difference in elevation = 19.00(Ft.)
Slope along watercourse = 554.2541 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.008 Hr.
Lag time = 0.47 Min.
25% of lag time = 0.12 Min.
40% of lag time = 0.19 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 5.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 5.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	91.00	0.000

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

91.0	91.0	0.117	0.000	0.117	1.000	0.117
					Sum (F) =	0.117

Area averaged mean soil loss (F) (In/Hr) = 0.117
Minimum soil loss rate ((In/Hr)) = 0.059
(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	1058.907	100.000	0.605
		Sum = 100.000	Sum= 0.605

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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011
46	3.83	0.20	0.130	(0.173)	0.117	0.013
47	3.92	0.20	0.130	(0.172)	0.117	0.013
48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013

50	4.17	0.20	0.130	(	0.170)	0.117	0.013
51	4.25	0.20	0.130	(	0.169)	0.117	0.013
52	4.33	0.23	0.151	(	0.169)	0.136	0.015
53	4.42	0.23	0.151	(	0.168)	0.136	0.015
54	4.50	0.23	0.151	(	0.167)	0.136	0.015
55	4.58	0.23	0.151	(	0.166)	0.136	0.015
56	4.67	0.23	0.151	(	0.166)	0.136	0.015
57	4.75	0.23	0.151	(	0.165)	0.136	0.015
58	4.83	0.27	0.173	(	0.164)	0.156	0.017
59	4.92	0.27	0.173	(	0.164)	0.156	0.017
60	5.00	0.27	0.173	(	0.163)	0.156	0.017
61	5.08	0.20	0.130	(	0.162)	0.117	0.013
62	5.17	0.20	0.130	(	0.161)	0.117	0.013
63	5.25	0.20	0.130	(	0.161)	0.117	0.013
64	5.33	0.23	0.151	(	0.160)	0.136	0.015
65	5.42	0.23	0.151	(	0.159)	0.136	0.015
66	5.50	0.23	0.151	(	0.159)	0.136	0.015
67	5.58	0.27	0.173	(	0.158)	0.156	0.017
68	5.67	0.27	0.173	(	0.157)	0.156	0.017
69	5.75	0.27	0.173	(	0.157)	0.156	0.017
70	5.83	0.27	0.173	(	0.156)	0.156	0.017
71	5.92	0.27	0.173		0.155	(0.156)	0.018
72	6.00	0.27	0.173		0.154	(0.156)	0.018
73	6.08	0.30	0.194		0.154	(0.175)	0.041
74	6.17	0.30	0.194		0.153	(0.175)	0.041
75	6.25	0.30	0.194		0.152	(0.175)	0.042
76	6.33	0.30	0.194		0.152	(0.175)	0.043
77	6.42	0.30	0.194		0.151	(0.175)	0.043
78	6.50	0.30	0.194		0.150	(0.175)	0.044
79	6.58	0.33	0.216		0.150	(0.194)	0.066
80	6.67	0.33	0.216		0.149	(0.194)	0.067
81	6.75	0.33	0.216		0.148	(0.194)	0.068
82	6.83	0.33	0.216		0.148	(0.194)	0.068
83	6.92	0.33	0.216		0.147	(0.194)	0.069
84	7.00	0.33	0.216		0.146	(0.194)	0.070
85	7.08	0.33	0.216		0.146	(0.194)	0.070
86	7.17	0.33	0.216		0.145	(0.194)	0.071
87	7.25	0.33	0.216		0.144	(0.194)	0.072
88	7.33	0.37	0.238		0.144	(0.214)	0.094
89	7.42	0.37	0.238		0.143	(0.214)	0.095
90	7.50	0.37	0.238		0.142	(0.214)	0.095
91	7.58	0.40	0.259		0.142	(0.233)	0.117
92	7.67	0.40	0.259		0.141	(0.233)	0.118
93	7.75	0.40	0.259		0.140	(0.233)	0.119
94	7.83	0.43	0.281		0.140	(0.253)	0.141
95	7.92	0.43	0.281		0.139	(0.253)	0.142
96	8.00	0.43	0.281		0.138	(0.253)	0.142
97	8.08	0.50	0.324		0.138	(0.292)	0.186
98	8.17	0.50	0.324		0.137	(0.292)	0.187
99	8.25	0.50	0.324		0.137	(0.292)	0.187
100	8.33	0.50	0.324		0.136	(0.292)	0.188
101	8.42	0.50	0.324		0.135	(0.292)	0.189
102	8.50	0.50	0.324		0.135	(0.292)	0.189
103	8.58	0.53	0.346		0.134	(0.311)	0.212
104	8.67	0.53	0.346		0.133	(0.311)	0.212
105	8.75	0.53	0.346		0.133	(0.311)	0.213
106	8.83	0.57	0.367		0.132	(0.330)	0.235
107	8.92	0.57	0.367		0.131	(0.330)	0.236
108	9.00	0.57	0.367		0.131	(0.330)	0.236
109	9.08	0.63	0.410		0.130	(0.369)	0.280
110	9.17	0.63	0.410		0.130	(0.369)	0.281
111	9.25	0.63	0.410		0.129	(0.369)	0.281
112	9.33	0.67	0.432		0.128	(0.389)	0.304
113	9.42	0.67	0.432		0.128	(0.389)	0.304
114	9.50	0.67	0.432		0.127	(0.389)	0.305
115	9.58	0.70	0.454		0.127	(0.408)	0.327
116	9.67	0.70	0.454		0.126	(0.408)	0.328
117	9.75	0.70	0.454		0.125	(0.408)	0.328
118	9.83	0.73	0.475		0.125	(0.428)	0.350
119	9.92	0.73	0.475		0.124	(0.428)	0.351
120	10.00	0.73	0.475		0.124	(0.428)	0.352
121	10.08	0.50	0.324		0.123	(0.292)	0.201
122	10.17	0.50	0.324		0.122	(0.292)	0.202
123	10.25	0.50	0.324		0.122	(0.292)	0.202
124	10.33	0.50	0.324		0.121	(0.292)	0.203

125	10.42	0.50	0.324		0.121	(0.292)	0.203
126	10.50	0.50	0.324		0.120	(0.292)	0.204
127	10.58	0.67	0.432		0.119	(0.389)	0.313
128	10.67	0.67	0.432		0.119	(0.389)	0.313
129	10.75	0.67	0.432		0.118	(0.389)	0.314
130	10.83	0.67	0.432		0.118	(0.389)	0.314
131	10.92	0.67	0.432		0.117	(0.389)	0.315
132	11.00	0.67	0.432		0.117	(0.389)	0.315
133	11.08	0.63	0.410		0.116	(0.369)	0.294
134	11.17	0.63	0.410		0.115	(0.369)	0.295
135	11.25	0.63	0.410		0.115	(0.369)	0.296
136	11.33	0.63	0.410		0.114	(0.369)	0.296
137	11.42	0.63	0.410		0.114	(0.369)	0.297
138	11.50	0.63	0.410		0.113	(0.369)	0.297
139	11.58	0.57	0.367		0.113	(0.330)	0.255
140	11.67	0.57	0.367		0.112	(0.330)	0.255
141	11.75	0.57	0.367		0.111	(0.330)	0.256
142	11.83	0.60	0.389		0.111	(0.350)	0.278
143	11.92	0.60	0.389		0.110	(0.350)	0.278
144	12.00	0.60	0.389		0.110	(0.350)	0.279
145	12.08	0.83	0.540		0.109	(0.486)	0.431
146	12.17	0.83	0.540		0.109	(0.486)	0.431
147	12.25	0.83	0.540		0.108	(0.486)	0.432
148	12.33	0.87	0.562		0.108	(0.505)	0.454
149	12.42	0.87	0.562		0.107	(0.505)	0.455
150	12.50	0.87	0.562		0.107	(0.505)	0.455
151	12.58	0.93	0.605		0.106	(0.544)	0.499
152	12.67	0.93	0.605		0.105	(0.544)	0.499
153	12.75	0.93	0.605		0.105	(0.544)	0.500
154	12.83	0.97	0.626		0.104	(0.564)	0.522
155	12.92	0.97	0.626		0.104	(0.564)	0.523
156	13.00	0.97	0.626		0.103	(0.564)	0.523
157	13.08	1.13	0.734		0.103	(0.661)	0.632
158	13.17	1.13	0.734		0.102	(0.661)	0.632
159	13.25	1.13	0.734		0.102	(0.661)	0.633
160	13.33	1.13	0.734		0.101	(0.661)	0.633
161	13.42	1.13	0.734		0.101	(0.661)	0.634
162	13.50	1.13	0.734		0.100	(0.661)	0.634
163	13.58	0.77	0.497		0.100	(0.447)	0.397
164	13.67	0.77	0.497		0.099	(0.447)	0.398
165	13.75	0.77	0.497		0.099	(0.447)	0.398
166	13.83	0.77	0.497		0.098	(0.447)	0.399
167	13.92	0.77	0.497		0.098	(0.447)	0.399
168	14.00	0.77	0.497		0.097	(0.447)	0.400
169	14.08	0.90	0.583		0.097	(0.525)	0.487
170	14.17	0.90	0.583		0.096	(0.525)	0.487
171	14.25	0.90	0.583		0.096	(0.525)	0.487
172	14.33	0.87	0.562		0.095	(0.505)	0.466
173	14.42	0.87	0.562		0.095	(0.505)	0.467
174	14.50	0.87	0.562		0.094	(0.505)	0.467
175	14.58	0.87	0.562		0.094	(0.505)	0.468
176	14.67	0.87	0.562		0.093	(0.505)	0.468
177	14.75	0.87	0.562		0.093	(0.505)	0.469
178	14.83	0.83	0.540		0.092	(0.486)	0.448
179	14.92	0.83	0.540		0.092	(0.486)	0.448
180	15.00	0.83	0.540		0.091	(0.486)	0.449
181	15.08	0.80	0.518		0.091	(0.467)	0.427
182	15.17	0.80	0.518		0.090	(0.467)	0.428
183	15.25	0.80	0.518		0.090	(0.467)	0.428
184	15.33	0.77	0.497		0.090	(0.447)	0.407
185	15.42	0.77	0.497		0.089	(0.447)	0.408
186	15.50	0.77	0.497		0.089	(0.447)	0.408
187	15.58	0.63	0.410		0.088	(0.369)	0.322
188	15.67	0.63	0.410		0.088	(0.369)	0.323
189	15.75	0.63	0.410		0.087	(0.369)	0.323
190	15.83	0.63	0.410		0.087	(0.369)	0.324
191	15.92	0.63	0.410		0.086	(0.369)	0.324
192	16.00	0.63	0.410		0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078		0.009
194	16.17	0.13	0.086	(0.085)	0.078		0.009
195	16.25	0.13	0.086	(0.085)	0.078		0.009
196	16.33	0.13	0.086	(0.084)	0.078		0.009
197	16.42	0.13	0.086	(0.084)	0.078		0.009
198	16.50	0.13	0.086	(0.083)	0.078		0.009
199	16.58	0.10	0.065	(0.083)	0.058		0.006

200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006
246	20.50	0.10	0.065	(	0.066)	0.058		0.006
247	20.58	0.10	0.065	(	0.066)	0.058		0.006
248	20.67	0.10	0.065	(	0.066)	0.058		0.006
249	20.75	0.10	0.065	(	0.065)	0.058		0.006
250	20.83	0.07	0.043	(	0.065)	0.039		0.004
251	20.92	0.07	0.043	(	0.065)	0.039		0.004
252	21.00	0.07	0.043	(	0.065)	0.039		0.004
253	21.08	0.10	0.065	(	0.064)	0.058		0.006
254	21.17	0.10	0.065	(	0.064)	0.058		0.006
255	21.25	0.10	0.065	(	0.064)	0.058		0.006
256	21.33	0.07	0.043	(	0.064)	0.039		0.004
257	21.42	0.07	0.043	(	0.063)	0.039		0.004
258	21.50	0.07	0.043	(	0.063)	0.039		0.004
259	21.58	0.10	0.065	(	0.063)	0.058		0.006
260	21.67	0.10	0.065	(	0.063)	0.058		0.006
261	21.75	0.10	0.065	(	0.062)	0.058		0.006
262	21.83	0.07	0.043	(	0.062)	0.039		0.004
263	21.92	0.07	0.043	(	0.062)	0.039		0.004
264	22.00	0.07	0.043	(	0.062)	0.039		0.004
265	22.08	0.10	0.065	(	0.062)	0.058		0.006
266	22.17	0.10	0.065	(	0.061)	0.058		0.006
267	22.25	0.10	0.065	(	0.061)	0.058		0.006
268	22.33	0.07	0.043	(	0.061)	0.039		0.004
269	22.42	0.07	0.043	(	0.061)	0.039		0.004
270	22.50	0.07	0.043	(	0.061)	0.039		0.004
271	22.58	0.07	0.043	(	0.060)	0.039		0.004
272	22.67	0.07	0.043	(	0.060)	0.039		0.004
273	22.75	0.07	0.043	(	0.060)	0.039		0.004
274	22.83	0.07	0.043	(	0.060)	0.039		0.004

275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 38.3

Flood volume = Effective rainfall 3.19(In)
times area 0.6(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.111(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 6944.6 Cubic Feet
Total soil loss = 4816.6 Cubic Feet

Peak flow rate of this hydrograph = 0.384(CFS)

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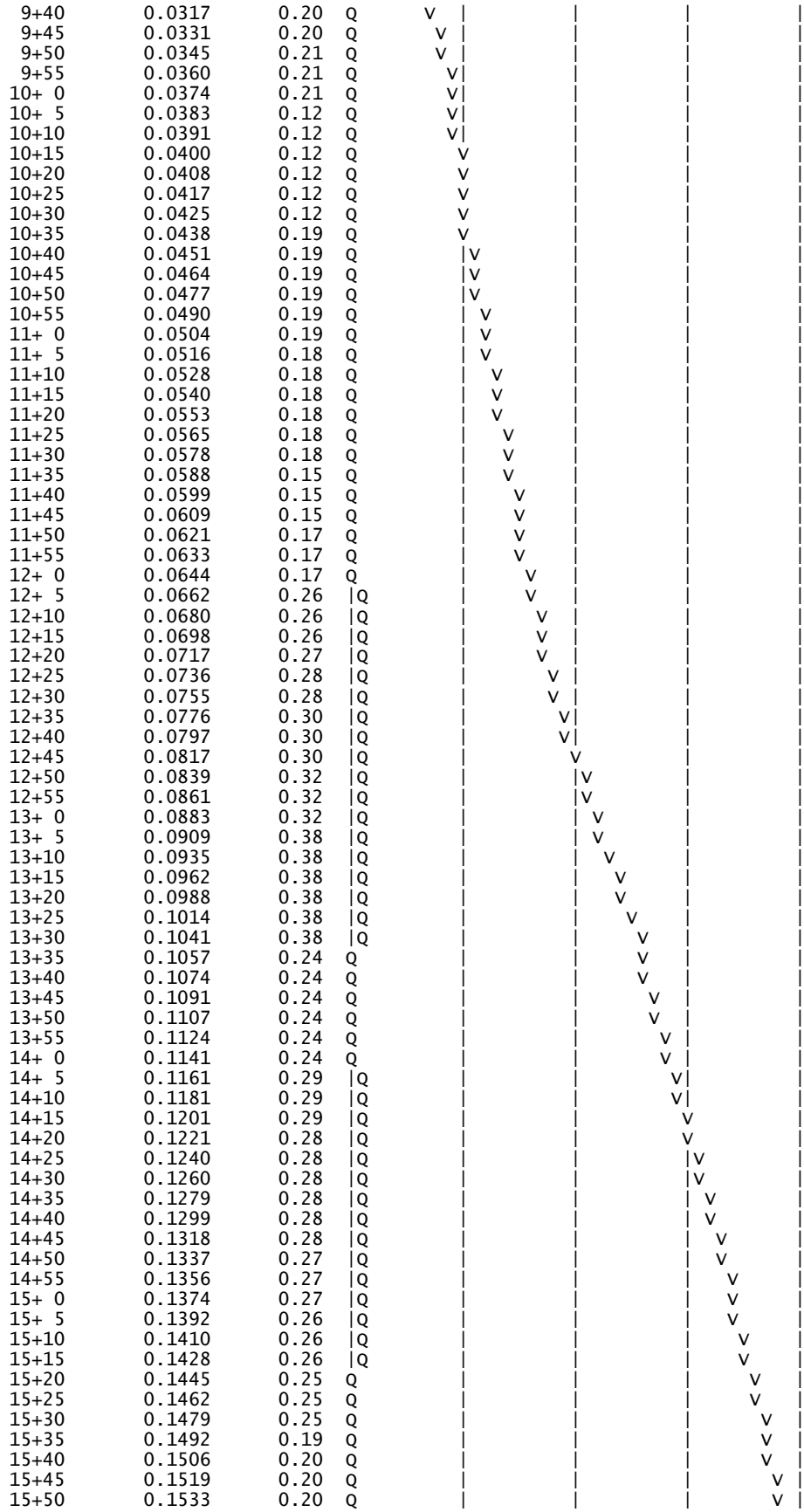
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0000	0.00	Q				
0+15	0.0001	0.00	Q				
0+20	0.0001	0.00	Q				
0+25	0.0001	0.00	Q				
0+30	0.0001	0.00	Q				
0+35	0.0002	0.00	Q				
0+40	0.0002	0.00	Q				
0+45	0.0002	0.00	Q				
0+50	0.0003	0.01	Q				
0+55	0.0003	0.01	Q				
1+ 0	0.0003	0.01	Q				
1+ 5	0.0004	0.00	Q				
1+10	0.0004	0.00	Q				
1+15	0.0004	0.00	Q				
1+20	0.0004	0.00	Q				
1+25	0.0005	0.00	Q				
1+30	0.0005	0.00	Q				
1+35	0.0005	0.00	Q				
1+40	0.0005	0.00	Q				
1+45	0.0006	0.00	Q				
1+50	0.0006	0.01	Q				
1+55	0.0006	0.01	Q				
2+ 0	0.0007	0.01	Q				
2+ 5	0.0007	0.01	Q				
2+10	0.0007	0.01	Q				
2+15	0.0008	0.01	Q				
2+20	0.0008	0.01	Q				
2+25	0.0009	0.01	Q				
2+30	0.0009	0.01	Q				
2+35	0.0009	0.01	Q				
2+40	0.0010	0.01	Q				
2+45	0.0010	0.01	Q				
2+50	0.0011	0.01	Q				
2+55	0.0011	0.01	Q				
3+ 0	0.0012	0.01	Q				
3+ 5	0.0012	0.01	Q				
3+10	0.0013	0.01	Q				
3+15	0.0013	0.01	Q				
3+20	0.0013	0.01	Q				

3+25	0.0014	0.01	Q	|	|	|	|
3+30	0.0014	0.01	Q	|	|	|	|
3+35	0.0015	0.01	Q	|	|	|	|
3+40	0.0015	0.01	Q	|	|	|	|
3+45	0.0016	0.01	Q	|	|	|	|
3+50	0.0016	0.01	Q	|	|	|	|
3+55	0.0017	0.01	Q	|	|	|	|
4+ 0	0.0017	0.01	Q	|	|	|	|
4+ 5	0.0018	0.01	Q	|	|	|	|
4+10	0.0018	0.01	Q	|	|	|	|
4+15	0.0019	0.01	Q	|	|	|	|
4+20	0.0020	0.01	Q	|	|	|	|
4+25	0.0020	0.01	Q	|	|	|	|
4+30	0.0021	0.01	Q	|	|	|	|
4+35	0.0021	0.01	Q	|	|	|	|
4+40	0.0022	0.01	Q	|	|	|	|
4+45	0.0023	0.01	Q	|	|	|	|
4+50	0.0023	0.01	Q	|	|	|	|
4+55	0.0024	0.01	Q	|	|	|	|
5+ 0	0.0025	0.01	Q	|	|	|	|
5+ 5	0.0025	0.01	Q	|	|	|	|
5+10	0.0026	0.01	Q	|	|	|	|
5+15	0.0026	0.01	Q	|	|	|	|
5+20	0.0027	0.01	Q	|	|	|	|
5+25	0.0028	0.01	Q	|	|	|	|
5+30	0.0028	0.01	Q	|	|	|	|
5+35	0.0029	0.01	Q	|	|	|	|
5+40	0.0030	0.01	Q	|	|	|	|
5+45	0.0031	0.01	Q	|	|	|	|
5+50	0.0031	0.01	Q	|	|	|	|
5+55	0.0032	0.01	Q	|	|	|	|
6+ 0	0.0033	0.01	Q	|	|	|	|
6+ 5	0.0034	0.02	Q	|	|	|	|
6+10	0.0036	0.03	Q	|	|	|	|
6+15	0.0038	0.03	Q	|	|	|	|
6+20	0.0040	0.03	Q	|	|	|	|
6+25	0.0041	0.03	QV	|	|	|	|
6+30	0.0043	0.03	QV	|	|	|	|
6+35	0.0046	0.04	QV	|	|	|	|
6+40	0.0049	0.04	QV	|	|	|	|
6+45	0.0052	0.04	QV	|	|	|	|
6+50	0.0055	0.04	QV	|	|	|	|
6+55	0.0057	0.04	QV	|	|	|	|
7+ 0	0.0060	0.04	QV	|	|	|	|
7+ 5	0.0063	0.04	QV	|	|	|	|
7+10	0.0066	0.04	QV	|	|	|	|
7+15	0.0069	0.04	QV	|	|	|	|
7+20	0.0073	0.06	QV	|	|	|	|
7+25	0.0077	0.06	QV	|	|	|	|
7+30	0.0081	0.06	Q V	|	|	|	|
7+35	0.0086	0.07	Q V	|	|	|	|
7+40	0.0091	0.07	Q V	|	|	|	|
7+45	0.0096	0.07	Q V	|	|	|	|
7+50	0.0102	0.09	Q V	|	|	|	|
7+55	0.0108	0.09	Q V	|	|	|	|
8+ 0	0.0113	0.09	Q V	|	|	|	|
8+ 5	0.0121	0.11	Q V	|	|	|	|
8+10	0.0129	0.11	Q V	|	|	|	|
8+15	0.0137	0.11	Q V	|	|	|	|
8+20	0.0145	0.11	Q V	|	|	|	|
8+25	0.0153	0.11	Q V	|	|	|	|
8+30	0.0160	0.11	Q V	|	|	|	|
8+35	0.0169	0.13	Q V	|	|	|	|
8+40	0.0178	0.13	Q V	|	|	|	|
8+45	0.0187	0.13	Q V	|	|	|	|
8+50	0.0197	0.14	Q V	|	|	|	|
8+55	0.0207	0.14	Q V	|	|	|	|
9+ 0	0.0216	0.14	Q V	|	|	|	|
9+ 5	0.0228	0.17	Q V	|	|	|	|
9+10	0.0240	0.17	Q V	|	|	|	|
9+15	0.0252	0.17	Q V	|	|	|	|
9+20	0.0264	0.18	Q V	|	|	|	|
9+25	0.0277	0.18	Q V	|	|	|	|
9+30	0.0290	0.18	Q V	|	|	|	|
9+35	0.0303	0.20	Q V	|	|	|	|



15+55	0.1546	0.20	Q	|	|	|	V |
16+ 0	0.1560	0.20	Q	|	|	|	V|
16+ 5	0.1560	0.01	Q	|	|	|	V|
16+10	0.1560	0.01	Q	|	|	|	V|
16+15	0.1561	0.01	Q	|	|	|	V|
16+20	0.1561	0.01	Q	|	|	|	V|
16+25	0.1561	0.01	Q	|	|	|	V|
16+30	0.1562	0.01	Q	|	|	|	V|
16+35	0.1562	0.00	Q	|	|	|	V|
16+40	0.1562	0.00	Q	|	|	|	V|
16+45	0.1563	0.00	Q	|	|	|	V|
16+50	0.1563	0.00	Q	|	|	|	V|
16+55	0.1563	0.00	Q	|	|	|	V|
17+ 0	0.1563	0.00	Q	|	|	|	V|
17+ 5	0.1565	0.02	Q	|	|	|	V|
17+10	0.1566	0.02	Q	|	|	|	V|
17+15	0.1567	0.02	Q	|	|	|	V|
17+20	0.1568	0.02	Q	|	|	|	V|
17+25	0.1569	0.02	Q	|	|	|	V|
17+30	0.1571	0.02	Q	|	|	|	V|
17+35	0.1572	0.02	Q	|	|	|	V|
17+40	0.1573	0.02	Q	|	|	|	V|
17+45	0.1574	0.02	Q	|	|	|	V|
17+50	0.1575	0.01	Q	|	|	|	V|
17+55	0.1575	0.01	Q	|	|	|	V|
18+ 0	0.1576	0.01	Q	|	|	|	V|
18+ 5	0.1576	0.01	Q	|	|	|	V|
18+10	0.1576	0.01	Q	|	|	|	V|
18+15	0.1577	0.01	Q	|	|	|	V|
18+20	0.1577	0.01	Q	|	|	|	V|
18+25	0.1578	0.01	Q	|	|	|	V|
18+30	0.1578	0.01	Q	|	|	|	V|
18+35	0.1579	0.00	Q	|	|	|	V|
18+40	0.1579	0.00	Q	|	|	|	V|
18+45	0.1579	0.00	Q	|	|	|	V|
18+50	0.1579	0.00	Q	|	|	|	V|
18+55	0.1580	0.00	Q	|	|	|	V|
19+ 0	0.1580	0.00	Q	|	|	|	V|
19+ 5	0.1580	0.00	Q	|	|	|	V|
19+10	0.1580	0.00	Q	|	|	|	V|
19+15	0.1581	0.00	Q	|	|	|	V|
19+20	0.1581	0.01	Q	|	|	|	V|
19+25	0.1582	0.01	Q	|	|	|	V|
19+30	0.1583	0.01	Q	|	|	|	V|
19+35	0.1583	0.00	Q	|	|	|	V|
19+40	0.1583	0.00	Q	|	|	|	V|
19+45	0.1583	0.00	Q	|	|	|	V|
19+50	0.1584	0.00	Q	|	|	|	V|
19+55	0.1584	0.00	Q	|	|	|	V|
20+ 0	0.1584	0.00	Q	|	|	|	V|
20+ 5	0.1584	0.00	Q	|	|	|	V|
20+10	0.1585	0.00	Q	|	|	|	V|
20+15	0.1585	0.00	Q	|	|	|	V|
20+20	0.1585	0.00	Q	|	|	|	V|
20+25	0.1585	0.00	Q	|	|	|	V|
20+30	0.1586	0.00	Q	|	|	|	V|
20+35	0.1586	0.00	Q	|	|	|	V|
20+40	0.1586	0.00	Q	|	|	|	V|
20+45	0.1586	0.00	Q	|	|	|	V|
20+50	0.1587	0.00	Q	|	|	|	V|
20+55	0.1587	0.00	Q	|	|	|	V|
21+ 0	0.1587	0.00	Q	|	|	|	V|
21+ 5	0.1587	0.00	Q	|	|	|	V|
21+10	0.1588	0.00	Q	|	|	|	V|
21+15	0.1588	0.00	Q	|	|	|	V|
21+20	0.1588	0.00	Q	|	|	|	V|
21+25	0.1588	0.00	Q	|	|	|	V|
21+30	0.1588	0.00	Q	|	|	|	V|
21+35	0.1589	0.00	Q	|	|	|	V|
21+40	0.1589	0.00	Q	|	|	|	V|
21+45	0.1589	0.00	Q	|	|	|	V|
21+50	0.1589	0.00	Q	|	|	|	V|
21+55	0.1589	0.00	Q	|	|	|	V|
22+ 0	0.1590	0.00	Q	|	|	|	V|
22+ 5	0.1590	0.00	Q	|	|	|	V|

22+10	0.1590	0.00	Q	|	|	|	v|
22+15	0.1590	0.00	Q	|	|	|	v|
22+20	0.1591	0.00	Q	|	|	|	v|
22+25	0.1591	0.00	Q	|	|	|	v|
22+30	0.1591	0.00	Q	|	|	|	v|
22+35	0.1591	0.00	Q	|	|	|	v|
22+40	0.1591	0.00	Q	|	|	|	v|
22+45	0.1592	0.00	Q	|	|	|	v|
22+50	0.1592	0.00	Q	|	|	|	v|
22+55	0.1592	0.00	Q	|	|	|	v|
23+ 0	0.1592	0.00	Q	|	|	|	v|
23+ 5	0.1592	0.00	Q	|	|	|	v|
23+10	0.1592	0.00	Q	|	|	|	v|
23+15	0.1593	0.00	Q	|	|	|	v|
23+20	0.1593	0.00	Q	|	|	|	v|
23+25	0.1593	0.00	Q	|	|	|	v|
23+30	0.1593	0.00	Q	|	|	|	v|
23+35	0.1593	0.00	Q	|	|	|	v|
23+40	0.1594	0.00	Q	|	|	|	v|
23+45	0.1594	0.00	Q	|	|	|	v|
23+50	0.1594	0.00	Q	|	|	|	v|
23+55	0.1594	0.00	Q	|	|	|	v|
24+ 0	0.1594	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 05/10/24 File: ONSITEPREE5242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  79.8      0.246     0.000        0.246       1.000      0.246
                                                 Sum (F) =   0.246
Area averaged mean soil loss (F) (In/Hr) =  0.246
Minimum soil loss rate ((In/Hr)) =  0.123
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

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	0.016	(0.437)	0.014	0.002
2	0.17	0.07	0.016	(0.435)	0.014	0.002
3	0.25	0.07	0.016	(0.433)	0.014	0.002
4	0.33	0.10	0.024	(0.432)	0.022	0.002
5	0.42	0.10	0.024	(0.430)	0.022	0.002
6	0.50	0.10	0.024	(0.428)	0.022	0.002
7	0.58	0.10	0.024	(0.427)	0.022	0.002
8	0.67	0.10	0.024	(0.425)	0.022	0.002
9	0.75	0.10	0.024	(0.423)	0.022	0.002
10	0.83	0.13	0.032	(0.422)	0.029	0.003
11	0.92	0.13	0.032	(0.420)	0.029	0.003
12	1.00	0.13	0.032	(0.418)	0.029	0.003
13	1.08	0.10	0.024	(0.417)	0.022	0.002
14	1.17	0.10	0.024	(0.415)	0.022	0.002
15	1.25	0.10	0.024	(0.413)	0.022	0.002
16	1.33	0.10	0.024	(0.412)	0.022	0.002
17	1.42	0.10	0.024	(0.410)	0.022	0.002
18	1.50	0.10	0.024	(0.408)	0.022	0.002
19	1.58	0.10	0.024	(0.407)	0.022	0.002
20	1.67	0.10	0.024	(0.405)	0.022	0.002
21	1.75	0.10	0.024	(0.404)	0.022	0.002
22	1.83	0.13	0.032	(0.402)	0.029	0.003
23	1.92	0.13	0.032	(0.400)	0.029	0.003
24	2.00	0.13	0.032	(0.399)	0.029	0.003
25	2.08	0.13	0.032	(0.397)	0.029	0.003
26	2.17	0.13	0.032	(0.395)	0.029	0.003
27	2.25	0.13	0.032	(0.394)	0.029	0.003
28	2.33	0.13	0.032	(0.392)	0.029	0.003
29	2.42	0.13	0.032	(0.391)	0.029	0.003
30	2.50	0.13	0.032	(0.389)	0.029	0.003
31	2.58	0.17	0.040	(0.387)	0.036	0.004
32	2.67	0.17	0.040	(0.386)	0.036	0.004
33	2.75	0.17	0.040	(0.384)	0.036	0.004
34	2.83	0.17	0.040	(0.383)	0.036	0.004
35	2.92	0.17	0.040	(0.381)	0.036	0.004
36	3.00	0.17	0.040	(0.380)	0.036	0.004
37	3.08	0.17	0.040	(0.378)	0.036	0.004
38	3.17	0.17	0.040	(0.376)	0.036	0.004
39	3.25	0.17	0.040	(0.375)	0.036	0.004
40	3.33	0.17	0.040	(0.373)	0.036	0.004
41	3.42	0.17	0.040	(0.372)	0.036	0.004
42	3.50	0.17	0.040	(0.370)	0.036	0.004
43	3.58	0.17	0.040	(0.369)	0.036	0.004
44	3.67	0.17	0.040	(0.367)	0.036	0.004
45	3.75	0.17	0.040	(0.366)	0.036	0.004

46	3.83	0.20	0.048	(0.364)	0.043	0.005
47	3.92	0.20	0.048	(0.362)	0.043	0.005
48	4.00	0.20	0.048	(0.361)	0.043	0.005
49	4.08	0.20	0.048	(0.359)	0.043	0.005
50	4.17	0.20	0.048	(0.358)	0.043	0.005
51	4.25	0.20	0.048	(0.356)	0.043	0.005
52	4.33	0.23	0.056	(0.355)	0.050	0.006
53	4.42	0.23	0.056	(0.353)	0.050	0.006
54	4.50	0.23	0.056	(0.352)	0.050	0.006
55	4.58	0.23	0.056	(0.350)	0.050	0.006
56	4.67	0.23	0.056	(0.349)	0.050	0.006
57	4.75	0.23	0.056	(0.347)	0.050	0.006
58	4.83	0.27	0.064	(0.346)	0.058	0.006
59	4.92	0.27	0.064	(0.344)	0.058	0.006
60	5.00	0.27	0.064	(0.343)	0.058	0.006
61	5.08	0.20	0.048	(0.341)	0.043	0.005
62	5.17	0.20	0.048	(0.340)	0.043	0.005
63	5.25	0.20	0.048	(0.338)	0.043	0.005
64	5.33	0.23	0.056	(0.337)	0.050	0.006
65	5.42	0.23	0.056	(0.335)	0.050	0.006
66	5.50	0.23	0.056	(0.334)	0.050	0.006
67	5.58	0.27	0.064	(0.332)	0.058	0.006
68	5.67	0.27	0.064	(0.331)	0.058	0.006
69	5.75	0.27	0.064	(0.330)	0.058	0.006
70	5.83	0.27	0.064	(0.328)	0.058	0.006
71	5.92	0.27	0.064	(0.327)	0.058	0.006
72	6.00	0.27	0.064	(0.325)	0.058	0.006
73	6.08	0.30	0.072	(0.324)	0.065	0.007
74	6.17	0.30	0.072	(0.322)	0.065	0.007
75	6.25	0.30	0.072	(0.321)	0.065	0.007
76	6.33	0.30	0.072	(0.319)	0.065	0.007
77	6.42	0.30	0.072	(0.318)	0.065	0.007
78	6.50	0.30	0.072	(0.317)	0.065	0.007
79	6.58	0.33	0.080	(0.315)	0.072	0.008
80	6.67	0.33	0.080	(0.314)	0.072	0.008
81	6.75	0.33	0.080	(0.312)	0.072	0.008
82	6.83	0.33	0.080	(0.311)	0.072	0.008
83	6.92	0.33	0.080	(0.310)	0.072	0.008
84	7.00	0.33	0.080	(0.308)	0.072	0.008
85	7.08	0.33	0.080	(0.307)	0.072	0.008
86	7.17	0.33	0.080	(0.305)	0.072	0.008
87	7.25	0.33	0.080	(0.304)	0.072	0.008
88	7.33	0.37	0.088	(0.303)	0.079	0.009
89	7.42	0.37	0.088	(0.301)	0.079	0.009
90	7.50	0.37	0.088	(0.300)	0.079	0.009
91	7.58	0.40	0.096	(0.298)	0.086	0.010
92	7.67	0.40	0.096	(0.297)	0.086	0.010
93	7.75	0.40	0.096	(0.296)	0.086	0.010
94	7.83	0.43	0.104	(0.294)	0.094	0.010
95	7.92	0.43	0.104	(0.293)	0.094	0.010

96	8.00	0.43	0.104	(0.292)	0.094	0.010
97	8.08	0.50	0.120	(0.290)	0.108	0.012
98	8.17	0.50	0.120	(0.289)	0.108	0.012
99	8.25	0.50	0.120	(0.288)	0.108	0.012
100	8.33	0.50	0.120	(0.286)	0.108	0.012
101	8.42	0.50	0.120	(0.285)	0.108	0.012
102	8.50	0.50	0.120	(0.283)	0.108	0.012
103	8.58	0.53	0.128	(0.282)	0.115	0.013
104	8.67	0.53	0.128	(0.281)	0.115	0.013
105	8.75	0.53	0.128	(0.280)	0.115	0.013
106	8.83	0.57	0.136	(0.278)	0.122	0.014
107	8.92	0.57	0.136	(0.277)	0.122	0.014
108	9.00	0.57	0.136	(0.276)	0.122	0.014
109	9.08	0.63	0.152	(0.274)	0.137	0.015
110	9.17	0.63	0.152	(0.273)	0.137	0.015
111	9.25	0.63	0.152	(0.272)	0.137	0.015
112	9.33	0.67	0.160	(0.270)	0.144	0.016
113	9.42	0.67	0.160	(0.269)	0.144	0.016
114	9.50	0.67	0.160	(0.268)	0.144	0.016
115	9.58	0.70	0.168	(0.267)	0.151	0.017
116	9.67	0.70	0.168	(0.265)	0.151	0.017
117	9.75	0.70	0.168	(0.264)	0.151	0.017
118	9.83	0.73	0.176	(0.263)	0.158	0.018
119	9.92	0.73	0.176	(0.261)	0.158	0.018
120	10.00	0.73	0.176	(0.260)	0.158	0.018
121	10.08	0.50	0.120	(0.259)	0.108	0.012
122	10.17	0.50	0.120	(0.258)	0.108	0.012
123	10.25	0.50	0.120	(0.256)	0.108	0.012
124	10.33	0.50	0.120	(0.255)	0.108	0.012
125	10.42	0.50	0.120	(0.254)	0.108	0.012
126	10.50	0.50	0.120	(0.253)	0.108	0.012
127	10.58	0.67	0.160	(0.251)	0.144	0.016
128	10.67	0.67	0.160	(0.250)	0.144	0.016
129	10.75	0.67	0.160	(0.249)	0.144	0.016
130	10.83	0.67	0.160	(0.248)	0.144	0.016
131	10.92	0.67	0.160	(0.247)	0.144	0.016
132	11.00	0.67	0.160	(0.245)	0.144	0.016
133	11.08	0.63	0.152	(0.244)	0.137	0.015
134	11.17	0.63	0.152	(0.243)	0.137	0.015
135	11.25	0.63	0.152	(0.242)	0.137	0.015
136	11.33	0.63	0.152	(0.241)	0.137	0.015
137	11.42	0.63	0.152	(0.239)	0.137	0.015
138	11.50	0.63	0.152	(0.238)	0.137	0.015
139	11.58	0.57	0.136	(0.237)	0.122	0.014
140	11.67	0.57	0.136	(0.236)	0.122	0.014
141	11.75	0.57	0.136	(0.235)	0.122	0.014
142	11.83	0.60	0.144	(0.233)	0.130	0.014
143	11.92	0.60	0.144	(0.232)	0.130	0.014
144	12.00	0.60	0.144	(0.231)	0.130	0.014
145	12.08	0.83	0.200	(0.230)	0.180	0.020

146	12.17	0.83	0.200	(	0.229)	0.180	0.020
147	12.25	0.83	0.200	(	0.228)	0.180	0.020
148	12.33	0.87	0.208	(	0.227)	0.187	0.021
149	12.42	0.87	0.208	(	0.225)	0.187	0.021
150	12.50	0.87	0.208	(	0.224)	0.187	0.021
151	12.58	0.93	0.224	(	0.223)	0.202	0.022
152	12.67	0.93	0.224	(	0.222)	0.202	0.022
153	12.75	0.93	0.224	(	0.221)	0.202	0.022
154	12.83	0.97	0.232	(	0.220)	0.209	0.023
155	12.92	0.97	0.232	(	0.219)	0.209	0.023
156	13.00	0.97	0.232	(	0.218)	0.209	0.023
157	13.08	1.13	0.272		0.216	(0.245)	0.056
158	13.17	1.13	0.272		0.215	(0.245)	0.057
159	13.25	1.13	0.272		0.214	(0.245)	0.058
160	13.33	1.13	0.272		0.213	(0.245)	0.059
161	13.42	1.13	0.272		0.212	(0.245)	0.060
162	13.50	1.13	0.272		0.211	(0.245)	0.061
163	13.58	0.77	0.184	(	0.210)	0.166	0.018
164	13.67	0.77	0.184	(	0.209)	0.166	0.018
165	13.75	0.77	0.184	(	0.208)	0.166	0.018
166	13.83	0.77	0.184	(	0.207)	0.166	0.018
167	13.92	0.77	0.184	(	0.206)	0.166	0.018
168	14.00	0.77	0.184	(	0.205)	0.166	0.018
169	14.08	0.90	0.216	(	0.204)	0.194	0.022
170	14.17	0.90	0.216	(	0.203)	0.194	0.022
171	14.25	0.90	0.216	(	0.202)	0.194	0.022
172	14.33	0.87	0.208	(	0.200)	0.187	0.021
173	14.42	0.87	0.208	(	0.199)	0.187	0.021
174	14.50	0.87	0.208	(	0.198)	0.187	0.021
175	14.58	0.87	0.208	(	0.197)	0.187	0.021
176	14.67	0.87	0.208	(	0.196)	0.187	0.021
177	14.75	0.87	0.208	(	0.195)	0.187	0.021
178	14.83	0.83	0.200	(	0.194)	0.180	0.020
179	14.92	0.83	0.200	(	0.193)	0.180	0.020
180	15.00	0.83	0.200	(	0.192)	0.180	0.020
181	15.08	0.80	0.192	(	0.191)	0.173	0.019
182	15.17	0.80	0.192	(	0.190)	0.173	0.019
183	15.25	0.80	0.192	(	0.189)	0.173	0.019
184	15.33	0.77	0.184	(	0.188)	0.166	0.018
185	15.42	0.77	0.184	(	0.188)	0.166	0.018
186	15.50	0.77	0.184	(	0.187)	0.166	0.018
187	15.58	0.63	0.152	(	0.186)	0.137	0.015
188	15.67	0.63	0.152	(	0.185)	0.137	0.015
189	15.75	0.63	0.152	(	0.184)	0.137	0.015
190	15.83	0.63	0.152	(	0.183)	0.137	0.015
191	15.92	0.63	0.152	(	0.182)	0.137	0.015
192	16.00	0.63	0.152	(	0.181)	0.137	0.015
193	16.08	0.13	0.032	(	0.180)	0.029	0.003
194	16.17	0.13	0.032	(	0.179)	0.029	0.003
195	16.25	0.13	0.032	(	0.178)	0.029	0.003

196	16.33	0.13	0.032	(0.177)	0.029	0.003
197	16.42	0.13	0.032	(0.176)	0.029	0.003
198	16.50	0.13	0.032	(0.175)	0.029	0.003
199	16.58	0.10	0.024	(0.175)	0.022	0.002
200	16.67	0.10	0.024	(0.174)	0.022	0.002
201	16.75	0.10	0.024	(0.173)	0.022	0.002
202	16.83	0.10	0.024	(0.172)	0.022	0.002
203	16.92	0.10	0.024	(0.171)	0.022	0.002
204	17.00	0.10	0.024	(0.170)	0.022	0.002
205	17.08	0.17	0.040	(0.169)	0.036	0.004
206	17.17	0.17	0.040	(0.168)	0.036	0.004
207	17.25	0.17	0.040	(0.168)	0.036	0.004
208	17.33	0.17	0.040	(0.167)	0.036	0.004
209	17.42	0.17	0.040	(0.166)	0.036	0.004
210	17.50	0.17	0.040	(0.165)	0.036	0.004
211	17.58	0.17	0.040	(0.164)	0.036	0.004
212	17.67	0.17	0.040	(0.163)	0.036	0.004
213	17.75	0.17	0.040	(0.163)	0.036	0.004
214	17.83	0.13	0.032	(0.162)	0.029	0.003
215	17.92	0.13	0.032	(0.161)	0.029	0.003
216	18.00	0.13	0.032	(0.160)	0.029	0.003
217	18.08	0.13	0.032	(0.159)	0.029	0.003
218	18.17	0.13	0.032	(0.159)	0.029	0.003
219	18.25	0.13	0.032	(0.158)	0.029	0.003
220	18.33	0.13	0.032	(0.157)	0.029	0.003
221	18.42	0.13	0.032	(0.156)	0.029	0.003
222	18.50	0.13	0.032	(0.156)	0.029	0.003
223	18.58	0.10	0.024	(0.155)	0.022	0.002
224	18.67	0.10	0.024	(0.154)	0.022	0.002
225	18.75	0.10	0.024	(0.153)	0.022	0.002
226	18.83	0.07	0.016	(0.153)	0.014	0.002
227	18.92	0.07	0.016	(0.152)	0.014	0.002
228	19.00	0.07	0.016	(0.151)	0.014	0.002
229	19.08	0.10	0.024	(0.150)	0.022	0.002
230	19.17	0.10	0.024	(0.150)	0.022	0.002
231	19.25	0.10	0.024	(0.149)	0.022	0.002
232	19.33	0.13	0.032	(0.148)	0.029	0.003
233	19.42	0.13	0.032	(0.148)	0.029	0.003
234	19.50	0.13	0.032	(0.147)	0.029	0.003
235	19.58	0.10	0.024	(0.146)	0.022	0.002
236	19.67	0.10	0.024	(0.146)	0.022	0.002
237	19.75	0.10	0.024	(0.145)	0.022	0.002
238	19.83	0.07	0.016	(0.144)	0.014	0.002
239	19.92	0.07	0.016	(0.144)	0.014	0.002
240	20.00	0.07	0.016	(0.143)	0.014	0.002
241	20.08	0.10	0.024	(0.142)	0.022	0.002
242	20.17	0.10	0.024	(0.142)	0.022	0.002
243	20.25	0.10	0.024	(0.141)	0.022	0.002
244	20.33	0.10	0.024	(0.141)	0.022	0.002
245	20.42	0.10	0.024	(0.140)	0.022	0.002

246	20.50	0.10	0.024	(0.139)	0.022	0.002
247	20.58	0.10	0.024	(0.139)	0.022	0.002
248	20.67	0.10	0.024	(0.138)	0.022	0.002
249	20.75	0.10	0.024	(0.138)	0.022	0.002
250	20.83	0.07	0.016	(0.137)	0.014	0.002
251	20.92	0.07	0.016	(0.137)	0.014	0.002
252	21.00	0.07	0.016	(0.136)	0.014	0.002
253	21.08	0.10	0.024	(0.135)	0.022	0.002
254	21.17	0.10	0.024	(0.135)	0.022	0.002
255	21.25	0.10	0.024	(0.134)	0.022	0.002
256	21.33	0.07	0.016	(0.134)	0.014	0.002
257	21.42	0.07	0.016	(0.133)	0.014	0.002
258	21.50	0.07	0.016	(0.133)	0.014	0.002
259	21.58	0.10	0.024	(0.132)	0.022	0.002
260	21.67	0.10	0.024	(0.132)	0.022	0.002
261	21.75	0.10	0.024	(0.131)	0.022	0.002
262	21.83	0.07	0.016	(0.131)	0.014	0.002
263	21.92	0.07	0.016	(0.131)	0.014	0.002
264	22.00	0.07	0.016	(0.130)	0.014	0.002
265	22.08	0.10	0.024	(0.130)	0.022	0.002
266	22.17	0.10	0.024	(0.129)	0.022	0.002
267	22.25	0.10	0.024	(0.129)	0.022	0.002
268	22.33	0.07	0.016	(0.128)	0.014	0.002
269	22.42	0.07	0.016	(0.128)	0.014	0.002
270	22.50	0.07	0.016	(0.128)	0.014	0.002
271	22.58	0.07	0.016	(0.127)	0.014	0.002
272	22.67	0.07	0.016	(0.127)	0.014	0.002
273	22.75	0.07	0.016	(0.127)	0.014	0.002
274	22.83	0.07	0.016	(0.126)	0.014	0.002
275	22.92	0.07	0.016	(0.126)	0.014	0.002
276	23.00	0.07	0.016	(0.126)	0.014	0.002
277	23.08	0.07	0.016	(0.125)	0.014	0.002
278	23.17	0.07	0.016	(0.125)	0.014	0.002
279	23.25	0.07	0.016	(0.125)	0.014	0.002
280	23.33	0.07	0.016	(0.125)	0.014	0.002
281	23.42	0.07	0.016	(0.124)	0.014	0.002
282	23.50	0.07	0.016	(0.124)	0.014	0.002
283	23.58	0.07	0.016	(0.124)	0.014	0.002
284	23.67	0.07	0.016	(0.124)	0.014	0.002
285	23.75	0.07	0.016	(0.124)	0.014	0.002
286	23.83	0.07	0.016	(0.123)	0.014	0.002
287	23.92	0.07	0.016	(0.123)	0.014	0.002
288	24.00	0.07	0.016	(0.123)	0.014	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 2.6

Flood volume = Effective rainfall 0.22(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.0(Ac.Ft)
Total soil loss = 1.78(In)
Total soil loss = 0.297(Ac.Ft)
Total rainfall = 2.00(In)

Flood volume = 1564.8 Cubic Feet
Total soil loss = 12955.1 Cubic Feet

Peak flow rate of this hydrograph = 0.121(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	0.0000	0.00	Q				
0+15	0.0001	0.00	Q				
0+20	0.0001	0.00	Q				
0+25	0.0001	0.00	Q				
0+30	0.0001	0.00	Q				
0+35	0.0002	0.00	Q				
0+40	0.0002	0.00	Q				
0+45	0.0002	0.00	Q				
0+50	0.0003	0.01	Q				
0+55	0.0003	0.01	Q				
1+ 0	0.0004	0.01	Q				
1+ 5	0.0004	0.01	Q				
1+10	0.0004	0.01	Q				
1+15	0.0005	0.00	Q				
1+20	0.0005	0.00	Q				
1+25	0.0005	0.00	Q				
1+30	0.0006	0.00	Q				
1+35	0.0006	0.00	Q				
1+40	0.0006	0.00	Q				
1+45	0.0007	0.00	Q				
1+50	0.0007	0.01	Q				
1+55	0.0008	0.01	Q				
2+ 0	0.0008	0.01	Q				
2+ 5	0.0008	0.01	Q				
2+10	0.0009	0.01	Q				
2+15	0.0009	0.01	QV				
2+20	0.0010	0.01	QV				
2+25	0.0010	0.01	QV				
2+30	0.0011	0.01	QV				
2+35	0.0011	0.01	QV				
2+40	0.0012	0.01	QV				
2+45	0.0012	0.01	QV				
2+50	0.0013	0.01	QV				
2+55	0.0013	0.01	QV				
3+ 0	0.0014	0.01	QV				

3+ 5	0.0015	0.01	QV	|	|	|	|
3+10	0.0015	0.01	QV	|	|	|	|
3+15	0.0016	0.01	QV	|	|	|	|
3+20	0.0016	0.01	QV	|	|	|	|
3+25	0.0017	0.01	QV	|	|	|	|
3+30	0.0017	0.01	QV	|	|	|	|
3+35	0.0018	0.01	QV	|	|	|	|
3+40	0.0018	0.01	Q V	|	|	|	|
3+45	0.0019	0.01	Q V	|	|	|	|
3+50	0.0020	0.01	Q V	|	|	|	|
3+55	0.0020	0.01	Q V	|	|	|	|
4+ 0	0.0021	0.01	Q V	|	|	|	|
4+ 5	0.0022	0.01	Q V	|	|	|	|
4+10	0.0022	0.01	Q V	|	|	|	|
4+15	0.0023	0.01	Q V	|	|	|	|
4+20	0.0024	0.01	Q V	|	|	|	|
4+25	0.0024	0.01	Q V	|	|	|	|
4+30	0.0025	0.01	Q V	|	|	|	|
4+35	0.0026	0.01	Q V	|	|	|	|
4+40	0.0027	0.01	Q V	|	|	|	|
4+45	0.0027	0.01	Q V	|	|	|	|
4+50	0.0028	0.01	Q V	|	|	|	|
4+55	0.0029	0.01	Q V	|	|	|	|
5+ 0	0.0030	0.01	Q V	|	|	|	|
5+ 5	0.0031	0.01	Q V	|	|	|	|
5+10	0.0032	0.01	Q V	|	|	|	|
5+15	0.0032	0.01	Q V	|	|	|	|
5+20	0.0033	0.01	Q V	|	|	|	|
5+25	0.0034	0.01	Q V	|	|	|	|
5+30	0.0034	0.01	Q V	|	|	|	|
5+35	0.0035	0.01	Q V	|	|	|	|
5+40	0.0036	0.01	Q V	|	|	|	|
5+45	0.0037	0.01	Q V	|	|	|	|
5+50	0.0038	0.01	Q V	|	|	|	|
5+55	0.0039	0.01	Q V	|	|	|	|
6+ 0	0.0040	0.01	Q V	|	|	|	|
6+ 5	0.0041	0.01	Q V	|	|	|	|
6+10	0.0042	0.01	Q V	|	|	|	|
6+15	0.0043	0.01	Q V	|	|	|	|
6+20	0.0044	0.01	Q V	|	|	|	|
6+25	0.0045	0.01	Q V	|	|	|	|
6+30	0.0046	0.01	Q V	|	|	|	|
6+35	0.0047	0.02	Q V	|	|	|	|
6+40	0.0048	0.02	Q V	|	|	|	|
6+45	0.0049	0.02	Q V	|	|	|	|
6+50	0.0050	0.02	Q V	|	|	|	|
6+55	0.0051	0.02	Q V	|	|	|	|
7+ 0	0.0052	0.02	Q V	|	|	|	|
7+ 5	0.0053	0.02	Q V	|	|	|	|
7+10	0.0054	0.02	Q V	|	|	|	|

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 7+15       0.0056      0.02  Q     V   |          |          |          |
 7+20       0.0057      0.02  Q     V   |          |          |          |
 7+25       0.0058      0.02  Q     V   |          |          |          |
 7+30       0.0059      0.02  Q     V   |          |          |          |
 7+35       0.0060      0.02  Q     V   |          |          |          |
 7+40       0.0062      0.02  Q     V   |          |          |          |
 7+45       0.0063      0.02  Q      V  |          |          |          |
 7+50       0.0064      0.02  Q      V  |          |          |          |
 7+55       0.0066      0.02  Q      V  |          |          |          |
 8+ 0       0.0067      0.02  Q      V  |          |          |          |
 8+ 5       0.0069      0.02  Q      V  |          |          |          |
 8+10       0.0071      0.02  Q      V  |          |          |          |
 8+15       0.0072      0.02  Q       V |          |          |          |
 8+20       0.0074      0.02  Q       V |          |          |          |
 8+25       0.0076      0.02  Q       V |          |          |          |
 8+30       0.0077      0.02  Q       V |          |          |          |
 8+35       0.0079      0.02  Q       V |          |          |          |
 8+40       0.0081      0.03  Q       V |          |          |          |
 8+45       0.0082      0.03  Q        V|          |          |          |
 8+50       0.0084      0.03  Q        V|          |          |          |
 8+55       0.0086      0.03  Q        V|          |          |          |
 9+ 0       0.0088      0.03  Q        V|          |          |          |
 9+ 5       0.0090      0.03  Q         V          |          |          |
 9+10       0.0092      0.03  Q         V          |          |          |
 9+15       0.0094      0.03  Q         V          |          |          |
 9+20       0.0096      0.03  Q         V          |          |          |
 9+25       0.0099      0.03  Q         V          |          |          |
 9+30       0.0101      0.03  Q         |V         |          |          |
 9+35       0.0103      0.03  Q         |V         |          |          |
 9+40       0.0105      0.03  Q         |V         |          |          |
 9+45       0.0108      0.03  Q         |V         |          |          |
 9+50       0.0110      0.03  Q         | V        |          |          |
 9+55       0.0113      0.04  Q         | V        |          |          |
10+ 0       0.0115      0.04  Q         | V        |          |          |
10+ 5       0.0117      0.03  Q         |  V       |          |          |
10+10       0.0119      0.03  Q         |  V       |          |          |
10+15       0.0121      0.02  Q         |  V       |          |          |
10+20       0.0122      0.02  Q         |  V       |          |          |
10+25       0.0124      0.02  Q         |  V       |          |          |
10+30       0.0126      0.02  Q         |  V       |          |          |
10+35       0.0127      0.03  Q         |   V      |          |          |
10+40       0.0130      0.03  Q         |   V      |          |          |
10+45       0.0132      0.03  Q         |   V      |          |          |
10+50       0.0134      0.03  Q         |   V      |          |          |
10+55       0.0136      0.03  Q         |    V     |          |          |
11+ 0       0.0138      0.03  Q         |    V     |          |          |
11+ 5       0.0141      0.03  Q         |    V     |          |          |
11+10       0.0143      0.03  Q         |    V     |          |          |
11+15       0.0145      0.03  Q         |     V    |          |          |
11+20       0.0147      0.03  Q         |     V    |          |          |
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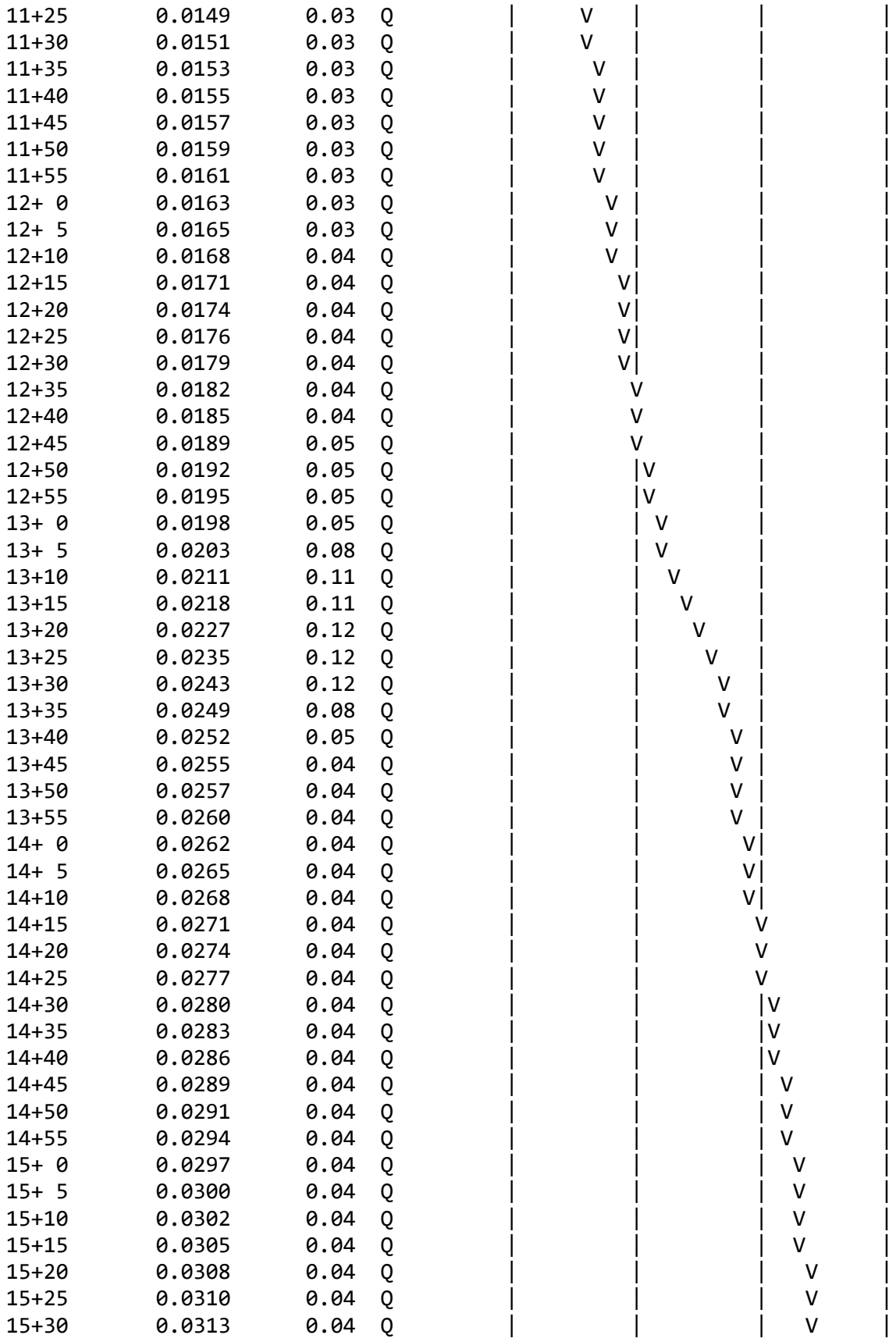

15+35	0.0315	0.03	Q			V	
15+40	0.0317	0.03	Q			V	
15+45	0.0319	0.03	Q			V	
15+50	0.0322	0.03	Q			V	
15+55	0.0324	0.03	Q			V	
16+ 0	0.0326	0.03	Q			V	
16+ 5	0.0327	0.02	Q			V	
16+10	0.0328	0.01	Q			V	
16+15	0.0328	0.01	Q			V	
16+20	0.0329	0.01	Q			V	
16+25	0.0329	0.01	Q			V	
16+30	0.0330	0.01	Q			V	
16+35	0.0330	0.01	Q			V	
16+40	0.0330	0.01	Q			V	
16+45	0.0331	0.00	Q			V	
16+50	0.0331	0.00	Q			V	
16+55	0.0331	0.00	Q			V	
17+ 0	0.0332	0.00	Q			V	
17+ 5	0.0332	0.01	Q			V	
17+10	0.0333	0.01	Q			V	
17+15	0.0333	0.01	Q			V	
17+20	0.0334	0.01	Q			V	
17+25	0.0334	0.01	Q			V	
17+30	0.0335	0.01	Q			V	
17+35	0.0335	0.01	Q			V	
17+40	0.0336	0.01	Q			V	
17+45	0.0337	0.01	Q			V	
17+50	0.0337	0.01	Q			V	
17+55	0.0337	0.01	Q			V	
18+ 0	0.0338	0.01	Q			V	
18+ 5	0.0338	0.01	Q			V	
18+10	0.0339	0.01	Q			V	
18+15	0.0339	0.01	Q			V	
18+20	0.0340	0.01	Q			V	
18+25	0.0340	0.01	Q			V	
18+30	0.0341	0.01	Q			V	
18+35	0.0341	0.01	Q			V	
18+40	0.0341	0.01	Q			V	
18+45	0.0342	0.00	Q			V	
18+50	0.0342	0.00	Q			V	
18+55	0.0342	0.00	Q			V	
19+ 0	0.0342	0.00	Q			V	
19+ 5	0.0343	0.00	Q			V	
19+10	0.0343	0.00	Q			V	
19+15	0.0343	0.00	Q			V	
19+20	0.0344	0.01	Q			V	
19+25	0.0344	0.01	Q			V	
19+30	0.0345	0.01	Q			V	
19+35	0.0345	0.01	Q			V	
19+40	0.0345	0.01	Q			V	

19+45	0.0346	0.00	Q	|	|	|	V |
19+50	0.0346	0.00	Q	|	|	|	V |
19+55	0.0346	0.00	Q	|	|	|	V |
20+ 0	0.0346	0.00	Q	|	|	|	V |
20+ 5	0.0347	0.00	Q	|	|	|	V |
20+10	0.0347	0.00	Q	|	|	|	V |
20+15	0.0347	0.00	Q	|	|	|	V |
20+20	0.0348	0.00	Q	|	|	|	V |
20+25	0.0348	0.00	Q	|	|	|	V |
20+30	0.0348	0.00	Q	|	|	|	V |
20+35	0.0349	0.00	Q	|	|	|	V |
20+40	0.0349	0.00	Q	|	|	|	V |
20+45	0.0349	0.00	Q	|	|	|	V |
20+50	0.0350	0.00	Q	|	|	|	V |
20+55	0.0350	0.00	Q	|	|	|	V |
21+ 0	0.0350	0.00	Q	|	|	|	V |
21+ 5	0.0350	0.00	Q	|	|	|	V|
21+10	0.0351	0.00	Q	|	|	|	V|
21+15	0.0351	0.00	Q	|	|	|	V|
21+20	0.0351	0.00	Q	|	|	|	V|
21+25	0.0352	0.00	Q	|	|	|	V|
21+30	0.0352	0.00	Q	|	|	|	V|
21+35	0.0352	0.00	Q	|	|	|	V|
21+40	0.0352	0.00	Q	|	|	|	V|
21+45	0.0353	0.00	Q	|	|	|	V|
21+50	0.0353	0.00	Q	|	|	|	V|
21+55	0.0353	0.00	Q	|	|	|	V|
22+ 0	0.0353	0.00	Q	|	|	|	V|
22+ 5	0.0354	0.00	Q	|	|	|	V|
22+10	0.0354	0.00	Q	|	|	|	V|
22+15	0.0354	0.00	Q	|	|	|	V|
22+20	0.0355	0.00	Q	|	|	|	V|
22+25	0.0355	0.00	Q	|	|	|	V|
22+30	0.0355	0.00	Q	|	|	|	V|
22+35	0.0355	0.00	Q	|	|	|	V|
22+40	0.0356	0.00	Q	|	|	|	V|
22+45	0.0356	0.00	Q	|	|	|	V|
22+50	0.0356	0.00	Q	|	|	|	V|
22+55	0.0356	0.00	Q	|	|	|	V|
23+ 0	0.0356	0.00	Q	|	|	|	V|
23+ 5	0.0357	0.00	Q	|	|	|	V|
23+10	0.0357	0.00	Q	|	|	|	V|
23+15	0.0357	0.00	Q	|	|	|	V|
23+20	0.0357	0.00	Q	|	|	|	V|
23+25	0.0358	0.00	Q	|	|	|	V|
23+30	0.0358	0.00	Q	|	|	|	V|
23+35	0.0358	0.00	Q	|	|	|	V|
23+40	0.0358	0.00	Q	|	|	|	V|
23+45	0.0358	0.00	Q	|	|	|	V|
23+50	0.0359	0.00	Q	|	|	|	V|

```
   23+55       0.0359      0.00  Q         |         |         |        V|
   24+ 0       0.0359      0.00  Q         |         |         |        V|
   24+ 5       0.0359      0.00  Q         |         |         |        V|
   24+10       0.0359      0.00  Q         |         |         |        V|
   24+15       0.0359      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 05/10/24 File: ONSITEPREE5110.out

++

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            0.50                 1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                 2.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                              Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.328	0.117	(0.295)	0.211
2	0.17	4.20	0.418	0.117	(0.376)	0.301
3	0.25	4.40	0.438	0.117	(0.394)	0.321
4	0.33	4.80	0.478	0.117	(0.430)	0.361
5	0.42	5.20	0.517	0.117	(0.466)	0.400
6	0.50	6.20	0.617	0.117	(0.555)	0.500
7	0.58	6.80	0.677	0.117	(0.609)	0.560
8	0.67	8.80	0.876	0.117	(0.788)	0.759
9	0.75	13.90	1.383	0.117	(1.245)	1.266
10	0.83	31.40	3.124	0.117	(2.812)	3.007
11	0.92	7.20	0.716	0.117	(0.645)	0.599
12	1.00	3.80	0.378	0.117	(0.340)	0.261
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.71(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.019(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 5169.9 Cubic Feet
Total soil loss = 849.4 Cubic Feet

Peak flow rate of this hydrograph = 4.051(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	0.0014	0.20	Q | | | |
0+10	0.0045	0.46	|Q | | | |
0+15	0.0086	0.59	| Q | | | |
0+20	0.0132	0.67	| Q V | | | |
0+25	0.0184	0.75	| Q V | | | |
0+30	0.0245	0.89	| Q V | | | |
0+35	0.0317	1.04	| Q V | | |
0+40	0.0406	1.29	| Q | V | | |
0+45	0.0541	1.95	| Q | V | |
0+50	0.0820	4.05	| | Q | V | |

```
    0+55       0.1052      3.37  |         |  Q      |         |    V    |
    1+ 0       0.1144      1.33  |    Q    |         |         |       V |
    1+ 5       0.1180      0.53  | Q       |         |         |        V|
    1+10       0.1186      0.08  Q         |         |         |        V|
    1+15       0.1187      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 05/10/24 File: ONSITEPREE5310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            0.80                  1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                  4.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

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	0.202	0.117	(0.182)	0.085
2	0.17	1.30	0.202	0.117	(0.182)	0.085
3	0.25	1.10	0.171	0.117	(0.154)	0.054
4	0.33	1.50	0.233	0.117	(0.210)	0.116
5	0.42	1.50	0.233	0.117	(0.210)	0.116
6	0.50	1.80	0.279	0.117	(0.251)	0.162
7	0.58	1.50	0.233	0.117	(0.210)	0.116
8	0.67	1.80	0.279	0.117	(0.251)	0.162
9	0.75	1.80	0.279	0.117	(0.251)	0.162
10	0.83	1.50	0.233	0.117	(0.210)	0.116
11	0.92	1.60	0.248	0.117	(0.224)	0.131
12	1.00	1.80	0.279	0.117	(0.251)	0.162
13	1.08	2.20	0.342	0.117	(0.307)	0.225
14	1.17	2.20	0.342	0.117	(0.307)	0.225
15	1.25	2.20	0.342	0.117	(0.307)	0.225
16	1.33	2.00	0.310	0.117	(0.279)	0.193
17	1.42	2.60	0.404	0.117	(0.363)	0.287
18	1.50	2.70	0.419	0.117	(0.377)	0.302
19	1.58	2.40	0.373	0.117	(0.335)	0.256
20	1.67	2.70	0.419	0.117	(0.377)	0.302
21	1.75	3.30	0.512	0.117	(0.461)	0.395
22	1.83	3.10	0.481	0.117	(0.433)	0.364
23	1.92	2.90	0.450	0.117	(0.405)	0.333
24	2.00	3.00	0.466	0.117	(0.419)	0.349
25	2.08	3.10	0.481	0.117	(0.433)	0.364
26	2.17	4.20	0.652	0.117	(0.587)	0.535
27	2.25	5.00	0.776	0.117	(0.699)	0.659
28	2.33	3.50	0.543	0.117	(0.489)	0.426
29	2.42	6.80	1.056	0.117	(0.950)	0.939
30	2.50	7.30	1.133	0.117	(1.020)	1.016
31	2.58	8.20	1.273	0.117	(1.146)	1.156
32	2.67	5.90	0.916	0.117	(0.824)	0.799
33	2.75	2.00	0.310	0.117	(0.279)	0.193
34	2.83	1.80	0.279	0.117	(0.251)	0.162
35	2.92	1.80	0.279	0.117	(0.251)	0.162
36	3.00	0.60	0.093	(0.117)	0.084	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

Flood volume = Effective rainfall 0.95(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.058(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 6863.9 Cubic Feet
Total soil loss = 2528.2 Cubic Feet

Peak flow rate of this hydrograph = 2.127(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	0.0005	0.08	Q				
0+10	0.0016	0.15	Q				
0+15	0.0025	0.14	Q				
0+20	0.0037	0.17	Q				
0+25	0.0052	0.22	QV				
0+30	0.0071	0.27	|Q				
0+35	0.0090	0.27	|QV				
0+40	0.0110	0.28	|QV				
0+45	0.0132	0.32	|Q V				
0+50	0.0151	0.28	|Q V				
0+55	0.0169	0.26	|Q V				
1+ 0	0.0189	0.29	|Q V				
1+ 5	0.0215	0.38	|Q V				
1+10	0.0245	0.44	|Q V				
1+15	0.0276	0.45	|Q V				
1+20	0.0305	0.42	|Q V				
1+25	0.0339	0.48	|Q V				
1+30	0.0378	0.57	| Q V				
1+35	0.0416	0.56	| Q V				
1+40	0.0456	0.57	| Q |V				
1+45	0.0503	0.69	| Q | V				
1+50	0.0554	0.74	| Q | V				
1+55	0.0603	0.71	| Q | V				
2+ 0	0.0651	0.70	| Q | V				
2+ 5	0.0700	0.72	| Q | V				
2+10	0.0761	0.89	| Q | V				
2+15	0.0841	1.15	| Q |V				
2+20	0.0915	1.07	| Q | V				
2+25	0.1010	1.38	| Q | V				
2+30	0.1138	1.86	| Q | V				
2+35	0.1285	2.13	| Q | V				
2+40	0.1420	1.96	| Q | V				
2+45	0.1497	1.12	| Q | V				
2+50	0.1533	0.53	| Q | V				
2+55	0.1559	0.38	|Q | V				
3+ 0	0.1572	0.19	Q | V				
3+ 5	0.1575	0.05	Q | V				
3+10	0.1576	0.01	Q | V				

```
    3+15       0.1576      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 05/10/24 File: ONSITEPREE5610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

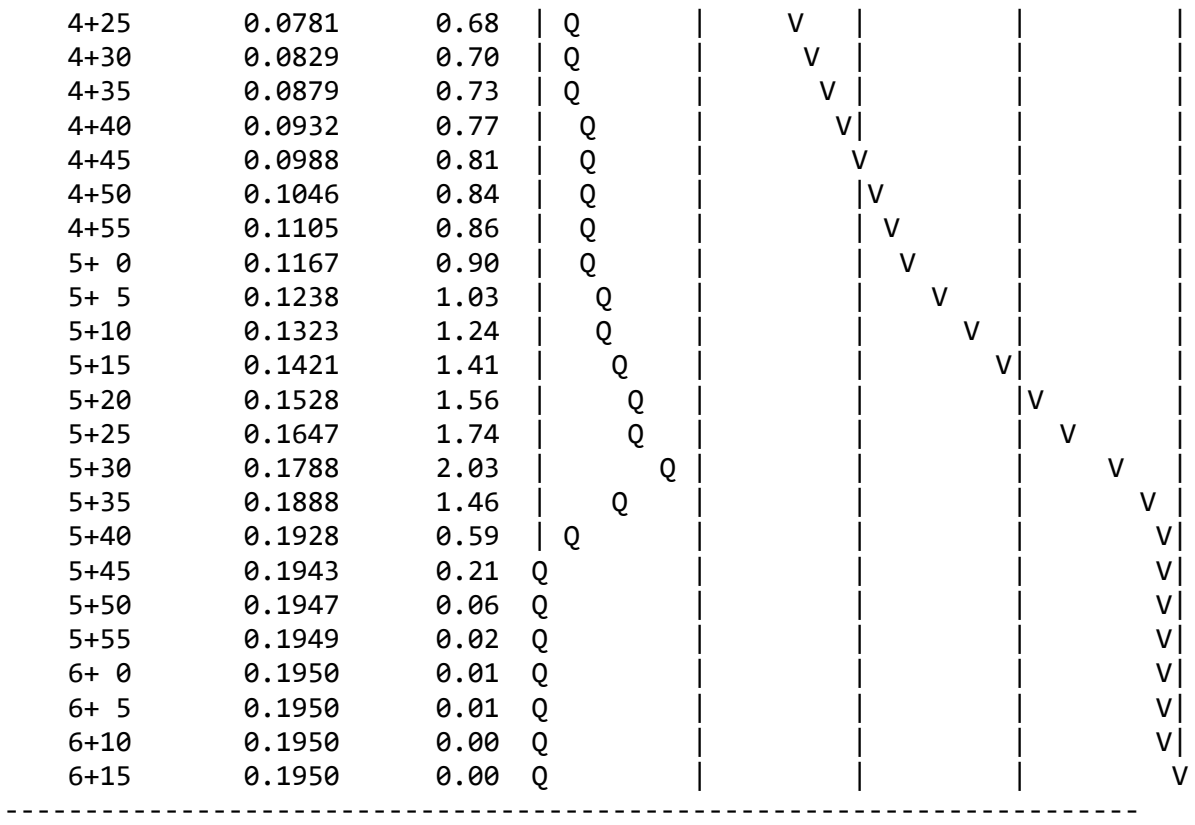
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.117)	0.100	0.011
2	0.17	0.60	0.134	0.117	(0.120)	0.017
3	0.25	0.60	0.134	0.117	(0.120)	0.017
4	0.33	0.60	0.134	0.117	(0.120)	0.017
5	0.42	0.60	0.134	0.117	(0.120)	0.017
6	0.50	0.70	0.156	0.117	(0.140)	0.039
7	0.58	0.70	0.156	0.117	(0.140)	0.039
8	0.67	0.70	0.156	0.117	(0.140)	0.039
9	0.75	0.70	0.156	0.117	(0.140)	0.039
10	0.83	0.70	0.156	0.117	(0.140)	0.039
11	0.92	0.70	0.156	0.117	(0.140)	0.039
12	1.00	0.80	0.178	0.117	(0.161)	0.061
13	1.08	0.80	0.178	0.117	(0.161)	0.061
14	1.17	0.80	0.178	0.117	(0.161)	0.061
15	1.25	0.80	0.178	0.117	(0.161)	0.061
16	1.33	0.80	0.178	0.117	(0.161)	0.061
17	1.42	0.80	0.178	0.117	(0.161)	0.061
18	1.50	0.80	0.178	0.117	(0.161)	0.061
19	1.58	0.80	0.178	0.117	(0.161)	0.061
20	1.67	0.80	0.178	0.117	(0.161)	0.061
21	1.75	0.80	0.178	0.117	(0.161)	0.061
22	1.83	0.80	0.178	0.117	(0.161)	0.061
23	1.92	0.80	0.178	0.117	(0.161)	0.061
24	2.00	0.90	0.201	0.117	(0.181)	0.084
25	2.08	0.80	0.178	0.117	(0.161)	0.061
26	2.17	0.90	0.201	0.117	(0.181)	0.084
27	2.25	0.90	0.201	0.117	(0.181)	0.084
28	2.33	0.90	0.201	0.117	(0.181)	0.084
29	2.42	0.90	0.201	0.117	(0.181)	0.084
30	2.50	0.90	0.201	0.117	(0.181)	0.084
31	2.58	0.90	0.201	0.117	(0.181)	0.084
32	2.67	0.90	0.201	0.117	(0.181)	0.084
33	2.75	1.00	0.223	0.117	(0.201)	0.106
34	2.83	1.00	0.223	0.117	(0.201)	0.106
35	2.92	1.00	0.223	0.117	(0.201)	0.106
36	3.00	1.00	0.223	0.117	(0.201)	0.106
37	3.08	1.00	0.223	0.117	(0.201)	0.106
38	3.17	1.10	0.245	0.117	(0.221)	0.128
39	3.25	1.10	0.245	0.117	(0.221)	0.128
40	3.33	1.10	0.245	0.117	(0.221)	0.128
41	3.42	1.20	0.268	0.117	(0.241)	0.151
42	3.50	1.30	0.290	0.117	(0.261)	0.173
43	3.58	1.40	0.312	0.117	(0.281)	0.195
44	3.67	1.40	0.312	0.117	(0.281)	0.195
45	3.75	1.50	0.334	0.117	(0.301)	0.217

```
46   3.83     1.50      0.334          0.117    (  0.301)        0.217
47   3.92     1.60      0.357          0.117    (  0.321)        0.240
48   4.00     1.60      0.357          0.117    (  0.321)        0.240
49   4.08     1.70      0.379          0.117    (  0.341)        0.262
50   4.17     1.80      0.401          0.117    (  0.361)        0.284
51   4.25     1.90      0.424          0.117    (  0.381)        0.307
52   4.33     2.00      0.446          0.117    (  0.401)        0.329
53   4.42     2.10      0.468          0.117    (  0.421)        0.351
54   4.50     2.10      0.468          0.117    (  0.421)        0.351
55   4.58     2.20      0.491          0.117    (  0.442)        0.374
56   4.67     2.30      0.513          0.117    (  0.462)        0.396
57   4.75     2.40      0.535          0.117    (  0.482)        0.418
58   4.83     2.40      0.535          0.117    (  0.482)        0.418
59   4.92     2.50      0.557          0.117    (  0.502)        0.440
60   5.00     2.60      0.580          0.117    (  0.522)        0.463
61   5.08     3.10      0.691          0.117    (  0.622)        0.574
62   5.17     3.60      0.803          0.117    (  0.722)        0.686
63   5.25     3.90      0.870          0.117    (  0.783)        0.753
64   5.33     4.20      0.937          0.117    (  0.843)        0.820
65   5.42     4.70      1.048          0.117    (  0.943)        0.931
66   5.50     5.60      1.249          0.117    (  1.124)        1.132
67   5.58     1.90      0.424          0.117    (  0.381)        0.307
68   5.67     0.90      0.201          0.117    (  0.181)        0.084
69   5.75     0.60      0.134          0.117    (  0.120)        0.017
70   5.83     0.50      0.111       (  0.117)       0.100        0.011
71   5.92     0.30      0.067       (  0.117)       0.060        0.007
72   6.00     0.20      0.045       (  0.117)       0.040        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.0
      Flood volume = Effective rainfall      1.17(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
      Total soil loss =      0.69(In)
      Total soil loss =     0.115(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        8495.3 Cubic Feet
      Total soil loss =        4995.5 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.035(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      0.01  Q         |         |         |         |
  0+10       0.0002      0.03  Q         |         |         |         |
```

```
0+15       0.0005      0.03  Q          |          |          |          |
0+20       0.0007      0.03  Q          |          |          |          |
0+25       0.0009      0.03  Q          |          |          |          |
0+30       0.0013      0.05  Q          |          |          |          |
0+35       0.0018      0.07  Q          |          |          |          |
0+40       0.0023      0.08  Q          |          |          |          |
0+45       0.0029      0.08  Q          |          |          |          |
0+50       0.0034      0.08  Q          |          |          |          |
0+55       0.0040      0.08  Q          |          |          |          |
1+ 0       0.0047      0.10  Q          |          |          |          |
1+ 5       0.0055      0.12  QV         |          |          |          |
1+10       0.0063      0.12  QV         |          |          |          |
1+15       0.0072      0.12  QV         |          |          |          |
1+20       0.0080      0.12  QV         |          |          |          |
1+25       0.0089      0.12  QV         |          |          |          |
1+30       0.0097      0.12  QV         |          |          |          |
1+35       0.0106      0.12  Q V        |          |          |          |
1+40       0.0114      0.12  Q V        |          |          |          |
1+45       0.0123      0.12  Q V        |          |          |          |
1+50       0.0131      0.12  Q V        |          |          |          |
1+55       0.0140      0.12  Q V        |          |          |          |
2+ 0       0.0150      0.14  Q  V       |          |          |          |
2+ 5       0.0160      0.14  Q  V       |          |          |          |
2+10       0.0170      0.15  Q  V       |          |          |          |
2+15       0.0181      0.17  Q  V       |          |          |          |
2+20       0.0193      0.17  Q  V       |          |          |          |
2+25       0.0204      0.17  Q   V      |          |          |          |
2+30       0.0216      0.17  Q   V      |          |          |          |
2+35       0.0228      0.17  Q   V      |          |          |          |
2+40       0.0239      0.17  Q   V      |          |          |          |
2+45       0.0252      0.19  Q    V     |          |          |          |
2+50       0.0267      0.21  Q    V     |          |          |          |
2+55       0.0281      0.21  Q    V     |          |          |          |
3+ 0       0.0296      0.21  Q     V    |          |          |          |
3+ 5       0.0311      0.21  Q     V    |          |          |          |
3+10       0.0327      0.23  Q     V    |          |          |          |
3+15       0.0344      0.25  |Q     V   |          |          |          |
3+20       0.0362      0.26  |Q     V   |          |          |          |
3+25       0.0381      0.28  |Q     V   |          |          |          |
3+30       0.0403      0.32  |Q      V  |          |          |          |
3+35       0.0428      0.36  |Q      V  |          |          |          |
3+40       0.0455      0.39  |Q       V|          |          |          |
3+45       0.0483      0.41  |Q       V|          |          |          |
3+50       0.0513      0.43  |Q        V          |          |          |
3+55       0.0545      0.46  |Q        |V         |          |          |
4+ 0       0.0578      0.48  |Q        |V         |          |          |
4+ 5       0.0612      0.50  | Q       | V        |          |          |
4+10       0.0650      0.54  | Q       |  V       |          |          |
4+15       0.0690      0.59  | Q       |   V      |          |          |
4+20       0.0734      0.63  | Q       |    V     |          |          |
```


4+25 0.0781 0.68
4+30 0.0829 0.70
4+35 0.0879 0.73
4+40 0.0932 0.77
4+45 0.0988 0.81
4+50 0.1046 0.84
4+55 0.1105 0.86
5+ 0 0.1167 0.90
5+ 5 0.1238 1.03
5+10 0.1323 1.24
5+15 0.1421 1.41
5+20 0.1528 1.56
5+25 0.1647 1.74
5+30 0.1788 2.03
5+35 0.1888 1.46
5+40 0.1928 0.59
5+45 0.1943 0.21
5+50 0.1947 0.06
5+55 0.1949 0.02
6+ 0 0.1950 0.01
6+ 5 0.1950 0.01
6+10 0.1950 0.00
6+15 0.1950 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 05/10/24 File: ONSITEPREE52410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

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	(0.207)	0.024	0.003
2	0.17	0.07	0.027	(0.207)	0.024	0.003
3	0.25	0.07	0.027	(0.206)	0.024	0.003
4	0.33	0.10	0.041	(0.205)	0.037	0.004
5	0.42	0.10	0.041	(0.204)	0.037	0.004
6	0.50	0.10	0.041	(0.203)	0.037	0.004
7	0.58	0.10	0.041	(0.203)	0.037	0.004
8	0.67	0.10	0.041	(0.202)	0.037	0.004
9	0.75	0.10	0.041	(0.201)	0.037	0.004
10	0.83	0.13	0.054	(0.200)	0.049	0.005
11	0.92	0.13	0.054	(0.199)	0.049	0.005
12	1.00	0.13	0.054	(0.199)	0.049	0.005
13	1.08	0.10	0.041	(0.198)	0.037	0.004
14	1.17	0.10	0.041	(0.197)	0.037	0.004
15	1.25	0.10	0.041	(0.196)	0.037	0.004
16	1.33	0.10	0.041	(0.196)	0.037	0.004
17	1.42	0.10	0.041	(0.195)	0.037	0.004
18	1.50	0.10	0.041	(0.194)	0.037	0.004
19	1.58	0.10	0.041	(0.193)	0.037	0.004
20	1.67	0.10	0.041	(0.192)	0.037	0.004
21	1.75	0.10	0.041	(0.192)	0.037	0.004
22	1.83	0.13	0.054	(0.191)	0.049	0.005
23	1.92	0.13	0.054	(0.190)	0.049	0.005
24	2.00	0.13	0.054	(0.189)	0.049	0.005
25	2.08	0.13	0.054	(0.189)	0.049	0.005
26	2.17	0.13	0.054	(0.188)	0.049	0.005
27	2.25	0.13	0.054	(0.187)	0.049	0.005
28	2.33	0.13	0.054	(0.186)	0.049	0.005
29	2.42	0.13	0.054	(0.186)	0.049	0.005
30	2.50	0.13	0.054	(0.185)	0.049	0.005
31	2.58	0.17	0.068	(0.184)	0.061	0.007
32	2.67	0.17	0.068	(0.183)	0.061	0.007
33	2.75	0.17	0.068	(0.183)	0.061	0.007
34	2.83	0.17	0.068	(0.182)	0.061	0.007
35	2.92	0.17	0.068	(0.181)	0.061	0.007
36	3.00	0.17	0.068	(0.180)	0.061	0.007
37	3.08	0.17	0.068	(0.180)	0.061	0.007
38	3.17	0.17	0.068	(0.179)	0.061	0.007
39	3.25	0.17	0.068	(0.178)	0.061	0.007
40	3.33	0.17	0.068	(0.177)	0.061	0.007
41	3.42	0.17	0.068	(0.177)	0.061	0.007
42	3.50	0.17	0.068	(0.176)	0.061	0.007
43	3.58	0.17	0.068	(0.175)	0.061	0.007
44	3.67	0.17	0.068	(0.174)	0.061	0.007
45	3.75	0.17	0.068	(0.174)	0.061	0.007

46	3.83	0.20	0.082	(	0.173)		0.073		0.008
47	3.92	0.20	0.082	(	0.172)		0.073		0.008
48	4.00	0.20	0.082	(	0.171)		0.073		0.008
49	4.08	0.20	0.082	(	0.171)		0.073		0.008
50	4.17	0.20	0.082	(	0.170)		0.073		0.008
51	4.25	0.20	0.082	(	0.169)		0.073		0.008
52	4.33	0.23	0.095	(	0.169)		0.086		0.010
53	4.42	0.23	0.095	(	0.168)		0.086		0.010
54	4.50	0.23	0.095	(	0.167)		0.086		0.010
55	4.58	0.23	0.095	(	0.166)		0.086		0.010
56	4.67	0.23	0.095	(	0.166)		0.086		0.010
57	4.75	0.23	0.095	(	0.165)		0.086		0.010
58	4.83	0.27	0.109	(	0.164)		0.098		0.011
59	4.92	0.27	0.109	(	0.164)		0.098		0.011
60	5.00	0.27	0.109	(	0.163)		0.098		0.011
61	5.08	0.20	0.082	(	0.162)		0.073		0.008
62	5.17	0.20	0.082	(	0.161)		0.073		0.008
63	5.25	0.20	0.082	(	0.161)		0.073		0.008
64	5.33	0.23	0.095	(	0.160)		0.086		0.010
65	5.42	0.23	0.095	(	0.159)		0.086		0.010
66	5.50	0.23	0.095	(	0.159)		0.086		0.010
67	5.58	0.27	0.109	(	0.158)		0.098		0.011
68	5.67	0.27	0.109	(	0.157)		0.098		0.011
69	5.75	0.27	0.109	(	0.157)		0.098		0.011
70	5.83	0.27	0.109	(	0.156)		0.098		0.011
71	5.92	0.27	0.109	(	0.155)		0.098		0.011
72	6.00	0.27	0.109	(	0.154)		0.098		0.011
73	6.08	0.30	0.122	(	0.154)		0.110		0.012
74	6.17	0.30	0.122	(	0.153)		0.110		0.012
75	6.25	0.30	0.122	(	0.152)		0.110		0.012
76	6.33	0.30	0.122	(	0.152)		0.110		0.012
77	6.42	0.30	0.122	(	0.151)		0.110		0.012
78	6.50	0.30	0.122	(	0.150)		0.110		0.012
79	6.58	0.33	0.136	(	0.150)		0.122		0.014
80	6.67	0.33	0.136	(	0.149)		0.122		0.014
81	6.75	0.33	0.136	(	0.148)		0.122		0.014
82	6.83	0.33	0.136	(	0.148)		0.122		0.014
83	6.92	0.33	0.136	(	0.147)		0.122		0.014
84	7.00	0.33	0.136	(	0.146)		0.122		0.014
85	7.08	0.33	0.136	(	0.146)		0.122		0.014
86	7.17	0.33	0.136	(	0.145)		0.122		0.014
87	7.25	0.33	0.136	(	0.144)		0.122		0.014
88	7.33	0.37	0.150	(	0.144)		0.135		0.015
89	7.42	0.37	0.150	(	0.143)		0.135		0.015
90	7.50	0.37	0.150	(	0.142)		0.135		0.015
91	7.58	0.40	0.163		0.142	(	0.147)		0.021
92	7.67	0.40	0.163		0.141	(	0.147)		0.022
93	7.75	0.40	0.163		0.140	(	0.147)		0.023
94	7.83	0.43	0.177		0.140	(	0.159)		0.037
95	7.92	0.43	0.177		0.139	(	0.159)		0.038

96	8.00	0.43	0.177	0.138	(	0.159)	0.038
97	8.08	0.50	0.204	0.138	(	0.184)	0.066
98	8.17	0.50	0.204	0.137	(	0.184)	0.067
99	8.25	0.50	0.204	0.137	(	0.184)	0.067
100	8.33	0.50	0.204	0.136	(	0.184)	0.068
101	8.42	0.50	0.204	0.135	(	0.184)	0.069
102	8.50	0.50	0.204	0.135	(	0.184)	0.069
103	8.58	0.53	0.218	0.134	(	0.196)	0.084
104	8.67	0.53	0.218	0.133	(	0.196)	0.084
105	8.75	0.53	0.218	0.133	(	0.196)	0.085
106	8.83	0.57	0.231	0.132	(	0.208)	0.099
107	8.92	0.57	0.231	0.131	(	0.208)	0.100
108	9.00	0.57	0.231	0.131	(	0.208)	0.100
109	9.08	0.63	0.258	0.130	(	0.232)	0.128
110	9.17	0.63	0.258	0.130	(	0.232)	0.129
111	9.25	0.63	0.258	0.129	(	0.232)	0.129
112	9.33	0.67	0.272	0.128	(	0.245)	0.144
113	9.42	0.67	0.272	0.128	(	0.245)	0.144
114	9.50	0.67	0.272	0.127	(	0.245)	0.145
115	9.58	0.70	0.285	0.127	(	0.257)	0.159
116	9.67	0.70	0.285	0.126	(	0.257)	0.160
117	9.75	0.70	0.285	0.125	(	0.257)	0.160
118	9.83	0.73	0.299	0.125	(	0.269)	0.174
119	9.92	0.73	0.299	0.124	(	0.269)	0.175
120	10.00	0.73	0.299	0.124	(	0.269)	0.176
121	10.08	0.50	0.204	0.123	(	0.184)	0.081
122	10.17	0.50	0.204	0.122	(	0.184)	0.082
123	10.25	0.50	0.204	0.122	(	0.184)	0.082
124	10.33	0.50	0.204	0.121	(	0.184)	0.083
125	10.42	0.50	0.204	0.121	(	0.184)	0.083
126	10.50	0.50	0.204	0.120	(	0.184)	0.084
127	10.58	0.67	0.272	0.119	(	0.245)	0.152
128	10.67	0.67	0.272	0.119	(	0.245)	0.153
129	10.75	0.67	0.272	0.118	(	0.245)	0.154
130	10.83	0.67	0.272	0.118	(	0.245)	0.154
131	10.92	0.67	0.272	0.117	(	0.245)	0.155
132	11.00	0.67	0.272	0.117	(	0.245)	0.155
133	11.08	0.63	0.258	0.116	(	0.232)	0.142
134	11.17	0.63	0.258	0.115	(	0.232)	0.143
135	11.25	0.63	0.258	0.115	(	0.232)	0.144
136	11.33	0.63	0.258	0.114	(	0.232)	0.144
137	11.42	0.63	0.258	0.114	(	0.232)	0.145
138	11.50	0.63	0.258	0.113	(	0.232)	0.145
139	11.58	0.57	0.231	0.113	(	0.208)	0.119
140	11.67	0.57	0.231	0.112	(	0.208)	0.119
141	11.75	0.57	0.231	0.111	(	0.208)	0.120
142	11.83	0.60	0.245	0.111	(	0.220)	0.134
143	11.92	0.60	0.245	0.110	(	0.220)	0.134
144	12.00	0.60	0.245	0.110	(	0.220)	0.135
145	12.08	0.83	0.340	0.109	(	0.306)	0.231

146	12.17	0.83	0.340	0.109	(0.306)	0.231
147	12.25	0.83	0.340	0.108	(0.306)	0.232
148	12.33	0.87	0.353	0.108	(0.318)	0.246
149	12.42	0.87	0.353	0.107	(0.318)	0.246
150	12.50	0.87	0.353	0.107	(0.318)	0.247
151	12.58	0.93	0.381	0.106	(0.343)	0.275
152	12.67	0.93	0.381	0.105	(0.343)	0.275
153	12.75	0.93	0.381	0.105	(0.343)	0.276
154	12.83	0.97	0.394	0.104	(0.355)	0.290
155	12.92	0.97	0.394	0.104	(0.355)	0.290
156	13.00	0.97	0.394	0.103	(0.355)	0.291
157	13.08	1.13	0.462	0.103	(0.416)	0.359
158	13.17	1.13	0.462	0.102	(0.416)	0.360
159	13.25	1.13	0.462	0.102	(0.416)	0.360
160	13.33	1.13	0.462	0.101	(0.416)	0.361
161	13.42	1.13	0.462	0.101	(0.416)	0.362
162	13.50	1.13	0.462	0.100	(0.416)	0.362
163	13.58	0.77	0.313	0.100	(0.281)	0.213
164	13.67	0.77	0.313	0.099	(0.281)	0.213
165	13.75	0.77	0.313	0.099	(0.281)	0.214
166	13.83	0.77	0.313	0.098	(0.281)	0.215
167	13.92	0.77	0.313	0.098	(0.281)	0.215
168	14.00	0.77	0.313	0.097	(0.281)	0.216
169	14.08	0.90	0.367	0.097	(0.330)	0.270
170	14.17	0.90	0.367	0.096	(0.330)	0.271
171	14.25	0.90	0.367	0.096	(0.330)	0.271
172	14.33	0.87	0.353	0.095	(0.318)	0.258
173	14.42	0.87	0.353	0.095	(0.318)	0.259
174	14.50	0.87	0.353	0.094	(0.318)	0.259
175	14.58	0.87	0.353	0.094	(0.318)	0.260
176	14.67	0.87	0.353	0.093	(0.318)	0.260
177	14.75	0.87	0.353	0.093	(0.318)	0.261
178	14.83	0.83	0.340	0.092	(0.306)	0.248
179	14.92	0.83	0.340	0.092	(0.306)	0.248
180	15.00	0.83	0.340	0.091	(0.306)	0.248
181	15.08	0.80	0.326	0.091	(0.294)	0.235
182	15.17	0.80	0.326	0.090	(0.294)	0.236
183	15.25	0.80	0.326	0.090	(0.294)	0.236
184	15.33	0.77	0.313	0.090	(0.281)	0.223
185	15.42	0.77	0.313	0.089	(0.281)	0.224
186	15.50	0.77	0.313	0.089	(0.281)	0.224
187	15.58	0.63	0.258	0.088	(0.232)	0.170
188	15.67	0.63	0.258	0.088	(0.232)	0.171
189	15.75	0.63	0.258	0.087	(0.232)	0.171
190	15.83	0.63	0.258	0.087	(0.232)	0.172
191	15.92	0.63	0.258	0.086	(0.232)	0.172
192	16.00	0.63	0.258	0.086	(0.232)	0.172
193	16.08	0.13	0.054	(0.085)	0.049	0.005
194	16.17	0.13	0.054	(0.085)	0.049	0.005
195	16.25	0.13	0.054	(0.085)	0.049	0.005

196	16.33	0.13	0.054	(0.084)	0.049	0.005
197	16.42	0.13	0.054	(0.084)	0.049	0.005
198	16.50	0.13	0.054	(0.083)	0.049	0.005
199	16.58	0.10	0.041	(0.083)	0.037	0.004
200	16.67	0.10	0.041	(0.082)	0.037	0.004
201	16.75	0.10	0.041	(0.082)	0.037	0.004
202	16.83	0.10	0.041	(0.082)	0.037	0.004
203	16.92	0.10	0.041	(0.081)	0.037	0.004
204	17.00	0.10	0.041	(0.081)	0.037	0.004
205	17.08	0.17	0.068	(0.080)	0.061	0.007
206	17.17	0.17	0.068	(0.080)	0.061	0.007
207	17.25	0.17	0.068	(0.080)	0.061	0.007
208	17.33	0.17	0.068	(0.079)	0.061	0.007
209	17.42	0.17	0.068	(0.079)	0.061	0.007
210	17.50	0.17	0.068	(0.078)	0.061	0.007
211	17.58	0.17	0.068	(0.078)	0.061	0.007
212	17.67	0.17	0.068	(0.078)	0.061	0.007
213	17.75	0.17	0.068	(0.077)	0.061	0.007
214	17.83	0.13	0.054	(0.077)	0.049	0.005
215	17.92	0.13	0.054	(0.076)	0.049	0.005
216	18.00	0.13	0.054	(0.076)	0.049	0.005
217	18.08	0.13	0.054	(0.076)	0.049	0.005
218	18.17	0.13	0.054	(0.075)	0.049	0.005
219	18.25	0.13	0.054	(0.075)	0.049	0.005
220	18.33	0.13	0.054	(0.075)	0.049	0.005
221	18.42	0.13	0.054	(0.074)	0.049	0.005
222	18.50	0.13	0.054	(0.074)	0.049	0.005
223	18.58	0.10	0.041	(0.074)	0.037	0.004
224	18.67	0.10	0.041	(0.073)	0.037	0.004
225	18.75	0.10	0.041	(0.073)	0.037	0.004
226	18.83	0.07	0.027	(0.072)	0.024	0.003
227	18.92	0.07	0.027	(0.072)	0.024	0.003
228	19.00	0.07	0.027	(0.072)	0.024	0.003
229	19.08	0.10	0.041	(0.071)	0.037	0.004
230	19.17	0.10	0.041	(0.071)	0.037	0.004
231	19.25	0.10	0.041	(0.071)	0.037	0.004
232	19.33	0.13	0.054	(0.070)	0.049	0.005
233	19.42	0.13	0.054	(0.070)	0.049	0.005
234	19.50	0.13	0.054	(0.070)	0.049	0.005
235	19.58	0.10	0.041	(0.069)	0.037	0.004
236	19.67	0.10	0.041	(0.069)	0.037	0.004
237	19.75	0.10	0.041	(0.069)	0.037	0.004
238	19.83	0.07	0.027	(0.069)	0.024	0.003
239	19.92	0.07	0.027	(0.068)	0.024	0.003
240	20.00	0.07	0.027	(0.068)	0.024	0.003
241	20.08	0.10	0.041	(0.068)	0.037	0.004
242	20.17	0.10	0.041	(0.067)	0.037	0.004
243	20.25	0.10	0.041	(0.067)	0.037	0.004
244	20.33	0.10	0.041	(0.067)	0.037	0.004
245	20.42	0.10	0.041	(0.066)	0.037	0.004

246	20.50	0.10	0.041	(0.066)	0.037	0.004
247	20.58	0.10	0.041	(0.066)	0.037	0.004
248	20.67	0.10	0.041	(0.066)	0.037	0.004
249	20.75	0.10	0.041	(0.065)	0.037	0.004
250	20.83	0.07	0.027	(0.065)	0.024	0.003
251	20.92	0.07	0.027	(0.065)	0.024	0.003
252	21.00	0.07	0.027	(0.065)	0.024	0.003
253	21.08	0.10	0.041	(0.064)	0.037	0.004
254	21.17	0.10	0.041	(0.064)	0.037	0.004
255	21.25	0.10	0.041	(0.064)	0.037	0.004
256	21.33	0.07	0.027	(0.064)	0.024	0.003
257	21.42	0.07	0.027	(0.063)	0.024	0.003
258	21.50	0.07	0.027	(0.063)	0.024	0.003
259	21.58	0.10	0.041	(0.063)	0.037	0.004
260	21.67	0.10	0.041	(0.063)	0.037	0.004
261	21.75	0.10	0.041	(0.062)	0.037	0.004
262	21.83	0.07	0.027	(0.062)	0.024	0.003
263	21.92	0.07	0.027	(0.062)	0.024	0.003
264	22.00	0.07	0.027	(0.062)	0.024	0.003
265	22.08	0.10	0.041	(0.062)	0.037	0.004
266	22.17	0.10	0.041	(0.061)	0.037	0.004
267	22.25	0.10	0.041	(0.061)	0.037	0.004
268	22.33	0.07	0.027	(0.061)	0.024	0.003
269	22.42	0.07	0.027	(0.061)	0.024	0.003
270	22.50	0.07	0.027	(0.061)	0.024	0.003
271	22.58	0.07	0.027	(0.060)	0.024	0.003
272	22.67	0.07	0.027	(0.060)	0.024	0.003
273	22.75	0.07	0.027	(0.060)	0.024	0.003
274	22.83	0.07	0.027	(0.060)	0.024	0.003
275	22.92	0.07	0.027	(0.060)	0.024	0.003
276	23.00	0.07	0.027	(0.060)	0.024	0.003
277	23.08	0.07	0.027	(0.060)	0.024	0.003
278	23.17	0.07	0.027	(0.059)	0.024	0.003
279	23.25	0.07	0.027	(0.059)	0.024	0.003
280	23.33	0.07	0.027	(0.059)	0.024	0.003
281	23.42	0.07	0.027	(0.059)	0.024	0.003
282	23.50	0.07	0.027	(0.059)	0.024	0.003
283	23.58	0.07	0.027	(0.059)	0.024	0.003
284	23.67	0.07	0.027	(0.059)	0.024	0.003
285	23.75	0.07	0.027	(0.059)	0.024	0.003
286	23.83	0.07	0.027	(0.059)	0.024	0.003
287	23.92	0.07	0.027	(0.059)	0.024	0.003
288	24.00	0.07	0.027	(0.059)	0.024	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.2

Flood volume = Effective rainfall 1.60(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 1.80(In)
Total soil loss = 0.299(Ac.Ft)
Total rainfall = 3.40(In)

Flood volume = 11631.1 Cubic Feet
Total soil loss = 13044.0 Cubic Feet

Peak flow rate of this hydrograph = 0.729(CFS)

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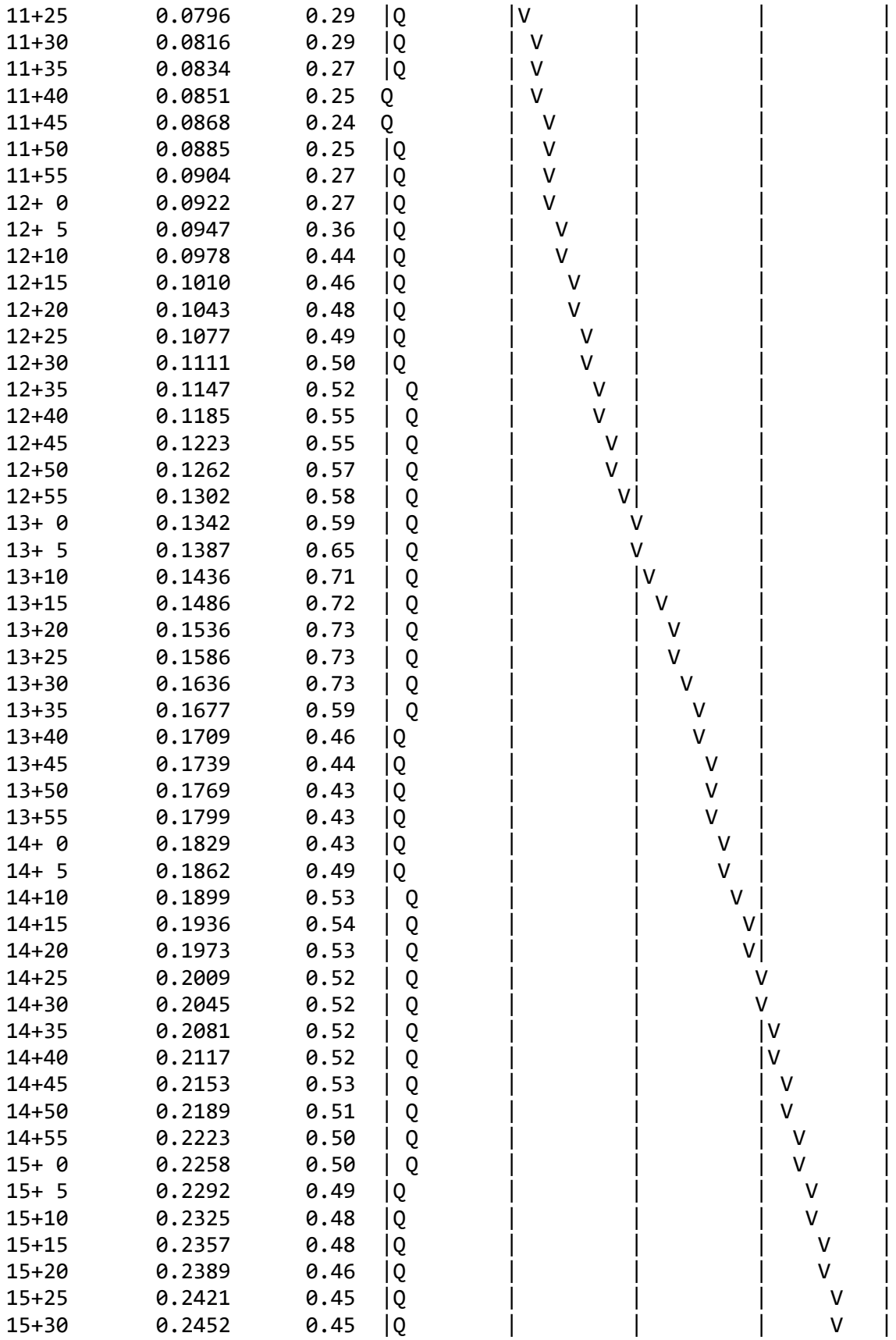
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.00	Q				
0+15	0.0001	0.01	Q				
0+20	0.0001	0.01	Q				
0+25	0.0002	0.01	Q				
0+30	0.0002	0.01	Q				
0+35	0.0003	0.01	Q				
0+40	0.0004	0.01	Q				
0+45	0.0004	0.01	Q				
0+50	0.0005	0.01	Q				
0+55	0.0006	0.01	Q				
1+ 0	0.0006	0.01	Q				
1+ 5	0.0007	0.01	Q				
1+10	0.0008	0.01	Q				
1+15	0.0008	0.01	Q				
1+20	0.0009	0.01	Q				
1+25	0.0009	0.01	Q				
1+30	0.0010	0.01	Q				
1+35	0.0010	0.01	Q				
1+40	0.0011	0.01	Q				
1+45	0.0012	0.01	Q				
1+50	0.0012	0.01	Q				
1+55	0.0013	0.01	Q				
2+ 0	0.0014	0.01	Q				
2+ 5	0.0014	0.01	Q				
2+10	0.0015	0.01	Q				
2+15	0.0016	0.01	Q				
2+20	0.0017	0.01	Q				
2+25	0.0017	0.01	Q				
2+30	0.0018	0.01	Q				
2+35	0.0019	0.01	Q				
2+40	0.0020	0.01	Q				
2+45	0.0021	0.01	Q				
2+50	0.0022	0.01	Q				
2+55	0.0023	0.01	Q				
3+ 0	0.0024	0.01	Q				

3+ 5	0.0025	0.01	Q				
3+10	0.0026	0.01	Q				
3+15	0.0027	0.01	Q				
3+20	0.0027	0.01	Q				
3+25	0.0028	0.01	Q				
3+30	0.0029	0.01	Q				
3+35	0.0030	0.01	Q				
3+40	0.0031	0.01	Q				
3+45	0.0032	0.01	Q				
3+50	0.0033	0.01	Q				
3+55	0.0034	0.02	Q				
4+ 0	0.0035	0.02	Q				
4+ 5	0.0037	0.02	Q				
4+10	0.0038	0.02	Q				
4+15	0.0039	0.02	Q				
4+20	0.0040	0.02	Q				
4+25	0.0041	0.02	Q				
4+30	0.0043	0.02	Q				
4+35	0.0044	0.02	Q				
4+40	0.0045	0.02	Q				
4+45	0.0047	0.02	Q				
4+50	0.0048	0.02	Q				
4+55	0.0050	0.02	Q				
5+ 0	0.0051	0.02	Q				
5+ 5	0.0052	0.02	Q				
5+10	0.0054	0.02	Q				
5+15	0.0055	0.02	Q				
5+20	0.0056	0.02	Q				
5+25	0.0057	0.02	Q				
5+30	0.0059	0.02	Q				
5+35	0.0060	0.02	Q				
5+40	0.0061	0.02	Q				
5+45	0.0063	0.02	Q				
5+50	0.0064	0.02	Q				
5+55	0.0066	0.02	Q				
6+ 0	0.0068	0.02	QV				
6+ 5	0.0069	0.02	QV				
6+10	0.0071	0.02	QV				
6+15	0.0072	0.02	QV				
6+20	0.0074	0.02	QV				
6+25	0.0076	0.02	QV				
6+30	0.0078	0.02	QV				
6+35	0.0079	0.03	QV				
6+40	0.0081	0.03	QV				
6+45	0.0083	0.03	QV				
6+50	0.0085	0.03	QV				
6+55	0.0087	0.03	QV				
7+ 0	0.0089	0.03	QV				
7+ 5	0.0091	0.03	QV				
7+10	0.0093	0.03	QV				

7+15	0.0094	0.03	QV	|	|	|	|
7+20	0.0096	0.03	QV	|	|	|	|
7+25	0.0098	0.03	QV	|	|	|	|
7+30	0.0101	0.03	QV	|	|	|	|
7+35	0.0103	0.04	QV	|	|	|	|
7+40	0.0106	0.04	QV	|	|	|	|
7+45	0.0109	0.04	QV	|	|	|	|
7+50	0.0113	0.06	QV	|	|	|	|
7+55	0.0118	0.07	QV	|	|	|	|
8+ 0	0.0123	0.08	QV	|	|	|	|
8+ 5	0.0130	0.10	QV	|	|	|	|
8+10	0.0139	0.13	Q V	|	|	|	|
8+15	0.0148	0.13	Q V	|	|	|	|
8+20	0.0158	0.14	Q V	|	|	|	|
8+25	0.0167	0.14	Q V	|	|	|	|
8+30	0.0177	0.14	Q V	|	|	|	|
8+35	0.0187	0.15	Q V	|	|	|	|
8+40	0.0199	0.17	Q V	|	|	|	|
8+45	0.0210	0.17	Q V	|	|	|	|
8+50	0.0223	0.18	Q V	|	|	|	|
8+55	0.0237	0.20	Q V	|	|	|	|
9+ 0	0.0250	0.20	Q V	|	|	|	|
9+ 5	0.0266	0.23	Q V	|	|	|	|
9+10	0.0283	0.25	|Q V	|	|	|	|
9+15	0.0301	0.26	|Q V	|	|	|	|
9+20	0.0320	0.27	|Q V	|	|	|	|
9+25	0.0340	0.29	|Q V	|	|	|	|
9+30	0.0360	0.29	|Q V	|	|	|	|
9+35	0.0381	0.30	|Q V	|	|	|	|
9+40	0.0403	0.32	|Q V	|	|	|	|
9+45	0.0425	0.32	|Q V	|	|	|	|
9+50	0.0448	0.34	|Q V	|	|	|	|
9+55	0.0472	0.35	|Q V	|	|	|	|
10+ 0	0.0496	0.35	|Q V	|	|	|	|
10+ 5	0.0514	0.27	|Q V	|	|	|	|
10+10	0.0527	0.19	Q V	|	|	|	|
10+15	0.0539	0.17	Q V	|	|	|	|
10+20	0.0550	0.17	Q V	|	|	|	|
10+25	0.0562	0.17	Q V	|	|	|	|
10+30	0.0574	0.17	Q V	|	|	|	|
10+35	0.0590	0.23	Q V	|	|	|	|
10+40	0.0610	0.29	|Q V|	|	|	|	|
10+45	0.0631	0.30	|Q V|	|	|	|	|
10+50	0.0652	0.31	|Q V|	|	|	|	|
10+55	0.0674	0.31	|Q V	|	|	|	|
11+ 0	0.0695	0.31	|Q V	|	|	|	|
11+ 5	0.0716	0.30	|Q V	|	|	|	|
11+10	0.0736	0.29	|Q |V	|	|	|	|
11+15	0.0756	0.29	|Q |V	|	|	|	|
11+20	0.0776	0.29	|Q |V	|	|	|	|



15+35	0.2479	0.40	|Q	|	|	|	V |
15+40	0.2504	0.36	|Q	|	|	|	V |
15+45	0.2528	0.35	|Q	|	|	|	V |
15+50	0.2552	0.35	|Q	|	|	|	V |
15+55	0.2575	0.35	|Q	|	|	|	V |
16+ 0	0.2599	0.35	|Q	|	|	|	V |
16+ 5	0.2613	0.19	Q	|	|	|	V|
16+10	0.2616	0.05	Q	|	|	|	V|
16+15	0.2618	0.02	Q	|	|	|	V|
16+20	0.2618	0.01	Q	|	|	|	V|
16+25	0.2619	0.01	Q	|	|	|	V|
16+30	0.2620	0.01	Q	|	|	|	V|
16+35	0.2620	0.01	Q	|	|	|	V|
16+40	0.2621	0.01	Q	|	|	|	V|
16+45	0.2622	0.01	Q	|	|	|	V|
16+50	0.2622	0.01	Q	|	|	|	V|
16+55	0.2623	0.01	Q	|	|	|	V|
17+ 0	0.2623	0.01	Q	|	|	|	V|
17+ 5	0.2624	0.01	Q	|	|	|	V|
17+10	0.2625	0.01	Q	|	|	|	V|
17+15	0.2626	0.01	Q	|	|	|	V|
17+20	0.2627	0.01	Q	|	|	|	V|
17+25	0.2628	0.01	Q	|	|	|	V|
17+30	0.2629	0.01	Q	|	|	|	V|
17+35	0.2630	0.01	Q	|	|	|	V|
17+40	0.2631	0.01	Q	|	|	|	V|
17+45	0.2632	0.01	Q	|	|	|	V|
17+50	0.2632	0.01	Q	|	|	|	V|
17+55	0.2633	0.01	Q	|	|	|	V|
18+ 0	0.2634	0.01	Q	|	|	|	V|
18+ 5	0.2635	0.01	Q	|	|	|	V|
18+10	0.2635	0.01	Q	|	|	|	V|
18+15	0.2636	0.01	Q	|	|	|	V|
18+20	0.2637	0.01	Q	|	|	|	V|
18+25	0.2638	0.01	Q	|	|	|	V|
18+30	0.2638	0.01	Q	|	|	|	V|
18+35	0.2639	0.01	Q	|	|	|	V|
18+40	0.2640	0.01	Q	|	|	|	V|
18+45	0.2640	0.01	Q	|	|	|	V|
18+50	0.2641	0.01	Q	|	|	|	V|
18+55	0.2641	0.01	Q	|	|	|	V|
19+ 0	0.2642	0.01	Q	|	|	|	V|
19+ 5	0.2642	0.01	Q	|	|	|	V|
19+10	0.2643	0.01	Q	|	|	|	V|
19+15	0.2643	0.01	Q	|	|	|	V|
19+20	0.2644	0.01	Q	|	|	|	V|
19+25	0.2645	0.01	Q	|	|	|	V|
19+30	0.2645	0.01	Q	|	|	|	V|
19+35	0.2646	0.01	Q	|	|	|	V|
19+40	0.2647	0.01	Q	|	|	|	V|

19+45	0.2647	0.01	Q	|	|	|	V|
19+50	0.2648	0.01	Q	|	|	|	V|
19+55	0.2648	0.01	Q	|	|	|	V|
20+ 0	0.2648	0.01	Q	|	|	|	V|
20+ 5	0.2649	0.01	Q	|	|	|	V|
20+10	0.2649	0.01	Q	|	|	|	V|
20+15	0.2650	0.01	Q	|	|	|	V|
20+20	0.2650	0.01	Q	|	|	|	V|
20+25	0.2651	0.01	Q	|	|	|	V|
20+30	0.2652	0.01	Q	|	|	|	V|
20+35	0.2652	0.01	Q	|	|	|	V|
20+40	0.2653	0.01	Q	|	|	|	V|
20+45	0.2653	0.01	Q	|	|	|	V|
20+50	0.2654	0.01	Q	|	|	|	V|
20+55	0.2654	0.01	Q	|	|	|	V|
21+ 0	0.2655	0.01	Q	|	|	|	V|
21+ 5	0.2655	0.01	Q	|	|	|	V|
21+10	0.2656	0.01	Q	|	|	|	V|
21+15	0.2656	0.01	Q	|	|	|	V|
21+20	0.2657	0.01	Q	|	|	|	V|
21+25	0.2657	0.01	Q	|	|	|	V|
21+30	0.2657	0.01	Q	|	|	|	V|
21+35	0.2658	0.01	Q	|	|	|	V|
21+40	0.2658	0.01	Q	|	|	|	V|
21+45	0.2659	0.01	Q	|	|	|	V|
21+50	0.2659	0.01	Q	|	|	|	V|
21+55	0.2660	0.01	Q	|	|	|	V|
22+ 0	0.2660	0.01	Q	|	|	|	V|
22+ 5	0.2661	0.01	Q	|	|	|	V|
22+10	0.2661	0.01	Q	|	|	|	V|
22+15	0.2662	0.01	Q	|	|	|	V|
22+20	0.2662	0.01	Q	|	|	|	V|
22+25	0.2663	0.01	Q	|	|	|	V|
22+30	0.2663	0.01	Q	|	|	|	V|
22+35	0.2663	0.01	Q	|	|	|	V|
22+40	0.2664	0.01	Q	|	|	|	V|
22+45	0.2664	0.01	Q	|	|	|	V|
22+50	0.2665	0.01	Q	|	|	|	V|
22+55	0.2665	0.01	Q	|	|	|	V|
23+ 0	0.2665	0.01	Q	|	|	|	V|
23+ 5	0.2666	0.01	Q	|	|	|	V|
23+10	0.2666	0.01	Q	|	|	|	V|
23+15	0.2666	0.01	Q	|	|	|	V|
23+20	0.2667	0.01	Q	|	|	|	V|
23+25	0.2667	0.01	Q	|	|	|	V|
23+30	0.2668	0.01	Q	|	|	|	V|
23+35	0.2668	0.01	Q	|	|	|	V|
23+40	0.2668	0.01	Q	|	|	|	V|
23+45	0.2669	0.01	Q	|	|	|	V|
23+50	0.2669	0.01	Q	|	|	|	V|

```
   23+55       0.2670      0.01  Q         |         |         |        V|
   24+ 0       0.2670      0.01  Q         |         |         |        V|
   24+ 5       0.2670      0.00  Q         |         |         |        V|
   24+10       0.2670      0.00  Q         |         |         |        V|
   24+15       0.2670      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 05/10/24 File: ONSITEPREE51100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            0.50                  1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                  2.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                              Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.515	0.117	(0.463)	0.398
2	0.17	4.20	0.655	0.117	(0.590)	0.538
3	0.25	4.40	0.686	0.117	(0.618)	0.569
4	0.33	4.80	0.749	0.117	(0.674)	0.632
5	0.42	5.20	0.811	0.117	(0.730)	0.694
6	0.50	6.20	0.967	0.117	(0.870)	0.850
7	0.58	6.80	1.061	0.117	(0.955)	0.944
8	0.67	8.80	1.373	0.117	(1.235)	1.256
9	0.75	13.90	2.168	0.117	(1.952)	2.051
10	0.83	31.40	4.898	0.117	(4.408)	4.781
11	0.92	7.20	1.123	0.117	(1.011)	1.006
12	1.00	3.80	0.593	0.117	(0.534)	0.476
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	14.2

Flood volume = Effective rainfall 1.18(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.12(In)
Total soil loss = 0.019(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 8588.4 Cubic Feet
Total soil loss = 849.4 Cubic Feet

Peak flow rate of this hydrograph = 6.485(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	0.0026	0.37	VQ				
0+10	0.0084	0.84	V Q				
0+15	0.0156	1.05	VQ				
0+20	0.0238	1.19	Q				
0+25	0.0329	1.32	QV				
0+30	0.0434	1.53	Q V				
0+35	0.0555	1.76	Q V				
0+40	0.0704	2.16	Q V				
0+45	0.0924	3.20	Q V				
0+50	0.1371	6.49	Q V				

```
    0+55       0.1745      5.42  |         |         |Q        |    V    |
    1+ 0       0.1898      2.22  |       Q |         |         |       V |
    1+ 5       0.1959      0.90  |  Q      |         |         |        V|
    1+10       0.1969      0.15  Q         |         |         |        V|
    1+15       0.1972      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 05/10/24 File: ONSITEPREE53100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            0.80                    1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                    4.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

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	0.312	0.117	(0.281)	0.195
2	0.17	1.30	0.312	0.117	(0.281)	0.195
3	0.25	1.10	0.264	0.117	(0.238)	0.147
4	0.33	1.50	0.360	0.117	(0.324)	0.243
5	0.42	1.50	0.360	0.117	(0.324)	0.243
6	0.50	1.80	0.432	0.117	(0.389)	0.315
7	0.58	1.50	0.360	0.117	(0.324)	0.243
8	0.67	1.80	0.432	0.117	(0.389)	0.315
9	0.75	1.80	0.432	0.117	(0.389)	0.315
10	0.83	1.50	0.360	0.117	(0.324)	0.243
11	0.92	1.60	0.384	0.117	(0.346)	0.267
12	1.00	1.80	0.432	0.117	(0.389)	0.315
13	1.08	2.20	0.528	0.117	(0.475)	0.411
14	1.17	2.20	0.528	0.117	(0.475)	0.411
15	1.25	2.20	0.528	0.117	(0.475)	0.411
16	1.33	2.00	0.480	0.117	(0.432)	0.363
17	1.42	2.60	0.624	0.117	(0.562)	0.507
18	1.50	2.70	0.648	0.117	(0.583)	0.531
19	1.58	2.40	0.576	0.117	(0.518)	0.459
20	1.67	2.70	0.648	0.117	(0.583)	0.531
21	1.75	3.30	0.792	0.117	(0.713)	0.675
22	1.83	3.10	0.744	0.117	(0.670)	0.627
23	1.92	2.90	0.696	0.117	(0.626)	0.579
24	2.00	3.00	0.720	0.117	(0.648)	0.603
25	2.08	3.10	0.744	0.117	(0.670)	0.627
26	2.17	4.20	1.008	0.117	(0.907)	0.891
27	2.25	5.00	1.200	0.117	(1.080)	1.083
28	2.33	3.50	0.840	0.117	(0.756)	0.723
29	2.42	6.80	1.632	0.117	(1.469)	1.515
30	2.50	7.30	1.752	0.117	(1.577)	1.635
31	2.58	8.20	1.968	0.117	(1.771)	1.851
32	2.67	5.90	1.416	0.117	(1.274)	1.299
33	2.75	2.00	0.480	0.117	(0.432)	0.363
34	2.83	1.80	0.432	0.117	(0.389)	0.315
35	2.92	1.80	0.432	0.117	(0.389)	0.315
36	3.00	0.60	0.144	0.117	(0.130)	0.027
		(Loss Rate Not Used)				
Sum =		100.0				Sum = 19.8

Flood volume = Effective rainfall 1.65(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.058(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 11971.6 Cubic Feet
Total soil loss = 2548.3 Cubic Feet

Peak flow rate of this hydrograph = 3.417(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	0.0013	0.18	Q				
0+10	0.0037	0.35	VQ				
0+15	0.0060	0.33	VQ				
0+20	0.0087	0.40	|Q				
0+25	0.0119	0.47	|Q				
0+30	0.0157	0.55	| Q				
0+35	0.0195	0.55	| Q				
0+40	0.0235	0.57	| QV				
0+45	0.0277	0.62	| Q V				
0+50	0.0316	0.56	| Q V				
0+55	0.0353	0.53	| Q V				
1+ 0	0.0393	0.58	| Q V				
1+ 5	0.0442	0.71	| Q V				
1+10	0.0497	0.80	| Q V				
1+15	0.0554	0.82	| Q V				
1+20	0.0608	0.78	| Q V				
1+25	0.0668	0.88	| Q V				
1+30	0.0738	1.01	| Q V				
1+35	0.0806	0.99	| Q |V				
1+40	0.0876	1.01	| Q | V				
1+45	0.0958	1.19	| Q | V				
1+50	0.1046	1.28	| Q | V				
1+55	0.1130	1.22	| Q | V				
2+ 0	0.1213	1.20	| Q | V				
2+ 5	0.1298	1.24	| Q | V				
2+10	0.1402	1.50	| Q | V				
2+15	0.1533	1.91	| Q | V				
2+20	0.1656	1.78	| Q | V				
2+25	0.1813	2.27	| Q| V				
2+30	0.2020	3.01	| Q V				
2+35	0.2255	3.42	| Q V				
2+40	0.2473	3.16	| Q V				
2+45	0.2601	1.86	| Q | V				
2+50	0.2665	0.94	| Q | V				
2+55	0.2714	0.71	| Q | V				
3+ 0	0.2740	0.37	|Q | V				
3+ 5	0.2746	0.10	Q | V				
3+10	0.2748	0.03	Q | V				

```
    3+15       0.2748      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 05/10/24 File: ONSITEPREE56100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

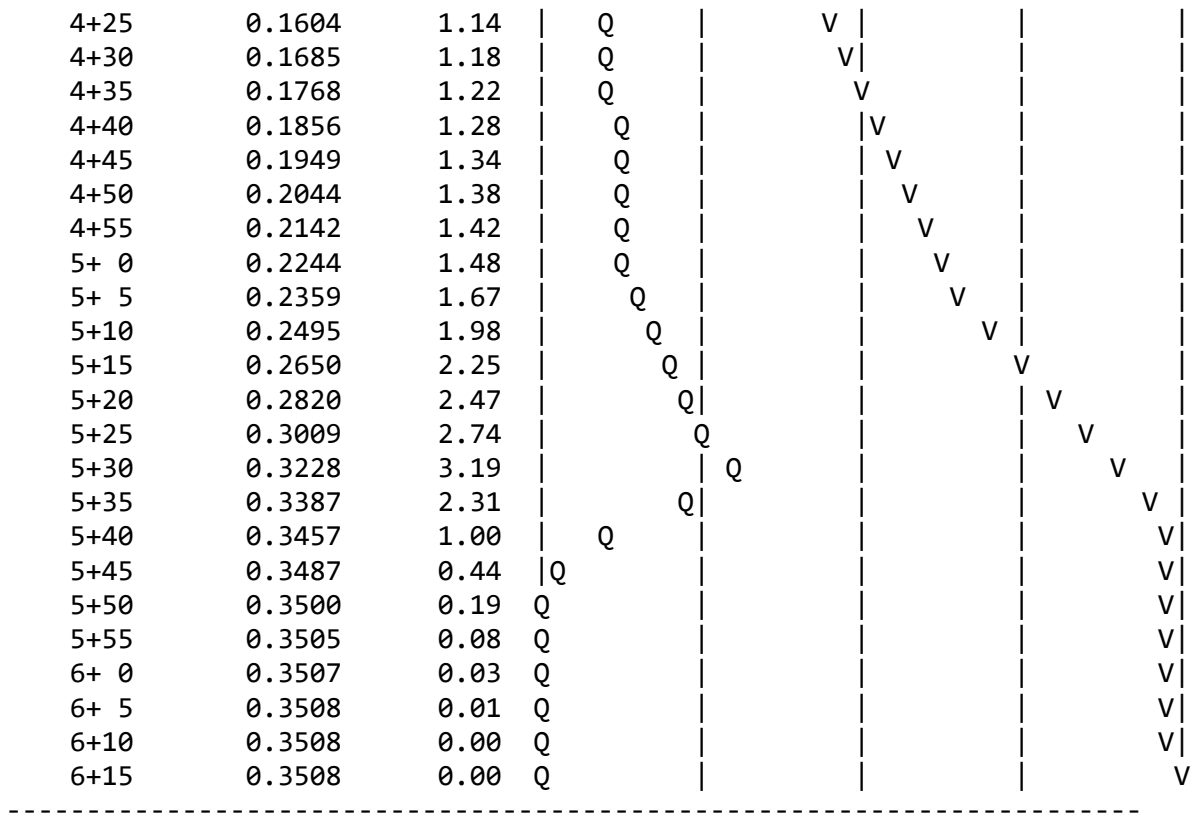
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	0.117	(0.151)	0.051
2	0.17	0.60	0.202	0.117	(0.181)	0.085
3	0.25	0.60	0.202	0.117	(0.181)	0.085
4	0.33	0.60	0.202	0.117	(0.181)	0.085
5	0.42	0.60	0.202	0.117	(0.181)	0.085
6	0.50	0.70	0.235	0.117	(0.212)	0.118
7	0.58	0.70	0.235	0.117	(0.212)	0.118
8	0.67	0.70	0.235	0.117	(0.212)	0.118
9	0.75	0.70	0.235	0.117	(0.212)	0.118
10	0.83	0.70	0.235	0.117	(0.212)	0.118
11	0.92	0.70	0.235	0.117	(0.212)	0.118
12	1.00	0.80	0.269	0.117	(0.242)	0.152
13	1.08	0.80	0.269	0.117	(0.242)	0.152
14	1.17	0.80	0.269	0.117	(0.242)	0.152
15	1.25	0.80	0.269	0.117	(0.242)	0.152
16	1.33	0.80	0.269	0.117	(0.242)	0.152
17	1.42	0.80	0.269	0.117	(0.242)	0.152
18	1.50	0.80	0.269	0.117	(0.242)	0.152
19	1.58	0.80	0.269	0.117	(0.242)	0.152
20	1.67	0.80	0.269	0.117	(0.242)	0.152
21	1.75	0.80	0.269	0.117	(0.242)	0.152
22	1.83	0.80	0.269	0.117	(0.242)	0.152
23	1.92	0.80	0.269	0.117	(0.242)	0.152
24	2.00	0.90	0.302	0.117	(0.272)	0.185
25	2.08	0.80	0.269	0.117	(0.242)	0.152
26	2.17	0.90	0.302	0.117	(0.272)	0.185
27	2.25	0.90	0.302	0.117	(0.272)	0.185
28	2.33	0.90	0.302	0.117	(0.272)	0.185
29	2.42	0.90	0.302	0.117	(0.272)	0.185
30	2.50	0.90	0.302	0.117	(0.272)	0.185
31	2.58	0.90	0.302	0.117	(0.272)	0.185
32	2.67	0.90	0.302	0.117	(0.272)	0.185
33	2.75	1.00	0.336	0.117	(0.302)	0.219
34	2.83	1.00	0.336	0.117	(0.302)	0.219
35	2.92	1.00	0.336	0.117	(0.302)	0.219
36	3.00	1.00	0.336	0.117	(0.302)	0.219
37	3.08	1.00	0.336	0.117	(0.302)	0.219
38	3.17	1.10	0.370	0.117	(0.333)	0.253
39	3.25	1.10	0.370	0.117	(0.333)	0.253
40	3.33	1.10	0.370	0.117	(0.333)	0.253
41	3.42	1.20	0.403	0.117	(0.363)	0.286
42	3.50	1.30	0.437	0.117	(0.393)	0.320
43	3.58	1.40	0.470	0.117	(0.423)	0.353
44	3.67	1.40	0.470	0.117	(0.423)	0.353
45	3.75	1.50	0.504	0.117	(0.454)	0.387

```
46   3.83     1.50      0.504          0.117    (  0.454)        0.387
47   3.92     1.60      0.538          0.117    (  0.484)        0.421
48   4.00     1.60      0.538          0.117    (  0.484)        0.421
49   4.08     1.70      0.571          0.117    (  0.514)        0.454
50   4.17     1.80      0.605          0.117    (  0.544)        0.488
51   4.25     1.90      0.638          0.117    (  0.575)        0.521
52   4.33     2.00      0.672          0.117    (  0.605)        0.555
53   4.42     2.10      0.706          0.117    (  0.635)        0.589
54   4.50     2.10      0.706          0.117    (  0.635)        0.589
55   4.58     2.20      0.739          0.117    (  0.665)        0.622
56   4.67     2.30      0.773          0.117    (  0.696)        0.656
57   4.75     2.40      0.806          0.117    (  0.726)        0.689
58   4.83     2.40      0.806          0.117    (  0.726)        0.689
59   4.92     2.50      0.840          0.117    (  0.756)        0.723
60   5.00     2.60      0.874          0.117    (  0.786)        0.757
61   5.08     3.10      1.042          0.117    (  0.937)        0.925
62   5.17     3.60      1.210          0.117    (  1.089)        1.093
63   5.25     3.90      1.310          0.117    (  1.179)        1.193
64   5.33     4.20      1.411          0.117    (  1.270)        1.294
65   5.42     4.70      1.579          0.117    (  1.421)        1.462
66   5.50     5.60      1.882          0.117    (  1.693)        1.765
67   5.58     1.90      0.638          0.117    (  0.575)        0.521
68   5.67     0.90      0.302          0.117    (  0.272)        0.185
69   5.75     0.60      0.202          0.117    (  0.181)        0.085
70   5.83     0.50      0.168          0.117    (  0.151)        0.051
71   5.92     0.30      0.101       (  0.117)       0.091        0.010
72   6.00     0.20      0.067       (  0.117)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    25.3
      Flood volume = Effective rainfall      2.10(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
      Total soil loss =      0.70(In)
      Total soil loss =     0.116(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       15281.4 Cubic Feet
      Total soil loss =        5046.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.186(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       0.0003      0.05  Q         |         |         |         |
  0+10       0.0012      0.12  Q         |         |         |         |
```

```
0+15       0.0023      0.16  Q         |         |         |         |
0+20       0.0034      0.17  Q         |         |         |         |
0+25       0.0046      0.17  Q         |         |         |         |
0+30       0.0060      0.20  Q         |         |         |         |
0+35       0.0076      0.23  Q         |         |         |         |
0+40       0.0092      0.24  QV        |         |         |         |
0+45       0.0109      0.24  QV        |         |         |         |
0+50       0.0125      0.24  QV        |         |         |         |
0+55       0.0141      0.24  QV        |         |         |         |
1+ 0       0.0160      0.27  |Q        |         |         |         |
1+ 5       0.0180      0.30  |QV       |         |         |         |
1+10       0.0201      0.30  |QV       |         |         |         |
1+15       0.0222      0.31  |QV       |         |         |         |
1+20       0.0244      0.31  |QV       |         |         |         |
1+25       0.0265      0.31  |Q V      |         |         |         |
1+30       0.0286      0.31  |Q V      |         |         |         |
1+35       0.0307      0.31  |Q V      |         |         |         |
1+40       0.0328      0.31  |Q V      |         |         |         |
1+45       0.0349      0.31  |Q V      |         |         |         |
1+50       0.0370      0.31  |Q  V     |         |         |         |
1+55       0.0391      0.31  |Q  V     |         |         |         |
2+ 0       0.0414      0.34  |Q  V     |         |         |         |
2+ 5       0.0437      0.33  |Q  V     |         |         |         |
2+10       0.0461      0.34  |Q   V    |         |         |         |
2+15       0.0486      0.37  |Q   V    |         |         |         |
2+20       0.0512      0.37  |Q   V    |         |         |         |
2+25       0.0538      0.37  |Q    V   |         |         |         |
2+30       0.0564      0.37  |Q    V   |         |         |         |
2+35       0.0589      0.37  |Q    V   |         |         |         |
2+40       0.0615      0.37  |Q     V  |         |         |         |
2+45       0.0643      0.41  |Q     V  |         |         |         |
2+50       0.0673      0.43  |Q     V  |         |         |         |
2+55       0.0703      0.44  |Q      V |         |         |         |
3+ 0       0.0733      0.44  |Q      V |         |         |         |
3+ 5       0.0764      0.44  |Q      V |         |         |         |
3+10       0.0796      0.47  |Q       V|         |         |         |
3+15       0.0831      0.50  | Q      V|         |         |         |
3+20       0.0866      0.51  | Q      V|         |         |         |
3+25       0.0903      0.54  | Q       V         |         |         |
3+30       0.0945      0.60  | Q       V         |         |         |
3+35       0.0990      0.67  | Q       |V        |         |         |
3+40       0.1039      0.70  | Q       |V        |         |         |
3+45       0.1090      0.74  | Q       | V       |         |         |
3+50       0.1143      0.77  |  Q      |  V      |         |         |
3+55       0.1199      0.81  |  Q      |  V      |         |         |
4+ 0       0.1257      0.84  |  Q      |   V     |         |         |
4+ 5       0.1317      0.88  |  Q      |    V    |         |         |
4+10       0.1382      0.94  |  Q      |    V    |         |         |
4+15       0.1451      1.01  |   Q     |     V   |         |         |
4+20       0.1525      1.07  |   Q     |      V  |         |         |
```


4+25 0.1604 1.14
4+30 0.1685 1.18
4+35 0.1768 1.22
4+40 0.1856 1.28
4+45 0.1949 1.34
4+50 0.2044 1.38
4+55 0.2142 1.42
5+ 0 0.2244 1.48
5+ 5 0.2359 1.67
5+10 0.2495 1.98
5+15 0.2650 2.25
5+20 0.2820 2.47
5+25 0.3009 2.74
5+30 0.3228 3.19
5+35 0.3387 2.31
5+40 0.3457 1.00
5+45 0.3487 0.44
5+50 0.3500 0.19
5+55 0.3505 0.08
6+ 0 0.3507 0.03
6+ 5 0.3508 0.01
6+10 0.3508 0.00
6+15 0.3508 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 05/10/24 File: ONSITEPREE524100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-5
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPREE5.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 627.00(Ft.)
Length along longest watercourse measured to centroid = 278.00(Ft.)
Length along longest watercourse = 0.119 Mi.
Length along longest watercourse measured to centroid = 0.053 Mi.
Difference in elevation = 24.00(Ft.)
Slope along watercourse = 202.1053 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.038 Hr.
Lag time = 2.29 Min.
25% of lag time = 0.57 Min.
40% of lag time = 0.92 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           91.00         0.000
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
91.0  91.0      0.117     0.000        0.117       1.000      0.117
                                                 Sum (F) =   0.117
Area averaged mean soil loss (F) (In/Hr) =  0.117
Minimum soil loss rate ((In/Hr)) =  0.059
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        218.298         46.393              0.935
    2   0.167        436.595         42.111              0.849
    3   0.250        654.893          8.099              0.163
    4   0.333        873.191          3.397              0.068
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------
```

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	0.043	(0.207)	0.039	0.004
2	0.17	0.07	0.043	(0.207)	0.039	0.004
3	0.25	0.07	0.043	(0.206)	0.039	0.004
4	0.33	0.10	0.065	(0.205)	0.058	0.006
5	0.42	0.10	0.065	(0.204)	0.058	0.006
6	0.50	0.10	0.065	(0.203)	0.058	0.006
7	0.58	0.10	0.065	(0.203)	0.058	0.006
8	0.67	0.10	0.065	(0.202)	0.058	0.006
9	0.75	0.10	0.065	(0.201)	0.058	0.006
10	0.83	0.13	0.086	(0.200)	0.078	0.009
11	0.92	0.13	0.086	(0.199)	0.078	0.009
12	1.00	0.13	0.086	(0.199)	0.078	0.009
13	1.08	0.10	0.065	(0.198)	0.058	0.006
14	1.17	0.10	0.065	(0.197)	0.058	0.006
15	1.25	0.10	0.065	(0.196)	0.058	0.006
16	1.33	0.10	0.065	(0.196)	0.058	0.006
17	1.42	0.10	0.065	(0.195)	0.058	0.006
18	1.50	0.10	0.065	(0.194)	0.058	0.006
19	1.58	0.10	0.065	(0.193)	0.058	0.006
20	1.67	0.10	0.065	(0.192)	0.058	0.006
21	1.75	0.10	0.065	(0.192)	0.058	0.006
22	1.83	0.13	0.086	(0.191)	0.078	0.009
23	1.92	0.13	0.086	(0.190)	0.078	0.009
24	2.00	0.13	0.086	(0.189)	0.078	0.009
25	2.08	0.13	0.086	(0.189)	0.078	0.009
26	2.17	0.13	0.086	(0.188)	0.078	0.009
27	2.25	0.13	0.086	(0.187)	0.078	0.009
28	2.33	0.13	0.086	(0.186)	0.078	0.009
29	2.42	0.13	0.086	(0.186)	0.078	0.009
30	2.50	0.13	0.086	(0.185)	0.078	0.009
31	2.58	0.17	0.108	(0.184)	0.097	0.011
32	2.67	0.17	0.108	(0.183)	0.097	0.011
33	2.75	0.17	0.108	(0.183)	0.097	0.011
34	2.83	0.17	0.108	(0.182)	0.097	0.011
35	2.92	0.17	0.108	(0.181)	0.097	0.011
36	3.00	0.17	0.108	(0.180)	0.097	0.011
37	3.08	0.17	0.108	(0.180)	0.097	0.011
38	3.17	0.17	0.108	(0.179)	0.097	0.011
39	3.25	0.17	0.108	(0.178)	0.097	0.011
40	3.33	0.17	0.108	(0.177)	0.097	0.011
41	3.42	0.17	0.108	(0.177)	0.097	0.011
42	3.50	0.17	0.108	(0.176)	0.097	0.011
43	3.58	0.17	0.108	(0.175)	0.097	0.011
44	3.67	0.17	0.108	(0.174)	0.097	0.011
45	3.75	0.17	0.108	(0.174)	0.097	0.011

46	3.83	0.20	0.130	(0.173)	0.117	0.013
47	3.92	0.20	0.130	(0.172)	0.117	0.013
48	4.00	0.20	0.130	(0.171)	0.117	0.013
49	4.08	0.20	0.130	(0.171)	0.117	0.013
50	4.17	0.20	0.130	(0.170)	0.117	0.013
51	4.25	0.20	0.130	(0.169)	0.117	0.013
52	4.33	0.23	0.151	(0.169)	0.136	0.015
53	4.42	0.23	0.151	(0.168)	0.136	0.015
54	4.50	0.23	0.151	(0.167)	0.136	0.015
55	4.58	0.23	0.151	(0.166)	0.136	0.015
56	4.67	0.23	0.151	(0.166)	0.136	0.015
57	4.75	0.23	0.151	(0.165)	0.136	0.015
58	4.83	0.27	0.173	(0.164)	0.156	0.017
59	4.92	0.27	0.173	(0.164)	0.156	0.017
60	5.00	0.27	0.173	(0.163)	0.156	0.017
61	5.08	0.20	0.130	(0.162)	0.117	0.013
62	5.17	0.20	0.130	(0.161)	0.117	0.013
63	5.25	0.20	0.130	(0.161)	0.117	0.013
64	5.33	0.23	0.151	(0.160)	0.136	0.015
65	5.42	0.23	0.151	(0.159)	0.136	0.015
66	5.50	0.23	0.151	(0.159)	0.136	0.015
67	5.58	0.27	0.173	(0.158)	0.156	0.017
68	5.67	0.27	0.173	(0.157)	0.156	0.017
69	5.75	0.27	0.173	(0.157)	0.156	0.017
70	5.83	0.27	0.173	(0.156)	0.156	0.017
71	5.92	0.27	0.173	0.155	(0.156)	0.018
72	6.00	0.27	0.173	0.154	(0.156)	0.018
73	6.08	0.30	0.194	0.154	(0.175)	0.041
74	6.17	0.30	0.194	0.153	(0.175)	0.041
75	6.25	0.30	0.194	0.152	(0.175)	0.042
76	6.33	0.30	0.194	0.152	(0.175)	0.043
77	6.42	0.30	0.194	0.151	(0.175)	0.043
78	6.50	0.30	0.194	0.150	(0.175)	0.044
79	6.58	0.33	0.216	0.150	(0.194)	0.066
80	6.67	0.33	0.216	0.149	(0.194)	0.067
81	6.75	0.33	0.216	0.148	(0.194)	0.068
82	6.83	0.33	0.216	0.148	(0.194)	0.068
83	6.92	0.33	0.216	0.147	(0.194)	0.069
84	7.00	0.33	0.216	0.146	(0.194)	0.070
85	7.08	0.33	0.216	0.146	(0.194)	0.070
86	7.17	0.33	0.216	0.145	(0.194)	0.071
87	7.25	0.33	0.216	0.144	(0.194)	0.072
88	7.33	0.37	0.238	0.144	(0.214)	0.094
89	7.42	0.37	0.238	0.143	(0.214)	0.095
90	7.50	0.37	0.238	0.142	(0.214)	0.095
91	7.58	0.40	0.259	0.142	(0.233)	0.117
92	7.67	0.40	0.259	0.141	(0.233)	0.118
93	7.75	0.40	0.259	0.140	(0.233)	0.119
94	7.83	0.43	0.281	0.140	(0.253)	0.141
95	7.92	0.43	0.281	0.139	(0.253)	0.142

96	8.00	0.43	0.281	0.138	(	0.253)	0.142
97	8.08	0.50	0.324	0.138	(	0.292)	0.186
98	8.17	0.50	0.324	0.137	(	0.292)	0.187
99	8.25	0.50	0.324	0.137	(	0.292)	0.187
100	8.33	0.50	0.324	0.136	(	0.292)	0.188
101	8.42	0.50	0.324	0.135	(	0.292)	0.189
102	8.50	0.50	0.324	0.135	(	0.292)	0.189
103	8.58	0.53	0.346	0.134	(	0.311)	0.212
104	8.67	0.53	0.346	0.133	(	0.311)	0.212
105	8.75	0.53	0.346	0.133	(	0.311)	0.213
106	8.83	0.57	0.367	0.132	(	0.330)	0.235
107	8.92	0.57	0.367	0.131	(	0.330)	0.236
108	9.00	0.57	0.367	0.131	(	0.330)	0.236
109	9.08	0.63	0.410	0.130	(	0.369)	0.280
110	9.17	0.63	0.410	0.130	(	0.369)	0.281
111	9.25	0.63	0.410	0.129	(	0.369)	0.281
112	9.33	0.67	0.432	0.128	(	0.389)	0.304
113	9.42	0.67	0.432	0.128	(	0.389)	0.304
114	9.50	0.67	0.432	0.127	(	0.389)	0.305
115	9.58	0.70	0.454	0.127	(	0.408)	0.327
116	9.67	0.70	0.454	0.126	(	0.408)	0.328
117	9.75	0.70	0.454	0.125	(	0.408)	0.328
118	9.83	0.73	0.475	0.125	(	0.428)	0.350
119	9.92	0.73	0.475	0.124	(	0.428)	0.351
120	10.00	0.73	0.475	0.124	(	0.428)	0.352
121	10.08	0.50	0.324	0.123	(	0.292)	0.201
122	10.17	0.50	0.324	0.122	(	0.292)	0.202
123	10.25	0.50	0.324	0.122	(	0.292)	0.202
124	10.33	0.50	0.324	0.121	(	0.292)	0.203
125	10.42	0.50	0.324	0.121	(	0.292)	0.203
126	10.50	0.50	0.324	0.120	(	0.292)	0.204
127	10.58	0.67	0.432	0.119	(	0.389)	0.313
128	10.67	0.67	0.432	0.119	(	0.389)	0.313
129	10.75	0.67	0.432	0.118	(	0.389)	0.314
130	10.83	0.67	0.432	0.118	(	0.389)	0.314
131	10.92	0.67	0.432	0.117	(	0.389)	0.315
132	11.00	0.67	0.432	0.117	(	0.389)	0.315
133	11.08	0.63	0.410	0.116	(	0.369)	0.294
134	11.17	0.63	0.410	0.115	(	0.369)	0.295
135	11.25	0.63	0.410	0.115	(	0.369)	0.296
136	11.33	0.63	0.410	0.114	(	0.369)	0.296
137	11.42	0.63	0.410	0.114	(	0.369)	0.297
138	11.50	0.63	0.410	0.113	(	0.369)	0.297
139	11.58	0.57	0.367	0.113	(	0.330)	0.255
140	11.67	0.57	0.367	0.112	(	0.330)	0.255
141	11.75	0.57	0.367	0.111	(	0.330)	0.256
142	11.83	0.60	0.389	0.111	(	0.350)	0.278
143	11.92	0.60	0.389	0.110	(	0.350)	0.278
144	12.00	0.60	0.389	0.110	(	0.350)	0.279
145	12.08	0.83	0.540	0.109	(	0.486)	0.431

146	12.17	0.83	0.540	0.109	(0.486)	0.431
147	12.25	0.83	0.540	0.108	(0.486)	0.432
148	12.33	0.87	0.562	0.108	(0.505)	0.454
149	12.42	0.87	0.562	0.107	(0.505)	0.455
150	12.50	0.87	0.562	0.107	(0.505)	0.455
151	12.58	0.93	0.605	0.106	(0.544)	0.499
152	12.67	0.93	0.605	0.105	(0.544)	0.499
153	12.75	0.93	0.605	0.105	(0.544)	0.500
154	12.83	0.97	0.626	0.104	(0.564)	0.522
155	12.92	0.97	0.626	0.104	(0.564)	0.523
156	13.00	0.97	0.626	0.103	(0.564)	0.523
157	13.08	1.13	0.734	0.103	(0.661)	0.632
158	13.17	1.13	0.734	0.102	(0.661)	0.632
159	13.25	1.13	0.734	0.102	(0.661)	0.633
160	13.33	1.13	0.734	0.101	(0.661)	0.633
161	13.42	1.13	0.734	0.101	(0.661)	0.634
162	13.50	1.13	0.734	0.100	(0.661)	0.634
163	13.58	0.77	0.497	0.100	(0.447)	0.397
164	13.67	0.77	0.497	0.099	(0.447)	0.398
165	13.75	0.77	0.497	0.099	(0.447)	0.398
166	13.83	0.77	0.497	0.098	(0.447)	0.399
167	13.92	0.77	0.497	0.098	(0.447)	0.399
168	14.00	0.77	0.497	0.097	(0.447)	0.400
169	14.08	0.90	0.583	0.097	(0.525)	0.487
170	14.17	0.90	0.583	0.096	(0.525)	0.487
171	14.25	0.90	0.583	0.096	(0.525)	0.487
172	14.33	0.87	0.562	0.095	(0.505)	0.466
173	14.42	0.87	0.562	0.095	(0.505)	0.467
174	14.50	0.87	0.562	0.094	(0.505)	0.467
175	14.58	0.87	0.562	0.094	(0.505)	0.468
176	14.67	0.87	0.562	0.093	(0.505)	0.468
177	14.75	0.87	0.562	0.093	(0.505)	0.469
178	14.83	0.83	0.540	0.092	(0.486)	0.448
179	14.92	0.83	0.540	0.092	(0.486)	0.448
180	15.00	0.83	0.540	0.091	(0.486)	0.449
181	15.08	0.80	0.518	0.091	(0.467)	0.427
182	15.17	0.80	0.518	0.090	(0.467)	0.428
183	15.25	0.80	0.518	0.090	(0.467)	0.428
184	15.33	0.77	0.497	0.090	(0.447)	0.407
185	15.42	0.77	0.497	0.089	(0.447)	0.408
186	15.50	0.77	0.497	0.089	(0.447)	0.408
187	15.58	0.63	0.410	0.088	(0.369)	0.322
188	15.67	0.63	0.410	0.088	(0.369)	0.323
189	15.75	0.63	0.410	0.087	(0.369)	0.323
190	15.83	0.63	0.410	0.087	(0.369)	0.324
191	15.92	0.63	0.410	0.086	(0.369)	0.324
192	16.00	0.63	0.410	0.086	(0.369)	0.324
193	16.08	0.13	0.086	(0.085)	0.078	0.009
194	16.17	0.13	0.086	(0.085)	0.078	0.009
195	16.25	0.13	0.086	(0.085)	0.078	0.009

196	16.33	0.13	0.086	(	0.084)	0.078		0.009
197	16.42	0.13	0.086	(	0.084)	0.078		0.009
198	16.50	0.13	0.086	(	0.083)	0.078		0.009
199	16.58	0.10	0.065	(	0.083)	0.058		0.006
200	16.67	0.10	0.065	(	0.082)	0.058		0.006
201	16.75	0.10	0.065	(	0.082)	0.058		0.006
202	16.83	0.10	0.065	(	0.082)	0.058		0.006
203	16.92	0.10	0.065	(	0.081)	0.058		0.006
204	17.00	0.10	0.065	(	0.081)	0.058		0.006
205	17.08	0.17	0.108		0.080	(	0.097)	0.028
206	17.17	0.17	0.108		0.080	(	0.097)	0.028
207	17.25	0.17	0.108		0.080	(	0.097)	0.028
208	17.33	0.17	0.108		0.079	(	0.097)	0.029
209	17.42	0.17	0.108		0.079	(	0.097)	0.029
210	17.50	0.17	0.108		0.078	(	0.097)	0.030
211	17.58	0.17	0.108		0.078	(	0.097)	0.030
212	17.67	0.17	0.108		0.078	(	0.097)	0.030
213	17.75	0.17	0.108		0.077	(	0.097)	0.031
214	17.83	0.13	0.086		0.077	(	0.078)	0.010
215	17.92	0.13	0.086		0.076	(	0.078)	0.010
216	18.00	0.13	0.086		0.076	(	0.078)	0.010
217	18.08	0.13	0.086		0.076	(	0.078)	0.011
218	18.17	0.13	0.086		0.075	(	0.078)	0.011
219	18.25	0.13	0.086		0.075	(	0.078)	0.011
220	18.33	0.13	0.086		0.075	(	0.078)	0.012
221	18.42	0.13	0.086		0.074	(	0.078)	0.012
222	18.50	0.13	0.086		0.074	(	0.078)	0.013
223	18.58	0.10	0.065	(	0.074)	0.058		0.006
224	18.67	0.10	0.065	(	0.073)	0.058		0.006
225	18.75	0.10	0.065	(	0.073)	0.058		0.006
226	18.83	0.07	0.043	(	0.072)	0.039		0.004
227	18.92	0.07	0.043	(	0.072)	0.039		0.004
228	19.00	0.07	0.043	(	0.072)	0.039		0.004
229	19.08	0.10	0.065	(	0.071)	0.058		0.006
230	19.17	0.10	0.065	(	0.071)	0.058		0.006
231	19.25	0.10	0.065	(	0.071)	0.058		0.006
232	19.33	0.13	0.086		0.070	(	0.078)	0.016
233	19.42	0.13	0.086		0.070	(	0.078)	0.016
234	19.50	0.13	0.086		0.070	(	0.078)	0.017
235	19.58	0.10	0.065	(	0.069)	0.058		0.006
236	19.67	0.10	0.065	(	0.069)	0.058		0.006
237	19.75	0.10	0.065	(	0.069)	0.058		0.006
238	19.83	0.07	0.043	(	0.069)	0.039		0.004
239	19.92	0.07	0.043	(	0.068)	0.039		0.004
240	20.00	0.07	0.043	(	0.068)	0.039		0.004
241	20.08	0.10	0.065	(	0.068)	0.058		0.006
242	20.17	0.10	0.065	(	0.067)	0.058		0.006
243	20.25	0.10	0.065	(	0.067)	0.058		0.006
244	20.33	0.10	0.065	(	0.067)	0.058		0.006
245	20.42	0.10	0.065	(	0.066)	0.058		0.006

246	20.50	0.10	0.065	(0.066)	0.058	0.006
247	20.58	0.10	0.065	(0.066)	0.058	0.006
248	20.67	0.10	0.065	(0.066)	0.058	0.006
249	20.75	0.10	0.065	(0.065)	0.058	0.006
250	20.83	0.07	0.043	(0.065)	0.039	0.004
251	20.92	0.07	0.043	(0.065)	0.039	0.004
252	21.00	0.07	0.043	(0.065)	0.039	0.004
253	21.08	0.10	0.065	(0.064)	0.058	0.006
254	21.17	0.10	0.065	(0.064)	0.058	0.006
255	21.25	0.10	0.065	(0.064)	0.058	0.006
256	21.33	0.07	0.043	(0.064)	0.039	0.004
257	21.42	0.07	0.043	(0.063)	0.039	0.004
258	21.50	0.07	0.043	(0.063)	0.039	0.004
259	21.58	0.10	0.065	(0.063)	0.058	0.006
260	21.67	0.10	0.065	(0.063)	0.058	0.006
261	21.75	0.10	0.065	(0.062)	0.058	0.006
262	21.83	0.07	0.043	(0.062)	0.039	0.004
263	21.92	0.07	0.043	(0.062)	0.039	0.004
264	22.00	0.07	0.043	(0.062)	0.039	0.004
265	22.08	0.10	0.065	(0.062)	0.058	0.006
266	22.17	0.10	0.065	(0.061)	0.058	0.006
267	22.25	0.10	0.065	(0.061)	0.058	0.006
268	22.33	0.07	0.043	(0.061)	0.039	0.004
269	22.42	0.07	0.043	(0.061)	0.039	0.004
270	22.50	0.07	0.043	(0.061)	0.039	0.004
271	22.58	0.07	0.043	(0.060)	0.039	0.004
272	22.67	0.07	0.043	(0.060)	0.039	0.004
273	22.75	0.07	0.043	(0.060)	0.039	0.004
274	22.83	0.07	0.043	(0.060)	0.039	0.004
275	22.92	0.07	0.043	(0.060)	0.039	0.004
276	23.00	0.07	0.043	(0.060)	0.039	0.004
277	23.08	0.07	0.043	(0.060)	0.039	0.004
278	23.17	0.07	0.043	(0.059)	0.039	0.004
279	23.25	0.07	0.043	(0.059)	0.039	0.004
280	23.33	0.07	0.043	(0.059)	0.039	0.004
281	23.42	0.07	0.043	(0.059)	0.039	0.004
282	23.50	0.07	0.043	(0.059)	0.039	0.004
283	23.58	0.07	0.043	(0.059)	0.039	0.004
284	23.67	0.07	0.043	(0.059)	0.039	0.004
285	23.75	0.07	0.043	(0.059)	0.039	0.004
286	23.83	0.07	0.043	(0.059)	0.039	0.004
287	23.92	0.07	0.043	(0.059)	0.039	0.004
288	24.00	0.07	0.043	(0.059)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 38.3

Flood volume = Effective rainfall 3.19(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 2.21(In)
Total soil loss = 0.369(Ac.Ft)
Total rainfall = 5.40(In)

Flood volume = 23148.7 Cubic Feet
Total soil loss = 16055.2 Cubic Feet

Peak flow rate of this hydrograph = 1.278(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0004	0.01	Q				
0+35	0.0005	0.01	Q				
0+40	0.0006	0.01	Q				
0+45	0.0007	0.01	Q				
0+50	0.0008	0.02	Q				
0+55	0.0009	0.02	Q				
1+ 0	0.0010	0.02	Q				
1+ 5	0.0011	0.02	Q				
1+10	0.0012	0.01	Q				
1+15	0.0013	0.01	Q				
1+20	0.0014	0.01	Q				
1+25	0.0015	0.01	Q				
1+30	0.0016	0.01	Q				
1+35	0.0016	0.01	Q				
1+40	0.0017	0.01	Q				
1+45	0.0018	0.01	Q				
1+50	0.0019	0.02	Q				
1+55	0.0020	0.02	Q				
2+ 0	0.0022	0.02	Q				
2+ 5	0.0023	0.02	Q				
2+10	0.0024	0.02	Q				
2+15	0.0025	0.02	Q				
2+20	0.0026	0.02	Q				
2+25	0.0028	0.02	Q				
2+30	0.0029	0.02	Q				
2+35	0.0030	0.02	Q				
2+40	0.0032	0.02	Q				
2+45	0.0033	0.02	Q				
2+50	0.0035	0.02	Q				
2+55	0.0036	0.02	Q				
3+ 0	0.0038	0.02	Q				

3+ 5	0.0039	0.02	Q				
3+10	0.0041	0.02	Q				
3+15	0.0042	0.02	Q				
3+20	0.0044	0.02	Q				
3+25	0.0045	0.02	Q				
3+30	0.0047	0.02	Q				
3+35	0.0048	0.02	Q				
3+40	0.0050	0.02	Q				
3+45	0.0051	0.02	Q				
3+50	0.0053	0.02	Q				
3+55	0.0055	0.03	Q				
4+ 0	0.0056	0.03	Q				
4+ 5	0.0058	0.03	Q				
4+10	0.0060	0.03	Q				
4+15	0.0062	0.03	Q				
4+20	0.0064	0.03	Q				
4+25	0.0066	0.03	Q				
4+30	0.0068	0.03	Q				
4+35	0.0070	0.03	Q				
4+40	0.0072	0.03	Q				
4+45	0.0074	0.03	Q				
4+50	0.0076	0.03	Q				
4+55	0.0079	0.03	Q				
5+ 0	0.0081	0.03	Q				
5+ 5	0.0083	0.03	Q				
5+10	0.0085	0.03	Q				
5+15	0.0087	0.03	Q				
5+20	0.0089	0.03	Q				
5+25	0.0091	0.03	Q				
5+30	0.0093	0.03	Q				
5+35	0.0095	0.03	Q				
5+40	0.0098	0.03	Q				
5+45	0.0100	0.03	Q				
5+50	0.0102	0.03	Q				
5+55	0.0105	0.04	Q				
6+ 0	0.0107	0.04	Q				
6+ 5	0.0111	0.06	Q				
6+10	0.0117	0.08	Q				
6+15	0.0122	0.08	Q				
6+20	0.0128	0.09	Q				
6+25	0.0134	0.09	QV				
6+30	0.0140	0.09	QV				
6+35	0.0148	0.11	QV				
6+40	0.0157	0.13	QV				
6+45	0.0166	0.13	QV				
6+50	0.0175	0.14	QV				
6+55	0.0185	0.14	QV				
7+ 0	0.0194	0.14	QV				
7+ 5	0.0204	0.14	QV				
7+10	0.0214	0.14	QV				

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 7+15       0.0224      0.14  QV        |         |         |         |
 7+20       0.0235      0.17  QV        |         |         |         |
 7+25       0.0248      0.18  QV        |         |         |         |
 7+30       0.0261      0.19  QV        |         |         |         |
 7+35       0.0276      0.21  Q V       |         |         |         |
 7+40       0.0292      0.23  Q V       |         |         |         |
 7+45       0.0308      0.24  Q V       |         |         |         |
 7+50       0.0326      0.26  |QV       |         |         |         |
 7+55       0.0345      0.28  |QV       |         |         |         |
 8+ 0       0.0365      0.28  |QV       |         |         |         |
 8+ 5       0.0387      0.33  |QV       |         |         |         |
 8+10       0.0413      0.37  |Q V      |         |         |         |
 8+15       0.0438      0.37  |Q V      |         |         |         |
 8+20       0.0464      0.38  |Q V      |         |         |         |
 8+25       0.0491      0.38  |Q V      |         |         |         |
 8+30       0.0517      0.38  |Q V      |         |         |         |
 8+35       0.0545      0.40  |Q  V     |         |         |         |
 8+40       0.0574      0.42  |Q  V     |         |         |         |
 8+45       0.0603      0.43  |Q  V     |         |         |         |
 8+50       0.0634      0.45  |Q  V     |         |         |         |
 8+55       0.0666      0.47  |Q   V    |         |         |         |
 9+ 0       0.0699      0.47  |Q   V    |         |         |         |
 9+ 5       0.0735      0.52  | Q  V    |         |         |         |
 9+10       0.0773      0.56  | Q  V    |         |         |         |
 9+15       0.0812      0.56  | Q   V   |         |         |         |
 9+20       0.0852      0.59  | Q   V   |         |         |         |
 9+25       0.0894      0.61  | Q   V   |         |         |         |
 9+30       0.0936      0.61  | Q    V  |         |         |         |
 9+35       0.0980      0.64  | Q    V  |         |         |         |
 9+40       0.1025      0.65  | Q    V  |         |         |         |
 9+45       0.1070      0.66  | Q     V |         |         |         |
 9+50       0.1117      0.68  | Q     V |         |         |         |
 9+55       0.1166      0.70  | Q     V |         |         |         |
10+ 0       0.1215      0.71  | Q      V|         |         |         |
10+ 5       0.1254      0.57  | Q      V|         |         |         |
10+10       0.1284      0.44  |Q       V|         |         |         |
10+15       0.1313      0.42  |Q       V|         |         |         |
10+20       0.1341      0.41  |Q        V         |         |         |
10+25       0.1369      0.41  |Q        V         |         |         |
10+30       0.1397      0.41  |Q        V         |         |         |
10+35       0.1433      0.51  | Q       V         |         |         |
10+40       0.1474      0.61  | Q       |V        |         |         |
10+45       0.1517      0.62  | Q       |V        |         |         |
10+50       0.1561      0.63  | Q       |V        |         |         |
10+55       0.1605      0.63  | Q       | V       |         |         |
11+ 0       0.1648      0.64  | Q       | V       |         |         |
11+ 5       0.1691      0.62  | Q       | V       |         |         |
11+10       0.1732      0.60  | Q       |  V      |         |         |
11+15       0.1773      0.60  | Q       |  V      |         |         |
11+20       0.1814      0.60  | Q       |  V      |         |         |
```

11+25	0.1855	0.60	Q	V			
11+30	0.1897	0.60	Q	V			
11+35	0.1935	0.56	Q	V			
11+40	0.1971	0.52	Q	V			
11+45	0.2007	0.52	Q	V			
11+50	0.2044	0.54	Q	V			
11+55	0.2082	0.56	Q	V			
12+ 0	0.2121	0.56	Q	V			
12+ 5	0.2169	0.70	Q	V			
12+10	0.2227	0.83	Q	V			
12+15	0.2286	0.86	Q	V			
12+20	0.2347	0.89	Q	V			
12+25	0.2410	0.91	Q	V			
12+30	0.2473	0.92	Q	V			
12+35	0.2539	0.96	Q	V			
12+40	0.2608	1.00	Q	V			
12+45	0.2677	1.00	Q	V			
12+50	0.2748	1.03	Q	V			
12+55	0.2820	1.05	Q	V			
13+ 0	0.2893	1.05	Q	V			
13+ 5	0.2972	1.16	Q	V			
13+10	0.3058	1.25	Q	V			
13+15	0.3146	1.27	Q	V			
13+20	0.3233	1.28	Q	V			
13+25	0.3321	1.28	Q	V			
13+30	0.3409	1.28	Q	V			
13+35	0.3482	1.06	Q	V			
13+40	0.3541	0.86	Q	V			
13+45	0.3598	0.82	Q	V			
13+50	0.3653	0.80	Q	V			
13+55	0.3708	0.80	Q	V			
14+ 0	0.3764	0.81	Q	V			
14+ 5	0.3825	0.89	Q	V			
14+10	0.3891	0.96	Q	V			
14+15	0.3958	0.98	Q	V			
14+20	0.4025	0.96	Q	V			
14+25	0.4090	0.95	Q	V			
14+30	0.4155	0.94	Q	V			
14+35	0.4220	0.94	Q	V			
14+40	0.4285	0.94	Q	V			
14+45	0.4350	0.94	Q	V			
14+50	0.4413	0.93	Q	V			
14+55	0.4476	0.91	Q	V			
15+ 0	0.4538	0.91	Q	V			
15+ 5	0.4599	0.88	Q	V			
15+10	0.4659	0.87	Q	V			
15+15	0.4719	0.86	Q	V			
15+20	0.4777	0.84	Q	V			
15+25	0.4834	0.83	Q	V			
15+30	0.4890	0.82	Q	V			

15+35	0.4942	0.74	| Q	|	|	|	V |
15+40	0.4988	0.67	| Q	|	|	|	V |
15+45	0.5033	0.66	| Q	|	|	|	V |
15+50	0.5078	0.65	| Q	|	|	|	V |
15+55	0.5123	0.65	| Q	|	|	|	V |
16+ 0	0.5168	0.65	| Q	|	|	|	V |
16+ 5	0.5192	0.36	|Q	|	|	|	V|
16+10	0.5199	0.09	Q	|	|	|	V|
16+15	0.5201	0.04	Q	|	|	|	V|
16+20	0.5203	0.02	Q	|	|	|	V|
16+25	0.5204	0.02	Q	|	|	|	V|
16+30	0.5205	0.02	Q	|	|	|	V|
16+35	0.5206	0.02	Q	|	|	|	V|
16+40	0.5207	0.01	Q	|	|	|	V|
16+45	0.5208	0.01	Q	|	|	|	V|
16+50	0.5209	0.01	Q	|	|	|	V|
16+55	0.5210	0.01	Q	|	|	|	V|
17+ 0	0.5211	0.01	Q	|	|	|	V|
17+ 5	0.5213	0.03	Q	|	|	|	V|
17+10	0.5216	0.05	Q	|	|	|	V|
17+15	0.5220	0.06	Q	|	|	|	V|
17+20	0.5224	0.06	Q	|	|	|	V|
17+25	0.5228	0.06	Q	|	|	|	V|
17+30	0.5232	0.06	Q	|	|	|	V|
17+35	0.5236	0.06	Q	|	|	|	V|
17+40	0.5241	0.06	Q	|	|	|	V|
17+45	0.5245	0.06	Q	|	|	|	V|
17+50	0.5248	0.04	Q	|	|	|	V|
17+55	0.5249	0.02	Q	|	|	|	V|
18+ 0	0.5251	0.02	Q	|	|	|	V|
18+ 5	0.5252	0.02	Q	|	|	|	V|
18+10	0.5254	0.02	Q	|	|	|	V|
18+15	0.5255	0.02	Q	|	|	|	V|
18+20	0.5257	0.02	Q	|	|	|	V|
18+25	0.5259	0.02	Q	|	|	|	V|
18+30	0.5260	0.02	Q	|	|	|	V|
18+35	0.5262	0.02	Q	|	|	|	V|
18+40	0.5263	0.01	Q	|	|	|	V|
18+45	0.5264	0.01	Q	|	|	|	V|
18+50	0.5264	0.01	Q	|	|	|	V|
18+55	0.5265	0.01	Q	|	|	|	V|
19+ 0	0.5266	0.01	Q	|	|	|	V|
19+ 5	0.5266	0.01	Q	|	|	|	V|
19+10	0.5267	0.01	Q	|	|	|	V|
19+15	0.5268	0.01	Q	|	|	|	V|
19+20	0.5270	0.02	Q	|	|	|	V|
19+25	0.5272	0.03	Q	|	|	|	V|
19+30	0.5274	0.03	Q	|	|	|	V|
19+35	0.5276	0.02	Q	|	|	|	V|
19+40	0.5277	0.02	Q	|	|	|	V|

19+45	0.5278	0.01	Q	|	|	|	V|
19+50	0.5278	0.01	Q	|	|	|	V|
19+55	0.5279	0.01	Q	|	|	|	V|
20+ 0	0.5280	0.01	Q	|	|	|	V|
20+ 5	0.5280	0.01	Q	|	|	|	V|
20+10	0.5281	0.01	Q	|	|	|	V|
20+15	0.5282	0.01	Q	|	|	|	V|
20+20	0.5283	0.01	Q	|	|	|	V|
20+25	0.5284	0.01	Q	|	|	|	V|
20+30	0.5285	0.01	Q	|	|	|	V|
20+35	0.5286	0.01	Q	|	|	|	V|
20+40	0.5287	0.01	Q	|	|	|	V|
20+45	0.5287	0.01	Q	|	|	|	V|
20+50	0.5288	0.01	Q	|	|	|	V|
20+55	0.5289	0.01	Q	|	|	|	V|
21+ 0	0.5289	0.01	Q	|	|	|	V|
21+ 5	0.5290	0.01	Q	|	|	|	V|
21+10	0.5291	0.01	Q	|	|	|	V|
21+15	0.5292	0.01	Q	|	|	|	V|
21+20	0.5293	0.01	Q	|	|	|	V|
21+25	0.5293	0.01	Q	|	|	|	V|
21+30	0.5294	0.01	Q	|	|	|	V|
21+35	0.5295	0.01	Q	|	|	|	V|
21+40	0.5296	0.01	Q	|	|	|	V|
21+45	0.5296	0.01	Q	|	|	|	V|
21+50	0.5297	0.01	Q	|	|	|	V|
21+55	0.5298	0.01	Q	|	|	|	V|
22+ 0	0.5298	0.01	Q	|	|	|	V|
22+ 5	0.5299	0.01	Q	|	|	|	V|
22+10	0.5300	0.01	Q	|	|	|	V|
22+15	0.5301	0.01	Q	|	|	|	V|
22+20	0.5302	0.01	Q	|	|	|	V|
22+25	0.5302	0.01	Q	|	|	|	V|
22+30	0.5303	0.01	Q	|	|	|	V|
22+35	0.5304	0.01	Q	|	|	|	V|
22+40	0.5304	0.01	Q	|	|	|	V|
22+45	0.5305	0.01	Q	|	|	|	V|
22+50	0.5305	0.01	Q	|	|	|	V|
22+55	0.5306	0.01	Q	|	|	|	V|
23+ 0	0.5307	0.01	Q	|	|	|	V|
23+ 5	0.5307	0.01	Q	|	|	|	V|
23+10	0.5308	0.01	Q	|	|	|	V|
23+15	0.5308	0.01	Q	|	|	|	V|
23+20	0.5309	0.01	Q	|	|	|	V|
23+25	0.5310	0.01	Q	|	|	|	V|
23+30	0.5310	0.01	Q	|	|	|	V|
23+35	0.5311	0.01	Q	|	|	|	V|
23+40	0.5311	0.01	Q	|	|	|	V|
23+45	0.5312	0.01	Q	|	|	|	V|
23+50	0.5313	0.01	Q	|	|	|	V|

```
   23+55       0.5313      0.01  Q         |         |         |        V|
   24+ 0       0.5314      0.01  Q         |         |         |        V|
   24+ 5       0.5314      0.00  Q         |         |         |        V|
   24+10       0.5314      0.00  Q         |         |         |        V|
   24+15       0.5314      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 03/07/24 File: STREAMTRIBEX1100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBEX.OUT- RSB

Drainage Area = 1203.50(Ac.) = 1.880 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1203.50(Ac.) = 1.880 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6871.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.301 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.381 Hr.
Lag time = 22.88 Min.
25% of lag time = 5.72 Min.
40% of lag time = 9.15 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]
     1203.50            0.50                  601.75

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1203.50            1.30                 1564.55

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =   98.91 %
Adjusted average point rain =    1.286(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   601.750           78.00         0.000
   601.750           86.00         0.000
 Total Area Entered =   1203.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.853          1.966             23.840
    2   0.167         43.706          6.036             73.206
    3   0.250         65.558         10.590            128.447
    4   0.333         87.411         14.519            176.097
```

5	0.417	109.264	15.314	185.739
6	0.500	131.117	11.440	138.753
7	0.583	152.970	7.385	89.578
8	0.667	174.822	5.042	61.158
9	0.750	196.675	3.600	43.663
10	0.833	218.528	3.014	36.561
11	0.917	240.381	2.521	30.579
12	1.000	262.234	2.163	26.239
13	1.083	284.086	1.918	23.266
14	1.167	305.939	1.623	19.690
15	1.250	327.792	1.381	16.747
16	1.333	349.645	1.311	15.903
17	1.417	371.498	1.142	13.851
18	1.500	393.350	0.962	11.663
19	1.583	415.203	0.898	10.893
20	1.667	437.056	0.711	8.629
21	1.750	458.909	0.696	8.438
22	1.833	480.762	0.663	8.045
23	1.917	502.614	0.654	7.936
24	2.000	524.467	0.549	6.653
25	2.083	546.320	0.481	5.831
26	2.167	568.173	0.451	5.465
27	2.250	590.026	0.395	4.786
28	2.333	611.878	0.380	4.614
29	2.417	633.731	0.315	3.821
30	2.500	655.584	0.303	3.676
31	2.583	677.437	0.243	2.944
32	2.667	699.290	0.219	2.651
33	2.750	721.142	0.219	2.651
34	2.833	742.995	0.219	2.651
35	2.917	764.848	0.219	2.651
36	3.000	786.701	0.219	2.651
37	3.083	808.554	0.242	2.938
			Sum = 100.000	Sum= 1212.902

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	3.30	0.509	0.222	(0.458)	0.288
2	0.17	4.20	0.648	0.222	(0.583)	0.426
3	0.25	4.40	0.679	0.222	(0.611)	0.457
4	0.33	4.80	0.741	0.222	(0.667)	0.519
5	0.42	5.20	0.802	0.222	(0.722)	0.581
6	0.50	6.20	0.957	0.222	(0.861)	0.735
7	0.58	6.80	1.049	0.222	(0.944)	0.828
8	0.67	8.80	1.358	0.222	(1.222)	1.136

```
 9   0.75    13.90      2.145          0.222    (  1.930)        1.923
10   0.83    31.40      4.845          0.222    (  4.360)        4.623
11   0.92     7.20      1.111          0.222    (  1.000)        0.889
12   1.00     3.80      0.586          0.222    (  0.528)        0.365
               (Loss Rate Not Used)
   Sum =     100.0                                  Sum =    12.8
      Flood volume = Effective rainfall      1.06(In)
       times area    1203.5(Ac.)/[(In)/(Ft.)] =     106.7(Ac.Ft)
      Total soil loss =      0.22(In)
      Total soil loss =    22.225(Ac.Ft)
      Total rainfall =      1.29(In)
      Flood volume =     4649268.8 Cubic Feet
      Total soil loss =      968105.0 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1666.108(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      425.0     850.0    1275.0    1700.0
-------------------------------------------------------------------------
  0+ 5       0.0472      6.86  Q         |         |         |         |
  0+10       0.2624     31.24  Q         |         |         |         |
  0+15       0.8071     79.10  VQ        |         |         |         |
  0+20       1.8495    151.35  V  Q      |         |         |         |
  0+25       3.4970    239.22  |V   Q    |         |         |         |
  0+30       5.7458    326.52  | V    Q  |         |         |         |
  0+35       8.5669    409.62  |  V     Q|         |         |         |
  0+40      12.0122    500.26  |   V     |Q        |         |         |
  0+45      16.3138    624.59  |     V   |   Q     |         |         |
  0+50      22.2631    863.85  |       V |         Q         |         |
  0+55      30.4671   1191.22  |         |V        |       Q |         |
  1+ 0      40.7584   1494.30  |         |    V    |         |    Q    |
  1+ 5      52.2330   1666.11  |         |        V|         |        Q|
  1+10      63.1079   1579.04  |         |         |  V      |      Q  |
  1+15      71.5898   1231.56  |         |         |     V Q |         |
  1+20      77.6073    873.75  |         |         Q       V|         |
  1+25      81.9160    625.62  |         |   Q     |         V         |
  1+30      85.1509    469.71  |         |Q        |         |V        |
  1+35      87.8034    385.14  |        Q|         |         | V       |
  1+40      90.0374    324.38  |      Q  |         |         |  V      |
  1+45      91.9647    279.84  |     Q   |         |         |   V     |
  1+50      93.6500    244.71  |    Q    |         |         |    V    |
  1+55      95.1107    212.09  |   Q     |         |         |    V    |
  2+ 0      96.3908    185.87  |   Q     |         |         |     V   |
  2+ 5      97.5489    168.15  |  Q      |         |         |     V   |
```

```
    2+10      98.5710    148.41  |  Q      |         |         |     V   |
    2+15      99.4676    130.19  |  Q      |         |         |      V  |
    2+20     100.2753    117.28  | Q       |         |         |      V  |
    2+25     100.9791    102.19  | Q       |         |         |      V  |
    2+30     101.6364     95.44  | Q       |         |         |       V |
    2+35     102.2486     88.89  | Q       |         |         |       V |
    2+40     102.8188     82.79  |Q        |         |         |       V |
    2+45     103.3211     72.93  |Q        |         |         |       V |
    2+50     103.7698     65.15  |Q        |         |         |       V |
    2+55     104.1789     59.41  |Q        |         |         |        V|
    3+ 0     104.5480     53.58  |Q        |         |         |        V|
    3+ 5     104.8897     49.62  |Q        |         |         |        V|
    3+10     105.1891     43.48  |Q        |         |         |        V|
    3+15     105.4589     39.17  Q         |         |         |        V|
    3+20     105.6904     33.61  Q         |         |         |        V|
    3+25     105.8983     30.19  Q         |         |         |        V|
    3+30     106.0922     28.16  Q         |         |         |        V|
    3+35     106.2722     26.13  Q         |         |         |        V|
    3+40     106.4377     24.03  Q         |         |         |        V|
    3+45     106.5840     21.24  Q         |         |         |        V|
    3+50     106.7005     16.92  Q         |         |         |        V|
    3+55     106.7251      3.58  Q         |         |         |        V|
    4+ 0     106.7325      1.07  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 03/07/24 File: STREAMTRIBEX3100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBEX.OUT- RSB

Drainage Area = 1203.50(Ac.) = 1.880 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1203.50(Ac.) = 1.880 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6871.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.301 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.381 Hr.
Lag time = 22.88 Min.
25% of lag time = 5.72 Min.
40% of lag time = 9.15 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]
     1203.50            0.80                  962.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1203.50            2.00                 2407.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =   99.47 %
Adjusted average point rain =    1.989(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   601.750           78.00         0.000
   601.750           86.00         0.000
 Total Area Entered =   1203.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.853          1.966             23.840
    2   0.167         43.706          6.036             73.206
    3   0.250         65.558         10.590            128.447
    4   0.333         87.411         14.519            176.097
    5   0.417        109.264         15.314            185.739
    6   0.500        131.117         11.440            138.753
```

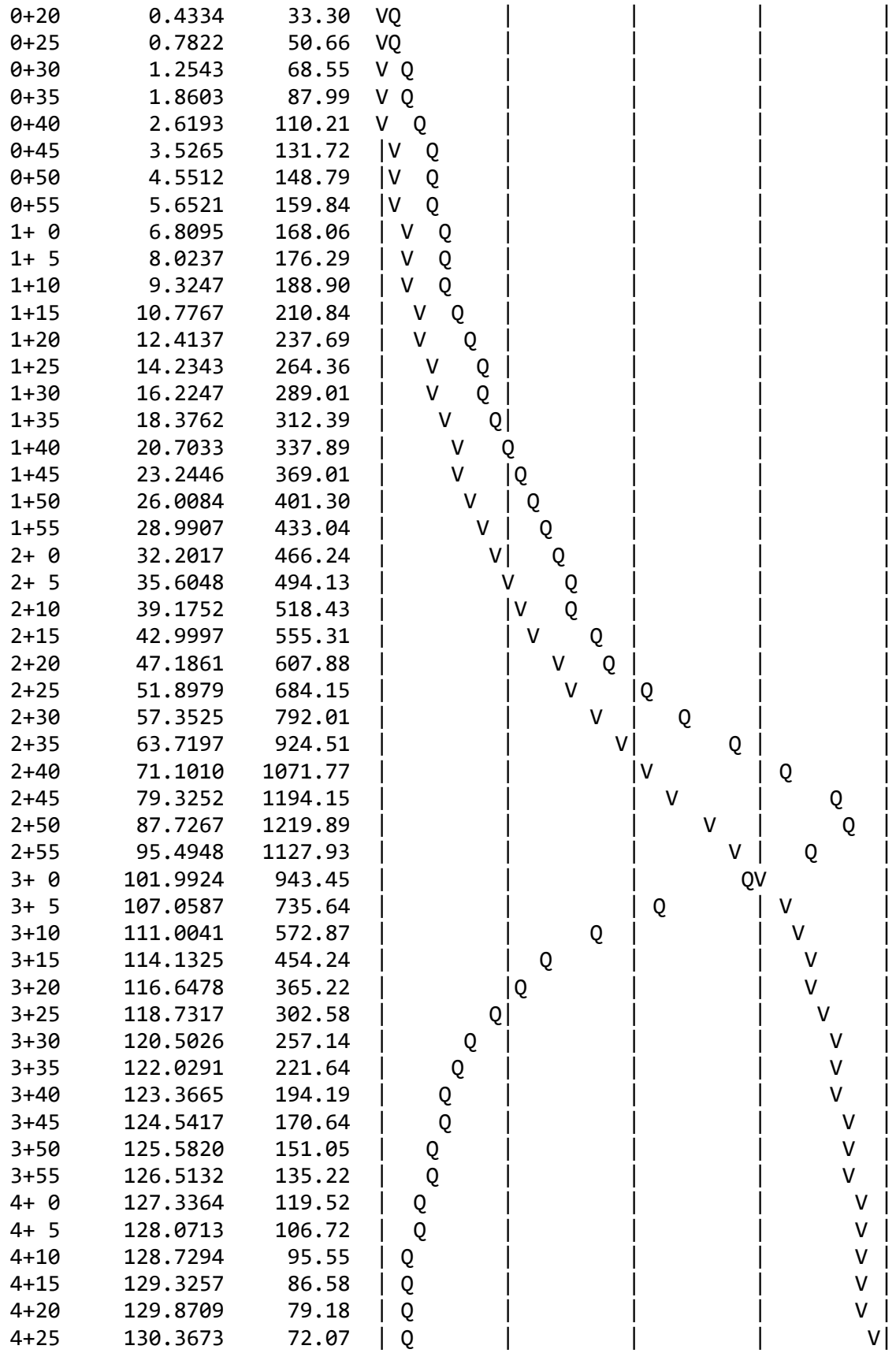
7	0.583	152.970	7.385	89.578
8	0.667	174.822	5.042	61.158
9	0.750	196.675	3.600	43.663
10	0.833	218.528	3.014	36.561
11	0.917	240.381	2.521	30.579
12	1.000	262.234	2.163	26.239
13	1.083	284.086	1.918	23.266
14	1.167	305.939	1.623	19.690
15	1.250	327.792	1.381	16.747
16	1.333	349.645	1.311	15.903
17	1.417	371.498	1.142	13.851
18	1.500	393.350	0.962	11.663
19	1.583	415.203	0.898	10.893
20	1.667	437.056	0.711	8.629
21	1.750	458.909	0.696	8.438
22	1.833	480.762	0.663	8.045
23	1.917	502.614	0.654	7.936
24	2.000	524.467	0.549	6.653
25	2.083	546.320	0.481	5.831
26	2.167	568.173	0.451	5.465
27	2.250	590.026	0.395	4.786
28	2.333	611.878	0.380	4.614
29	2.417	633.731	0.315	3.821
30	2.500	655.584	0.303	3.676
31	2.583	677.437	0.243	2.944
32	2.667	699.290	0.219	2.651
33	2.750	721.142	0.219	2.651
34	2.833	742.995	0.219	2.651
35	2.917	764.848	0.219	2.651
36	3.000	786.701	0.219	2.651
37	3.083	808.554	0.242	2.938
		Sum = 100.000	Sum=	1212.902

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	0.310	0.222	(0.279)	0.089
2	0.17	1.30	0.310	0.222	(0.279)	0.089
3	0.25	1.10	0.263	0.222	(0.236)	0.041
4	0.33	1.50	0.358	0.222	(0.322)	0.137
5	0.42	1.50	0.358	0.222	(0.322)	0.137
6	0.50	1.80	0.430	0.222	(0.387)	0.208
7	0.58	1.50	0.358	0.222	(0.322)	0.137
8	0.67	1.80	0.430	0.222	(0.387)	0.208
9	0.75	1.80	0.430	0.222	(0.387)	0.208
10	0.83	1.50	0.358	0.222	(0.322)	0.137

```
11   0.92     1.60      0.382          0.222    (  0.344)        0.160
12   1.00     1.80      0.430          0.222    (  0.387)        0.208
13   1.08     2.20      0.525          0.222    (  0.473)        0.304
14   1.17     2.20      0.525          0.222    (  0.473)        0.304
15   1.25     2.20      0.525          0.222    (  0.473)        0.304
16   1.33     2.00      0.477          0.222    (  0.430)        0.256
17   1.42     2.60      0.621          0.222    (  0.559)        0.399
18   1.50     2.70      0.645          0.222    (  0.580)        0.423
19   1.58     2.40      0.573          0.222    (  0.516)        0.351
20   1.67     2.70      0.645          0.222    (  0.580)        0.423
21   1.75     3.30      0.788          0.222    (  0.709)        0.566
22   1.83     3.10      0.740          0.222    (  0.666)        0.518
23   1.92     2.90      0.692          0.222    (  0.623)        0.471
24   2.00     3.00      0.716          0.222    (  0.645)        0.495
25   2.08     3.10      0.740          0.222    (  0.666)        0.518
26   2.17     4.20      1.003          0.222    (  0.902)        0.781
27   2.25     5.00      1.194          0.222    (  1.074)        0.972
28   2.33     3.50      0.836          0.222    (  0.752)        0.614
29   2.42     6.80      1.623          0.222    (  1.461)        1.402
30   2.50     7.30      1.743          0.222    (  1.568)        1.521
31   2.58     8.20      1.958          0.222    (  1.762)        1.736
32   2.67     5.90      1.409          0.222    (  1.268)        1.187
33   2.75     2.00      0.477          0.222    (  0.430)        0.256
34   2.83     1.80      0.430          0.222    (  0.387)        0.208
35   2.92     1.80      0.430          0.222    (  0.387)        0.208
36   3.00     0.60      0.143       (  0.222)       0.129        0.014
              (Loss Rate Not Used)
   Sum =     100.0                                   Sum =    16.0
      Flood volume = Effective rainfall      1.33(In)
       times area    1203.5(Ac.)/[(In)/(Ft.)] =     133.6(Ac.Ft)
      Total soil loss =      0.66(In)
      Total soil loss =    65.899(Ac.Ft)
      Total rainfall =      1.99(In)
      Flood volume =     5820831.6 Cubic Feet
      Total soil loss =     2870573.3 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1219.893(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      325.0     650.0     975.0    1300.0
-------------------------------------------------------------------------
  0+ 5       0.0146      2.12  Q         |         |         |         |
  0+10       0.0739      8.62  Q         |         |         |         |
  0+15       0.2040     18.89  Q         |         |         |         |
```



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    4+30     130.8114     64.49  |Q        |         |         |        V|
    4+35     131.2053     57.19  |Q        |         |         |        V|
    4+40     131.5607     51.60  |Q        |         |         |        V|
    4+45     131.8774     46.00  |Q        |         |         |        V|
    4+50     132.1577     40.70  |Q        |         |         |        V|
    4+55     132.4047     35.86  |Q        |         |         |        V|
    5+ 0     132.6226     31.63  Q         |         |         |        V|
    5+ 5     132.8157     28.05  Q         |         |         |        V|
    5+10     132.9887     25.12  Q         |         |         |        V|
    5+15     133.1428     22.37  Q         |         |         |        V|
    5+20     133.2765     19.42  Q         |         |         |        V|
    5+25     133.3991     17.80  Q         |         |         |        V|
    5+30     133.4959     14.05  Q         |         |         |        V|
    5+35     133.5652     10.07  Q         |         |         |        V|
    5+40     133.6018      5.31  Q         |         |         |        V|
    5+45     133.6149      1.89  Q         |         |         |        V|
    5+50     133.6231      1.20  Q         |         |         |        V|
    5+55     133.6276      0.65  Q         |         |         |        V|
    6+ 0     133.6279      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 03/07/24 File: STREAMTRIBEX6100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBEX.OUT- RSB

Drainage Area = 1203.50(Ac.) = 1.880 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1203.50(Ac.) = 1.880 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6871.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.301 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.381 Hr.
Lag time = 22.88 Min.
25% of lag time = 5.72 Min.
40% of lag time = 9.15 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]
     1203.50            1.20                 1444.20

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1203.50            2.80                 3369.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =   99.59 %
Adjusted average point rain =    2.788(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   601.750           78.00         0.000
   601.750           86.00         0.000
 Total Area Entered =   1203.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.853          1.966             23.840
    2   0.167         43.706          6.036             73.206
    3   0.250         65.558         10.590            128.447
    4   0.333         87.411         14.519            176.097
    5   0.417        109.264         15.314            185.739
    6   0.500        131.117         11.440            138.753
```

7	0.583	152.970	7.385	89.578
8	0.667	174.822	5.042	61.158
9	0.750	196.675	3.600	43.663
10	0.833	218.528	3.014	36.561
11	0.917	240.381	2.521	30.579
12	1.000	262.234	2.163	26.239
13	1.083	284.086	1.918	23.266
14	1.167	305.939	1.623	19.690
15	1.250	327.792	1.381	16.747
16	1.333	349.645	1.311	15.903
17	1.417	371.498	1.142	13.851
18	1.500	393.350	0.962	11.663
19	1.583	415.203	0.898	10.893
20	1.667	437.056	0.711	8.629
21	1.750	458.909	0.696	8.438
22	1.833	480.762	0.663	8.045
23	1.917	502.614	0.654	7.936
24	2.000	524.467	0.549	6.653
25	2.083	546.320	0.481	5.831
26	2.167	568.173	0.451	5.465
27	2.250	590.026	0.395	4.786
28	2.333	611.878	0.380	4.614
29	2.417	633.731	0.315	3.821
30	2.500	655.584	0.303	3.676
31	2.583	677.437	0.243	2.944
32	2.667	699.290	0.219	2.651
33	2.750	721.142	0.219	2.651
34	2.833	742.995	0.219	2.651
35	2.917	764.848	0.219	2.651
36	3.000	786.701	0.219	2.651
37	3.083	808.554	0.242	2.938
			Sum = 100.000	Sum= 1212.902

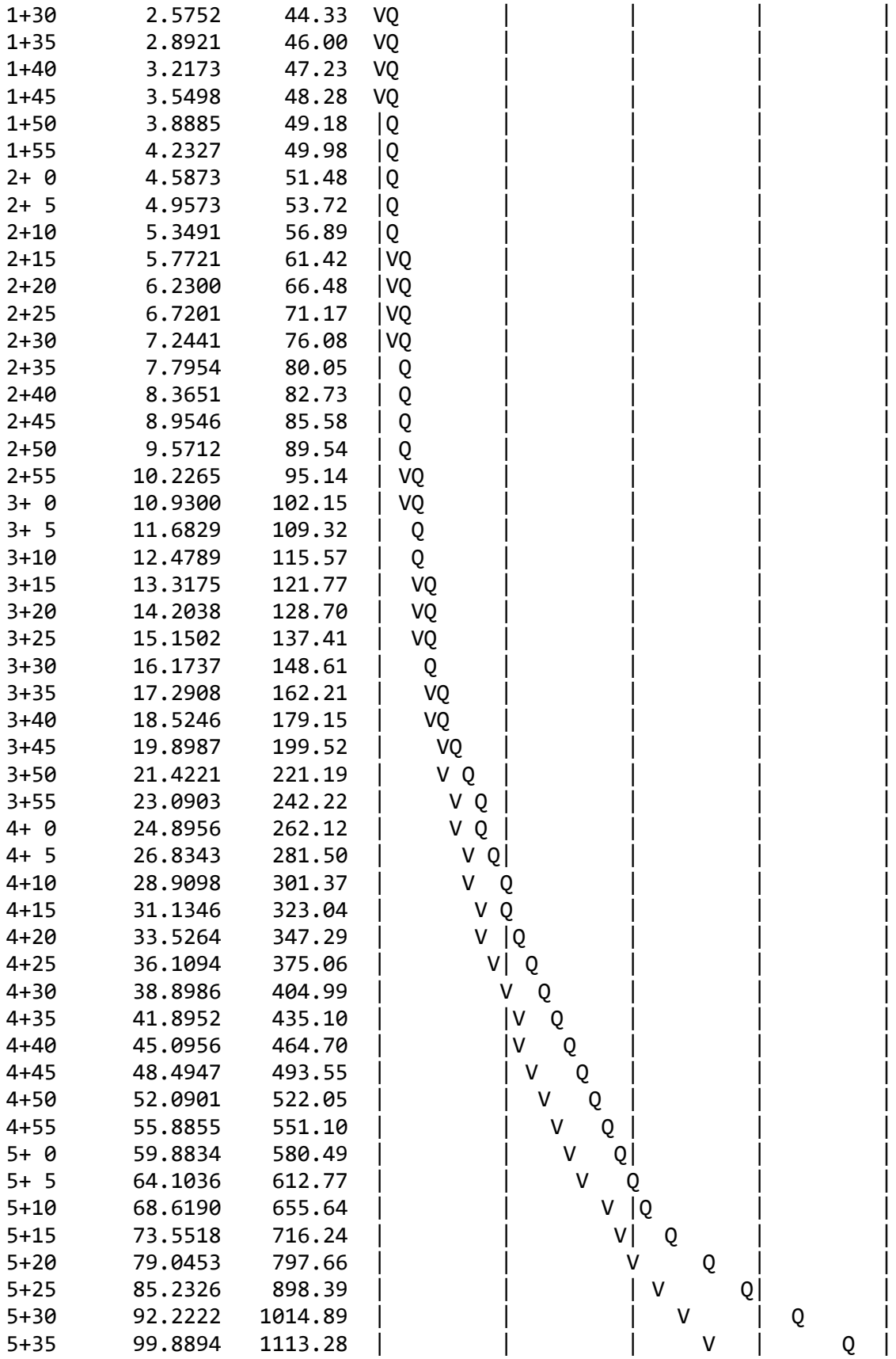
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

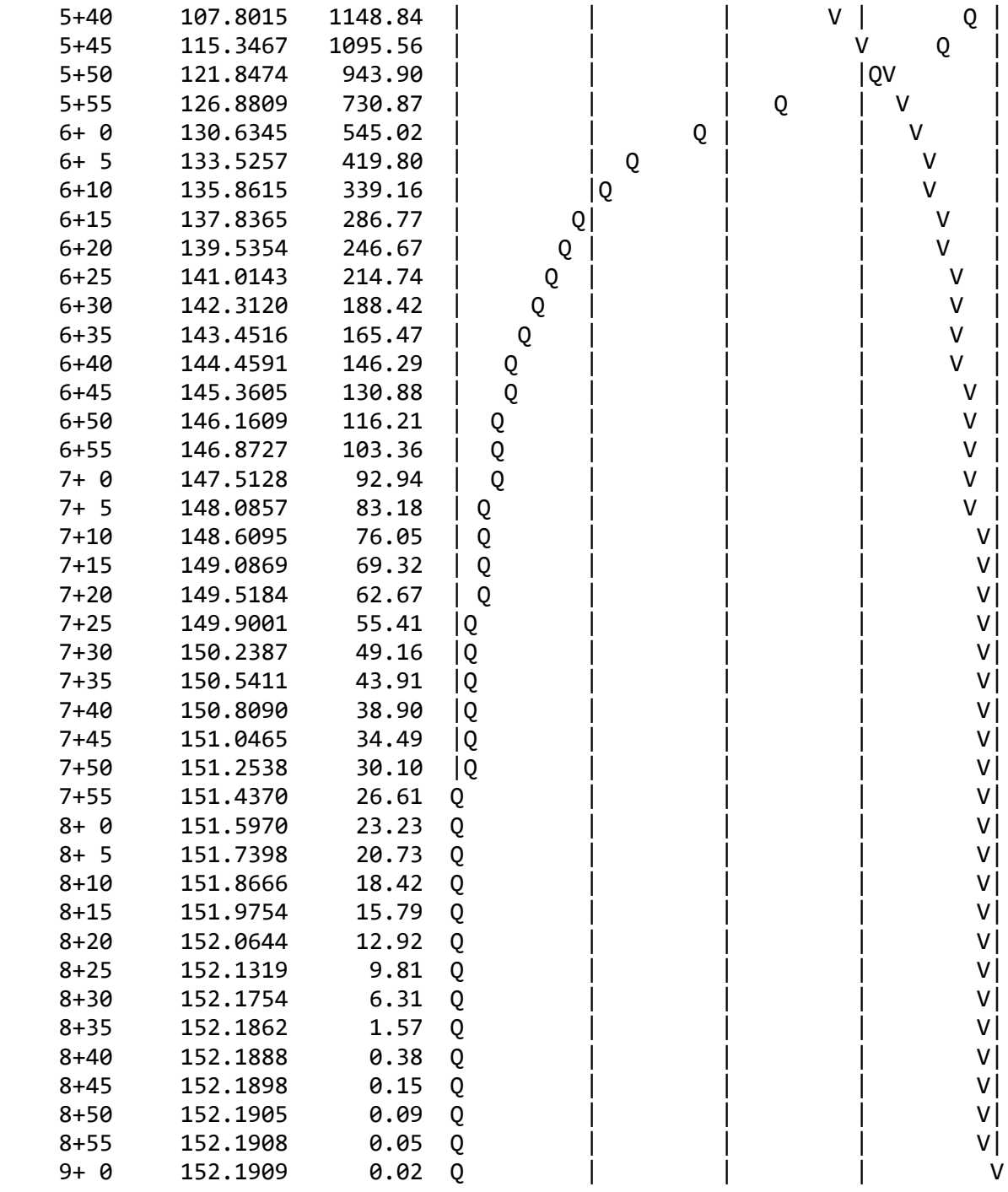
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.167	(0.222)	0.151	0.017
2	0.17	0.60	0.201	(0.222)	0.181	0.020
3	0.25	0.60	0.201	(0.222)	0.181	0.020
4	0.33	0.60	0.201	(0.222)	0.181	0.020
5	0.42	0.60	0.201	(0.222)	0.181	0.020
6	0.50	0.70	0.234	(0.222)	0.211	0.023
7	0.58	0.70	0.234	(0.222)	0.211	0.023
8	0.67	0.70	0.234	(0.222)	0.211	0.023
9	0.75	0.70	0.234	(0.222)	0.211	0.023
10	0.83	0.70	0.234	(0.222)	0.211	0.023

11	0.92	0.70	0.234	(0.222)	0.211	0.023
12	1.00	0.80	0.268	0.222	(0.241)	0.046
13	1.08	0.80	0.268	0.222	(0.241)	0.046
14	1.17	0.80	0.268	0.222	(0.241)	0.046
15	1.25	0.80	0.268	0.222	(0.241)	0.046
16	1.33	0.80	0.268	0.222	(0.241)	0.046
17	1.42	0.80	0.268	0.222	(0.241)	0.046
18	1.50	0.80	0.268	0.222	(0.241)	0.046
19	1.58	0.80	0.268	0.222	(0.241)	0.046
20	1.67	0.80	0.268	0.222	(0.241)	0.046
21	1.75	0.80	0.268	0.222	(0.241)	0.046
22	1.83	0.80	0.268	0.222	(0.241)	0.046
23	1.92	0.80	0.268	0.222	(0.241)	0.046
24	2.00	0.90	0.301	0.222	(0.271)	0.080
25	2.08	0.80	0.268	0.222	(0.241)	0.046
26	2.17	0.90	0.301	0.222	(0.271)	0.080
27	2.25	0.90	0.301	0.222	(0.271)	0.080
28	2.33	0.90	0.301	0.222	(0.271)	0.080
29	2.42	0.90	0.301	0.222	(0.271)	0.080
30	2.50	0.90	0.301	0.222	(0.271)	0.080
31	2.58	0.90	0.301	0.222	(0.271)	0.080
32	2.67	0.90	0.301	0.222	(0.271)	0.080
33	2.75	1.00	0.335	0.222	(0.301)	0.113
34	2.83	1.00	0.335	0.222	(0.301)	0.113
35	2.92	1.00	0.335	0.222	(0.301)	0.113
36	3.00	1.00	0.335	0.222	(0.301)	0.113
37	3.08	1.00	0.335	0.222	(0.301)	0.113
38	3.17	1.10	0.368	0.222	(0.331)	0.146
39	3.25	1.10	0.368	0.222	(0.331)	0.146
40	3.33	1.10	0.368	0.222	(0.331)	0.146
41	3.42	1.20	0.402	0.222	(0.361)	0.180
42	3.50	1.30	0.435	0.222	(0.391)	0.213
43	3.58	1.40	0.468	0.222	(0.422)	0.247
44	3.67	1.40	0.468	0.222	(0.422)	0.247
45	3.75	1.50	0.502	0.222	(0.452)	0.280
46	3.83	1.50	0.502	0.222	(0.452)	0.280
47	3.92	1.60	0.535	0.222	(0.482)	0.314
48	4.00	1.60	0.535	0.222	(0.482)	0.314
49	4.08	1.70	0.569	0.222	(0.512)	0.347
50	4.17	1.80	0.602	0.222	(0.542)	0.381
51	4.25	1.90	0.636	0.222	(0.572)	0.414
52	4.33	2.00	0.669	0.222	(0.602)	0.448
53	4.42	2.10	0.703	0.222	(0.632)	0.481
54	4.50	2.10	0.703	0.222	(0.632)	0.481
55	4.58	2.20	0.736	0.222	(0.663)	0.515
56	4.67	2.30	0.770	0.222	(0.693)	0.548
57	4.75	2.40	0.803	0.222	(0.723)	0.581
58	4.83	2.40	0.803	0.222	(0.723)	0.581
59	4.92	2.50	0.837	0.222	(0.753)	0.615
60	5.00	2.60	0.870	0.222	(0.783)	0.648

```
61   5.08     3.10      1.037          0.222    (  0.934)        0.816
62   5.17     3.60      1.205          0.222    (  1.084)        0.983
63   5.25     3.90      1.305          0.222    (  1.174)        1.083
64   5.33     4.20      1.405          0.222    (  1.265)        1.184
65   5.42     4.70      1.573          0.222    (  1.415)        1.351
66   5.50     5.60      1.874          0.222    (  1.686)        1.652
67   5.58     1.90      0.636          0.222    (  0.572)        0.414
68   5.67     0.90      0.301          0.222    (  0.271)        0.080
69   5.75     0.60      0.201       (  0.222)       0.181        0.020
70   5.83     0.50      0.167       (  0.222)       0.151        0.017
71   5.92     0.30      0.100       (  0.222)       0.090        0.010
72   6.00     0.20      0.067       (  0.222)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    18.2
      Flood volume = Effective rainfall      1.52(In)
       times area    1203.5(Ac.)/[(In)/(Ft.)] =     152.2(Ac.Ft)
      Total soil loss =      1.27(In)
      Total soil loss =   127.464(Ac.Ft)
      Total rainfall =      2.79(In)
      Flood volume =     6629436.9 Cubic Feet
      Total soil loss =     5552331.3 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1148.839(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      300.0     600.0     900.0    1200.0
-------------------------------------------------------------------------
  0+ 5       0.0027      0.40  Q         |         |         |         |
  0+10       0.0145      1.70  Q         |         |         |         |
  0+15       0.0427      4.10  Q         |         |         |         |
  0+20       0.0942      7.48  Q         |         |         |         |
  0+25       0.1712     11.18  Q         |         |         |         |
  0+30       0.2690     14.20  Q         |         |         |         |
  0+35       0.3820     16.41  Q         |         |         |         |
  0+40       0.5071     18.16  Q         |         |         |         |
  0+45       0.6427     19.69  Q         |         |         |         |
  0+50       0.7878     21.07  Q         |         |         |         |
  0+55       0.9404     22.17  Q         |         |         |         |
  1+ 0       1.1026     23.55  Q         |         |         |         |
  1+ 5       1.2809     25.89  Q         |         |         |         |
  1+10       1.4831     29.36  Q         |         |         |         |
  1+15       1.7160     33.82  VQ        |         |         |         |
  1+20       1.9809     38.46  VQ        |         |         |         |
  1+25       2.2700     41.98  VQ        |         |         |         |
```





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 03/07/24 File: STREAMTRIBEX24100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
EXISITNG CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBEX.OUT- RSB

Drainage Area = 1203.50(Ac.) = 1.880 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1203.50(Ac.) = 1.880 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6871.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.301 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.381 Hr.
Lag time = 22.88 Min.
25% of lag time = 5.72 Min.
40% of lag time = 9.15 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]
     1203.50            2.00                 2407.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1203.50            5.40                 6498.90

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =   99.76 %
Adjusted average point rain =    5.387(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   601.750           78.00         0.000
   601.750           86.00         0.000
 Total Area Entered =   1203.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.853          1.966             23.840
    2   0.167         43.706          6.036             73.206
    3   0.250         65.558         10.590            128.447
    4   0.333         87.411         14.519            176.097
    5   0.417        109.264         15.314            185.739
    6   0.500        131.117         11.440            138.753
```

7	0.583	152.970	7.385	89.578
8	0.667	174.822	5.042	61.158
9	0.750	196.675	3.600	43.663
10	0.833	218.528	3.014	36.561
11	0.917	240.381	2.521	30.579
12	1.000	262.234	2.163	26.239
13	1.083	284.086	1.918	23.266
14	1.167	305.939	1.623	19.690
15	1.250	327.792	1.381	16.747
16	1.333	349.645	1.311	15.903
17	1.417	371.498	1.142	13.851
18	1.500	393.350	0.962	11.663
19	1.583	415.203	0.898	10.893
20	1.667	437.056	0.711	8.629
21	1.750	458.909	0.696	8.438
22	1.833	480.762	0.663	8.045
23	1.917	502.614	0.654	7.936
24	2.000	524.467	0.549	6.653
25	2.083	546.320	0.481	5.831
26	2.167	568.173	0.451	5.465
27	2.250	590.026	0.395	4.786
28	2.333	611.878	0.380	4.614
29	2.417	633.731	0.315	3.821
30	2.500	655.584	0.303	3.676
31	2.583	677.437	0.243	2.944
32	2.667	699.290	0.219	2.651
33	2.750	721.142	0.219	2.651
34	2.833	742.995	0.219	2.651
35	2.917	764.848	0.219	2.651
36	3.000	786.701	0.219	2.651
37	3.083	808.554	0.242	2.938
			Sum = 100.000	Sum= 1212.902

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	0.043	(0.393)	0.039	0.004
2	0.17	0.07	0.043	(0.391)	0.039	0.004
3	0.25	0.07	0.043	(0.390)	0.039	0.004
4	0.33	0.10	0.065	(0.388)	0.058	0.006
5	0.42	0.10	0.065	(0.387)	0.058	0.006
6	0.50	0.10	0.065	(0.385)	0.058	0.006
7	0.58	0.10	0.065	(0.384)	0.058	0.006
8	0.67	0.10	0.065	(0.382)	0.058	0.006
9	0.75	0.10	0.065	(0.381)	0.058	0.006
10	0.83	0.13	0.086	(0.379)	0.078	0.009

11	0.92	0.13	0.086	(0.378)	0.078	0.009
12	1.00	0.13	0.086	(0.376)	0.078	0.009
13	1.08	0.10	0.065	(0.375)	0.058	0.006
14	1.17	0.10	0.065	(0.373)	0.058	0.006
15	1.25	0.10	0.065	(0.372)	0.058	0.006
16	1.33	0.10	0.065	(0.370)	0.058	0.006
17	1.42	0.10	0.065	(0.369)	0.058	0.006
18	1.50	0.10	0.065	(0.367)	0.058	0.006
19	1.58	0.10	0.065	(0.366)	0.058	0.006
20	1.67	0.10	0.065	(0.364)	0.058	0.006
21	1.75	0.10	0.065	(0.363)	0.058	0.006
22	1.83	0.13	0.086	(0.362)	0.078	0.009
23	1.92	0.13	0.086	(0.360)	0.078	0.009
24	2.00	0.13	0.086	(0.359)	0.078	0.009
25	2.08	0.13	0.086	(0.357)	0.078	0.009
26	2.17	0.13	0.086	(0.356)	0.078	0.009
27	2.25	0.13	0.086	(0.354)	0.078	0.009
28	2.33	0.13	0.086	(0.353)	0.078	0.009
29	2.42	0.13	0.086	(0.351)	0.078	0.009
30	2.50	0.13	0.086	(0.350)	0.078	0.009
31	2.58	0.17	0.108	(0.349)	0.097	0.011
32	2.67	0.17	0.108	(0.347)	0.097	0.011
33	2.75	0.17	0.108	(0.346)	0.097	0.011
34	2.83	0.17	0.108	(0.344)	0.097	0.011
35	2.92	0.17	0.108	(0.343)	0.097	0.011
36	3.00	0.17	0.108	(0.341)	0.097	0.011
37	3.08	0.17	0.108	(0.340)	0.097	0.011
38	3.17	0.17	0.108	(0.339)	0.097	0.011
39	3.25	0.17	0.108	(0.337)	0.097	0.011
40	3.33	0.17	0.108	(0.336)	0.097	0.011
41	3.42	0.17	0.108	(0.334)	0.097	0.011
42	3.50	0.17	0.108	(0.333)	0.097	0.011
43	3.58	0.17	0.108	(0.332)	0.097	0.011
44	3.67	0.17	0.108	(0.330)	0.097	0.011
45	3.75	0.17	0.108	(0.329)	0.097	0.011
46	3.83	0.20	0.129	(0.327)	0.116	0.013
47	3.92	0.20	0.129	(0.326)	0.116	0.013
48	4.00	0.20	0.129	(0.325)	0.116	0.013
49	4.08	0.20	0.129	(0.323)	0.116	0.013
50	4.17	0.20	0.129	(0.322)	0.116	0.013
51	4.25	0.20	0.129	(0.321)	0.116	0.013
52	4.33	0.23	0.151	(0.319)	0.136	0.015
53	4.42	0.23	0.151	(0.318)	0.136	0.015
54	4.50	0.23	0.151	(0.316)	0.136	0.015
55	4.58	0.23	0.151	(0.315)	0.136	0.015
56	4.67	0.23	0.151	(0.314)	0.136	0.015
57	4.75	0.23	0.151	(0.312)	0.136	0.015
58	4.83	0.27	0.172	(0.311)	0.155	0.017
59	4.92	0.27	0.172	(0.310)	0.155	0.017
60	5.00	0.27	0.172	(0.308)	0.155	0.017

61	5.08	0.20	0.129	(0.307)	0.116	0.013
62	5.17	0.20	0.129	(0.306)	0.116	0.013
63	5.25	0.20	0.129	(0.304)	0.116	0.013
64	5.33	0.23	0.151	(0.303)	0.136	0.015
65	5.42	0.23	0.151	(0.302)	0.136	0.015
66	5.50	0.23	0.151	(0.300)	0.136	0.015
67	5.58	0.27	0.172	(0.299)	0.155	0.017
68	5.67	0.27	0.172	(0.298)	0.155	0.017
69	5.75	0.27	0.172	(0.296)	0.155	0.017
70	5.83	0.27	0.172	(0.295)	0.155	0.017
71	5.92	0.27	0.172	(0.294)	0.155	0.017
72	6.00	0.27	0.172	(0.293)	0.155	0.017
73	6.08	0.30	0.194	(0.291)	0.175	0.019
74	6.17	0.30	0.194	(0.290)	0.175	0.019
75	6.25	0.30	0.194	(0.289)	0.175	0.019
76	6.33	0.30	0.194	(0.287)	0.175	0.019
77	6.42	0.30	0.194	(0.286)	0.175	0.019
78	6.50	0.30	0.194	(0.285)	0.175	0.019
79	6.58	0.33	0.215	(0.283)	0.194	0.022
80	6.67	0.33	0.215	(0.282)	0.194	0.022
81	6.75	0.33	0.215	(0.281)	0.194	0.022
82	6.83	0.33	0.215	(0.280)	0.194	0.022
83	6.92	0.33	0.215	(0.278)	0.194	0.022
84	7.00	0.33	0.215	(0.277)	0.194	0.022
85	7.08	0.33	0.215	(0.276)	0.194	0.022
86	7.17	0.33	0.215	(0.275)	0.194	0.022
87	7.25	0.33	0.215	(0.273)	0.194	0.022
88	7.33	0.37	0.237	(0.272)	0.213	0.024
89	7.42	0.37	0.237	(0.271)	0.213	0.024
90	7.50	0.37	0.237	(0.270)	0.213	0.024
91	7.58	0.40	0.259	(0.268)	0.233	0.026
92	7.67	0.40	0.259	(0.267)	0.233	0.026
93	7.75	0.40	0.259	(0.266)	0.233	0.026
94	7.83	0.43	0.280	(0.265)	0.252	0.028
95	7.92	0.43	0.280	(0.263)	0.252	0.028
96	8.00	0.43	0.280	(0.262)	0.252	0.028
97	8.08	0.50	0.323	0.261	(0.291)	0.062
98	8.17	0.50	0.323	0.260	(0.291)	0.063
99	8.25	0.50	0.323	0.259	(0.291)	0.065
100	8.33	0.50	0.323	0.257	(0.291)	0.066
101	8.42	0.50	0.323	0.256	(0.291)	0.067
102	8.50	0.50	0.323	0.255	(0.291)	0.068
103	8.58	0.53	0.345	0.254	(0.310)	0.091
104	8.67	0.53	0.345	0.253	(0.310)	0.092
105	8.75	0.53	0.345	0.251	(0.310)	0.093
106	8.83	0.57	0.366	0.250	(0.330)	0.116
107	8.92	0.57	0.366	0.249	(0.330)	0.117
108	9.00	0.57	0.366	0.248	(0.330)	0.118
109	9.08	0.63	0.409	0.247	(0.368)	0.163
110	9.17	0.63	0.409	0.246	(0.368)	0.164

111	9.25	0.63	0.409	0.244	(	0.368)	0.165
112	9.33	0.67	0.431	0.243	(	0.388)	0.188
113	9.42	0.67	0.431	0.242	(	0.388)	0.189
114	9.50	0.67	0.431	0.241	(	0.388)	0.190
115	9.58	0.70	0.453	0.240	(	0.407)	0.213
116	9.67	0.70	0.453	0.239	(	0.407)	0.214
117	9.75	0.70	0.453	0.237	(	0.407)	0.215
118	9.83	0.73	0.474	0.236	(	0.427)	0.238
119	9.92	0.73	0.474	0.235	(	0.427)	0.239
120	10.00	0.73	0.474	0.234	(	0.427)	0.240
121	10.08	0.50	0.323	0.233	(	0.291)	0.090
122	10.17	0.50	0.323	0.232	(	0.291)	0.091
123	10.25	0.50	0.323	0.231	(	0.291)	0.093
124	10.33	0.50	0.323	0.230	(	0.291)	0.094
125	10.42	0.50	0.323	0.228	(	0.291)	0.095
126	10.50	0.50	0.323	0.227	(	0.291)	0.096
127	10.58	0.67	0.431	0.226	(	0.388)	0.205
128	10.67	0.67	0.431	0.225	(	0.388)	0.206
129	10.75	0.67	0.431	0.224	(	0.388)	0.207
130	10.83	0.67	0.431	0.223	(	0.388)	0.208
131	10.92	0.67	0.431	0.222	(	0.388)	0.209
132	11.00	0.67	0.431	0.221	(	0.388)	0.210
133	11.08	0.63	0.409	0.220	(	0.368)	0.190
134	11.17	0.63	0.409	0.219	(	0.368)	0.191
135	11.25	0.63	0.409	0.217	(	0.368)	0.192
136	11.33	0.63	0.409	0.216	(	0.368)	0.193
137	11.42	0.63	0.409	0.215	(	0.368)	0.194
138	11.50	0.63	0.409	0.214	(	0.368)	0.195
139	11.58	0.57	0.366	0.213	(	0.330)	0.153
140	11.67	0.57	0.366	0.212	(	0.330)	0.154
141	11.75	0.57	0.366	0.211	(	0.330)	0.155
142	11.83	0.60	0.388	0.210	(	0.349)	0.178
143	11.92	0.60	0.388	0.209	(	0.349)	0.179
144	12.00	0.60	0.388	0.208	(	0.349)	0.180
145	12.08	0.83	0.539	0.207	(	0.485)	0.332
146	12.17	0.83	0.539	0.206	(	0.485)	0.333
147	12.25	0.83	0.539	0.205	(	0.485)	0.334
148	12.33	0.87	0.560	0.204	(	0.504)	0.357
149	12.42	0.87	0.560	0.203	(	0.504)	0.358
150	12.50	0.87	0.560	0.202	(	0.504)	0.359
151	12.58	0.93	0.603	0.201	(	0.543)	0.403
152	12.67	0.93	0.603	0.200	(	0.543)	0.404
153	12.75	0.93	0.603	0.199	(	0.543)	0.405
154	12.83	0.97	0.625	0.198	(	0.562)	0.427
155	12.92	0.97	0.625	0.197	(	0.562)	0.428
156	13.00	0.97	0.625	0.196	(	0.562)	0.429
157	13.08	1.13	0.733	0.195	(	0.659)	0.538
158	13.17	1.13	0.733	0.194	(	0.659)	0.539
159	13.25	1.13	0.733	0.193	(	0.659)	0.540
160	13.33	1.13	0.733	0.192	(	0.659)	0.541

161	13.42	1.13	0.733		0.191	(0.659)	0.542
162	13.50	1.13	0.733		0.190	(0.659)	0.543
163	13.58	0.77	0.496		0.189	(0.446)	0.307
164	13.67	0.77	0.496		0.188	(0.446)	0.308
165	13.75	0.77	0.496		0.187	(0.446)	0.309
166	13.83	0.77	0.496		0.186	(0.446)	0.310
167	13.92	0.77	0.496		0.185	(0.446)	0.311
168	14.00	0.77	0.496		0.184	(0.446)	0.312
169	14.08	0.90	0.582		0.183	(0.524)	0.399
170	14.17	0.90	0.582		0.182	(0.524)	0.400
171	14.25	0.90	0.582		0.181	(0.524)	0.401
172	14.33	0.87	0.560		0.180	(0.504)	0.380
173	14.42	0.87	0.560		0.179	(0.504)	0.381
174	14.50	0.87	0.560		0.178	(0.504)	0.382
175	14.58	0.87	0.560		0.178	(0.504)	0.383
176	14.67	0.87	0.560		0.177	(0.504)	0.384
177	14.75	0.87	0.560		0.176	(0.504)	0.385
178	14.83	0.83	0.539		0.175	(0.485)	0.364
179	14.92	0.83	0.539		0.174	(0.485)	0.365
180	15.00	0.83	0.539		0.173	(0.485)	0.366
181	15.08	0.80	0.517		0.172	(0.465)	0.345
182	15.17	0.80	0.517		0.171	(0.465)	0.346
183	15.25	0.80	0.517		0.170	(0.465)	0.347
184	15.33	0.77	0.496		0.170	(0.446)	0.326
185	15.42	0.77	0.496		0.169	(0.446)	0.327
186	15.50	0.77	0.496		0.168	(0.446)	0.328
187	15.58	0.63	0.409		0.167	(0.368)	0.242
188	15.67	0.63	0.409		0.166	(0.368)	0.243
189	15.75	0.63	0.409		0.165	(0.368)	0.244
190	15.83	0.63	0.409		0.164	(0.368)	0.245
191	15.92	0.63	0.409		0.164	(0.368)	0.246
192	16.00	0.63	0.409		0.163	(0.368)	0.247
193	16.08	0.13	0.086	(0.162)		0.078	0.009
194	16.17	0.13	0.086	(0.161)		0.078	0.009
195	16.25	0.13	0.086	(0.160)		0.078	0.009
196	16.33	0.13	0.086	(0.159)		0.078	0.009
197	16.42	0.13	0.086	(0.159)		0.078	0.009
198	16.50	0.13	0.086	(0.158)		0.078	0.009
199	16.58	0.10	0.065	(0.157)		0.058	0.006
200	16.67	0.10	0.065	(0.156)		0.058	0.006
201	16.75	0.10	0.065	(0.155)		0.058	0.006
202	16.83	0.10	0.065	(0.155)		0.058	0.006
203	16.92	0.10	0.065	(0.154)		0.058	0.006
204	17.00	0.10	0.065	(0.153)		0.058	0.006
205	17.08	0.17	0.108	(0.152)		0.097	0.011
206	17.17	0.17	0.108	(0.152)		0.097	0.011
207	17.25	0.17	0.108	(0.151)		0.097	0.011
208	17.33	0.17	0.108	(0.150)		0.097	0.011
209	17.42	0.17	0.108	(0.149)		0.097	0.011
210	17.50	0.17	0.108	(0.149)		0.097	0.011

211	17.58	0.17	0.108	(0.148)	0.097	0.011
212	17.67	0.17	0.108	(0.147)	0.097	0.011
213	17.75	0.17	0.108	(0.146)	0.097	0.011
214	17.83	0.13	0.086	(0.146)	0.078	0.009
215	17.92	0.13	0.086	(0.145)	0.078	0.009
216	18.00	0.13	0.086	(0.144)	0.078	0.009
217	18.08	0.13	0.086	(0.143)	0.078	0.009
218	18.17	0.13	0.086	(0.143)	0.078	0.009
219	18.25	0.13	0.086	(0.142)	0.078	0.009
220	18.33	0.13	0.086	(0.141)	0.078	0.009
221	18.42	0.13	0.086	(0.141)	0.078	0.009
222	18.50	0.13	0.086	(0.140)	0.078	0.009
223	18.58	0.10	0.065	(0.139)	0.058	0.006
224	18.67	0.10	0.065	(0.139)	0.058	0.006
225	18.75	0.10	0.065	(0.138)	0.058	0.006
226	18.83	0.07	0.043	(0.137)	0.039	0.004
227	18.92	0.07	0.043	(0.137)	0.039	0.004
228	19.00	0.07	0.043	(0.136)	0.039	0.004
229	19.08	0.10	0.065	(0.135)	0.058	0.006
230	19.17	0.10	0.065	(0.135)	0.058	0.006
231	19.25	0.10	0.065	(0.134)	0.058	0.006
232	19.33	0.13	0.086	(0.133)	0.078	0.009
233	19.42	0.13	0.086	(0.133)	0.078	0.009
234	19.50	0.13	0.086	(0.132)	0.078	0.009
235	19.58	0.10	0.065	(0.132)	0.058	0.006
236	19.67	0.10	0.065	(0.131)	0.058	0.006
237	19.75	0.10	0.065	(0.130)	0.058	0.006
238	19.83	0.07	0.043	(0.130)	0.039	0.004
239	19.92	0.07	0.043	(0.129)	0.039	0.004
240	20.00	0.07	0.043	(0.129)	0.039	0.004
241	20.08	0.10	0.065	(0.128)	0.058	0.006
242	20.17	0.10	0.065	(0.128)	0.058	0.006
243	20.25	0.10	0.065	(0.127)	0.058	0.006
244	20.33	0.10	0.065	(0.126)	0.058	0.006
245	20.42	0.10	0.065	(0.126)	0.058	0.006
246	20.50	0.10	0.065	(0.125)	0.058	0.006
247	20.58	0.10	0.065	(0.125)	0.058	0.006
248	20.67	0.10	0.065	(0.124)	0.058	0.006
249	20.75	0.10	0.065	(0.124)	0.058	0.006
250	20.83	0.07	0.043	(0.123)	0.039	0.004
251	20.92	0.07	0.043	(0.123)	0.039	0.004
252	21.00	0.07	0.043	(0.122)	0.039	0.004
253	21.08	0.10	0.065	(0.122)	0.058	0.006
254	21.17	0.10	0.065	(0.121)	0.058	0.006
255	21.25	0.10	0.065	(0.121)	0.058	0.006
256	21.33	0.07	0.043	(0.120)	0.039	0.004
257	21.42	0.07	0.043	(0.120)	0.039	0.004
258	21.50	0.07	0.043	(0.120)	0.039	0.004
259	21.58	0.10	0.065	(0.119)	0.058	0.006
260	21.67	0.10	0.065	(0.119)	0.058	0.006

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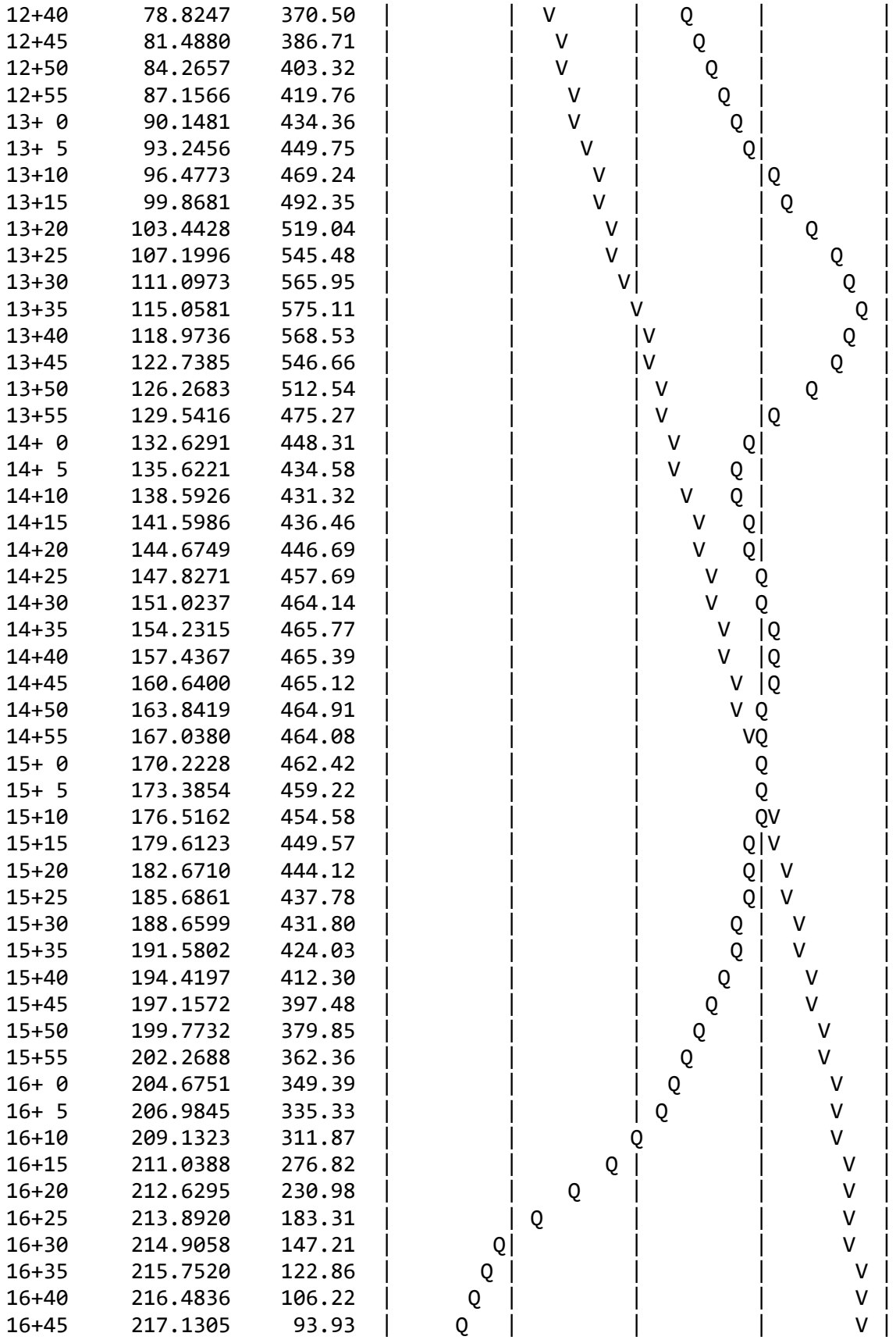
261  21.75     0.10      0.065       (  0.118)       0.058        0.006
262  21.83     0.07      0.043       (  0.118)       0.039        0.004
263  21.92     0.07      0.043       (  0.117)       0.039        0.004
264  22.00     0.07      0.043       (  0.117)       0.039        0.004
265  22.08     0.10      0.065       (  0.117)       0.058        0.006
266  22.17     0.10      0.065       (  0.116)       0.058        0.006
267  22.25     0.10      0.065       (  0.116)       0.058        0.006
268  22.33     0.07      0.043       (  0.116)       0.039        0.004
269  22.42     0.07      0.043       (  0.115)       0.039        0.004
270  22.50     0.07      0.043       (  0.115)       0.039        0.004
271  22.58     0.07      0.043       (  0.114)       0.039        0.004
272  22.67     0.07      0.043       (  0.114)       0.039        0.004
273  22.75     0.07      0.043       (  0.114)       0.039        0.004
274  22.83     0.07      0.043       (  0.114)       0.039        0.004
275  22.92     0.07      0.043       (  0.113)       0.039        0.004
276  23.00     0.07      0.043       (  0.113)       0.039        0.004
277  23.08     0.07      0.043       (  0.113)       0.039        0.004
278  23.17     0.07      0.043       (  0.112)       0.039        0.004
279  23.25     0.07      0.043       (  0.112)       0.039        0.004
280  23.33     0.07      0.043       (  0.112)       0.039        0.004
281  23.42     0.07      0.043       (  0.112)       0.039        0.004
282  23.50     0.07      0.043       (  0.112)       0.039        0.004
283  23.58     0.07      0.043       (  0.111)       0.039        0.004
284  23.67     0.07      0.043       (  0.111)       0.039        0.004
285  23.75     0.07      0.043       (  0.111)       0.039        0.004
286  23.83     0.07      0.043       (  0.111)       0.039        0.004
287  23.92     0.07      0.043       (  0.111)       0.039        0.004
288  24.00     0.07      0.043       (  0.111)       0.039        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    27.1
      Flood volume = Effective rainfall      2.26(In)
       times area    1203.5(Ac.)/[(In)/(Ft.)] =     226.3(Ac.Ft)
      Total soil loss =      3.13(In)
      Total soil loss =   313.982(Ac.Ft)
      Total rainfall =      5.39(In)
      Flood volume =     9858517.4 Cubic Feet
      Total soil loss =    13677036.9 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =    575.109(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      150.0     300.0     450.0     600.0
---------------------------------------------------------------------
  0+ 5       0.0007      0.10  Q         |         |         |         |
```

0+10	0.0036	0.42	Q	|	|	|	|
0+15	0.0103	0.97	Q	|	|	|	|
0+20	0.0226	1.78	Q	|	|	|	|
0+25	0.0414	2.74	Q	|	|	|	|
0+30	0.0664	3.62	Q	|	|	|	|
0+35	0.0965	4.38	Q	|	|	|	|
0+40	0.1313	5.05	Q	|	|	|	|
0+45	0.1694	5.53	Q	|	|	|	|
0+50	0.2103	5.94	Q	|	|	|	|
0+55	0.2541	6.36	Q	|	|	|	|
1+ 0	0.3012	6.84	Q	|	|	|	|
1+ 5	0.3518	7.35	Q	|	|	|	|
1+10	0.4052	7.74	Q	|	|	|	|
1+15	0.4595	7.89	Q	|	|	|	|
1+20	0.5135	7.83	Q	|	|	|	|
1+25	0.5662	7.66	Q	|	|	|	|
1+30	0.6181	7.54	Q	|	|	|	|
1+35	0.6699	7.51	Q	|	|	|	|
1+40	0.7216	7.51	Q	|	|	|	|
1+45	0.7735	7.53	Q	|	|	|	|
1+50	0.8259	7.61	Q	|	|	|	|
1+55	0.8796	7.80	Q	|	|	|	|
2+ 0	0.9355	8.11	Q	|	|	|	|
2+ 5	0.9941	8.51	Q	|	|	|	|
2+10	1.0556	8.94	Q	|	|	|	|
2+15	1.1194	9.26	Q	|	|	|	|
2+20	1.1847	9.48	Q	|	|	|	|
2+25	1.2510	9.63	Q	|	|	|	|
2+30	1.3181	9.74	Q	|	|	|	|
2+35	1.3862	9.89	Q	|	|	|	|
2+40	1.4559	10.13	Q	|	|	|	|
2+45	1.5281	10.48	Q	|	|	|	|
2+50	1.6033	10.92	Q	|	|	|	|
2+55	1.6817	11.38	Q	|	|	|	|
3+ 0	1.7624	11.72	Q	|	|	|	|
3+ 5	1.8448	11.97	Q	|	|	|	|
3+10	1.9284	12.13	Q	|	|	|	|
3+15	2.0128	12.25	Q	|	|	|	|
3+20	2.0979	12.36	Q	|	|	|	|
3+25	2.1836	12.44	Q	|	|	|	|
3+30	2.2697	12.51	Q	|	|	|	|
3+35	2.3564	12.58	Q	|	|	|	|
3+40	2.4434	12.64	Q	|	|	|	|
3+45	2.5308	12.69	Q	|	|	|	|
3+50	2.6189	12.79	Q	|	|	|	|
3+55	2.7083	12.98	Q	|	|	|	|
4+ 0	2.7998	13.29	Q	|	|	|	|
4+ 5	2.8942	13.70	Q	|	|	|	|
4+10	2.9914	14.12	Q	|	|	|	|
4+15	3.0909	14.45	Q	|	|	|	|

4+20	3.1923	14.72	Q				
4+25	3.2958	15.03	VQ				
4+30	3.4020	15.42	VQ				
4+35	3.5115	15.90	VQ				
4+40	3.6243	16.38	VQ				
4+45	3.7397	16.75	VQ				
4+50	3.8572	17.06	VQ				
4+55	3.9771	17.40	VQ				
5+ 0	4.0998	17.82	VQ				
5+ 5	4.2252	18.22	VQ				
5+10	4.3520	18.40	VQ				
5+15	4.4776	18.23	VQ				
5+20	4.6002	17.80	VQ				
5+25	4.7197	17.35	VQ				
5+30	4.8380	17.19	VQ				
5+35	4.9577	17.37	VQ				
5+40	5.0801	17.78	VQ				
5+45	5.2059	18.26	VQ				
5+50	5.3351	18.76	VQ				
5+55	5.4676	19.24	VQ				
6+ 0	5.6024	19.58	VQ				
6+ 5	5.7392	19.86	|Q				
6+10	5.8783	20.19	|Q				
6+15	6.0201	20.59	|Q				
6+20	6.1652	21.08	|Q				
6+25	6.3137	21.56	|Q				
6+30	6.4648	21.94	|Q				
6+35	6.6181	22.25	|Q				
6+40	6.7738	22.61	|Q				
6+45	6.9324	23.03	|Q				
6+50	7.0945	23.54	|Q				
6+55	7.2600	24.04	|Q				
7+ 0	7.4282	24.42	|Q				
7+ 5	7.5983	24.70	|Q				
7+10	7.7698	24.90	|Q				
7+15	7.9424	25.05	|Q				
7+20	8.1162	25.24	|Q				
7+25	8.2919	25.51	|Q				
7+30	8.4702	25.89	|Q				
7+35	8.6521	26.41	|Q				
7+40	8.8383	27.04	|Q				
7+45	9.0289	27.68	|Q				
7+50	9.2243	28.37	|Q				
7+55	9.4248	29.11	|Q				
8+ 0	9.6302	29.82	|Q				
8+ 5	9.8459	31.32	|VQ				
8+10	10.0835	34.50	|VQ				
8+15	10.3555	39.50	|VQ				
8+20	10.6734	46.16	|V Q				
8+25	11.0403	53.27	|V Q				

8+30	11.4462	58.94	VQ				
8+35	11.8841	63.58	V Q				
8+40	12.3551	68.39	V Q				
8+45	12.8637	73.85	V Q				
8+50	13.4190	80.64	V Q				
8+55	14.0287	88.52	V Q				
9+ 0	14.6929	96.45	V Q				
9+ 5	15.4181	105.29	V Q				
9+10	16.2153	115.75	V Q				
9+15	17.0907	127.11	V Q				
9+20	18.0536	139.81	V Q				
9+25	19.1086	153.19	V Q				
9+30	20.2464	165.20	V Q				
9+35	21.4611	176.39	V Q				
9+40	22.7514	187.34	V Q				
9+45	24.1120	197.56	V Q				
9+50	25.5435	207.85	V Q				
9+55	27.0478	218.43	V Q				
10+ 0	28.6213	228.47	V Q				
10+ 5	30.2365	234.54	V Q				
10+10	31.8368	232.36	V Q				
10+15	33.3531	220.16	V Q				
10+20	34.7265	199.43	V Q				
10+25	35.9403	176.25	V Q				
10+30	37.0388	159.49	V Q				
10+35	38.0884	152.41	V Q				
10+40	39.1529	154.56	V Q				
10+45	40.2897	165.06	V Q				
10+50	41.5405	181.62	V Q				
10+55	42.9174	199.92	V Q				
11+ 0	44.3886	213.62	V Q				
11+ 5	45.9166	221.86	V Q				
11+10	47.4750	226.28	V Q				
11+15	49.0449	227.95	V Q				
11+20	50.6144	227.89	V Q				
11+25	52.1790	227.17	V Q				
11+30	53.7443	227.28	V Q				
11+35	55.3087	227.15	V Q				
11+40	56.8607	225.36	V Q				
11+45	58.3843	221.22	V Q				
11+50	59.8693	215.63	V Q				
11+55	61.3191	210.51	V Q				
12+ 0	62.7560	208.63	V Q				
12+ 5	64.2271	213.60	V Q				
12+10	65.7917	227.18	V Q				
12+15	67.5064	248.98	V Q				
12+20	69.4191	277.72	V Q				
12+25	71.5451	308.70	V Q				
12+30	73.8420	333.51	V Q				
12+35	76.2730	352.98	V Q				



16+50	217.7043	83.32	| Q	|	|	|	V |
16+55	218.2163	74.33	| Q	|	|	|	V |
17+ 0	218.6756	66.70	| Q	|	|	|	V |
17+ 5	219.0893	60.07	| Q	|	|	|	V |
17+10	219.4649	54.53	| Q	|	|	|	V |
17+15	219.8093	50.01	| Q	|	|	|	V |
17+20	220.1259	45.97	| Q	|	|	|	V |
17+25	220.4189	42.55	| Q	|	|	|	V |
17+30	220.6916	39.59	| Q	|	|	|	V|
17+35	220.9442	36.68	| Q	|	|	|	V|
17+40	221.1801	34.25	| Q	|	|	|	V|
17+45	221.3994	31.85	| Q	|	|	|	V|
17+50	221.6024	29.47	|Q	|	|	|	V|
17+55	221.7892	27.13	|Q	|	|	|	V|
18+ 0	221.9612	24.96	|Q	|	|	|	V|
18+ 5	222.1191	22.93	|Q	|	|	|	V|
18+10	222.2640	21.04	|Q	|	|	|	V|
18+15	222.3976	19.40	|Q	|	|	|	V|
18+20	222.5208	17.89	|Q	|	|	|	V|
18+25	222.6357	16.68	|Q	|	|	|	V|
18+30	222.7427	15.53	|Q	|	|	|	V|
18+35	222.8425	14.50	Q	|	|	|	V|
18+40	222.9367	13.68	Q	|	|	|	V|
18+45	223.0245	12.75	Q	|	|	|	V|
18+50	223.1049	11.67	Q	|	|	|	V|
18+55	223.1770	10.47	Q	|	|	|	V|
19+ 0	223.2407	9.25	Q	|	|	|	V|
19+ 5	223.2958	8.01	Q	|	|	|	V|
19+10	223.3483	7.62	Q	|	|	|	V|
19+15	223.3999	7.50	Q	|	|	|	V|
19+20	223.4526	7.65	Q	|	|	|	V|
19+25	223.5077	8.00	Q	|	|	|	V|
19+30	223.5657	8.42	Q	|	|	|	V|
19+35	223.6262	8.80	Q	|	|	|	V|
19+40	223.6886	9.06	Q	|	|	|	V|
19+45	223.7511	9.08	Q	|	|	|	V|
19+50	223.8120	8.83	Q	|	|	|	V|
19+55	223.8698	8.40	Q	|	|	|	V|
20+ 0	223.9244	7.92	Q	|	|	|	V|
20+ 5	223.9758	7.47	Q	|	|	|	V|
20+10	224.0250	7.14	Q	|	|	|	V|
20+15	224.0737	7.07	Q	|	|	|	V|
20+20	224.1234	7.22	Q	|	|	|	V|
20+25	224.1747	7.45	Q	|	|	|	V|
20+30	224.2272	7.62	Q	|	|	|	V|
20+35	224.2802	7.71	Q	|	|	|	V|
20+40	224.3336	7.74	Q	|	|	|	V|
20+45	224.3870	7.76	Q	|	|	|	V|
20+50	224.4401	7.71	Q	|	|	|	V|
20+55	224.4922	7.56	Q	|	|	|	V|

21+ 0	224.5425	7.30	Q	|	|	|	V|
21+ 5	224.5905	6.97	Q	|	|	|	V|
21+10	224.6369	6.74	Q	|	|	|	V|
21+15	224.6832	6.72	Q	|	|	|	V|
21+20	224.7305	6.86	Q	|	|	|	V|
21+25	224.7785	6.98	Q	|	|	|	V|
21+30	224.8261	6.90	Q	|	|	|	V|
21+35	224.8721	6.69	Q	|	|	|	V|
21+40	224.9169	6.51	Q	|	|	|	V|
21+45	224.9619	6.52	Q	|	|	|	V|
21+50	225.0079	6.69	Q	|	|	|	V|
21+55	225.0550	6.83	Q	|	|	|	V|
22+ 0	225.1017	6.79	Q	|	|	|	V|
22+ 5	225.1472	6.60	Q	|	|	|	V|
22+10	225.1915	6.44	Q	|	|	|	V|
22+15	225.2361	6.47	Q	|	|	|	V|
22+20	225.2818	6.65	Q	|	|	|	V|
22+25	225.3286	6.79	Q	|	|	|	V|
22+30	225.3750	6.74	Q	|	|	|	V|
22+35	225.4197	6.49	Q	|	|	|	V|
22+40	225.4622	6.17	Q	|	|	|	V|
22+45	225.5030	5.92	Q	|	|	|	V|
22+50	225.5427	5.77	Q	|	|	|	V|
22+55	225.5819	5.69	Q	|	|	|	V|
23+ 0	225.6207	5.63	Q	|	|	|	V|
23+ 5	225.6591	5.58	Q	|	|	|	V|
23+10	225.6972	5.53	Q	|	|	|	V|
23+15	225.7351	5.50	Q	|	|	|	V|
23+20	225.7727	5.46	Q	|	|	|	V|
23+25	225.8102	5.44	Q	|	|	|	V|
23+30	225.8475	5.42	Q	|	|	|	V|
23+35	225.8846	5.39	Q	|	|	|	V|
23+40	225.9216	5.37	Q	|	|	|	V|
23+45	225.9584	5.35	Q	|	|	|	V|
23+50	225.9952	5.33	Q	|	|	|	V|
23+55	226.0319	5.33	Q	|	|	|	V|
24+ 0	226.0685	5.32	Q	|	|	|	V|
24+ 5	226.1044	5.21	Q	|	|	|	V|
24+10	226.1381	4.88	Q	|	|	|	V|
24+15	226.1678	4.32	Q	|	|	|	V|
24+20	226.1922	3.55	Q	|	|	|	V|
24+25	226.2111	2.74	Q	|	|	|	V|
24+30	226.2259	2.14	Q	|	|	|	V|
24+35	226.2379	1.75	Q	|	|	|	V|
24+40	226.2481	1.48	Q	|	|	|	V|
24+45	226.2570	1.29	Q	|	|	|	V|
24+50	226.2647	1.12	Q	|	|	|	V|
24+55	226.2715	0.99	Q	|	|	|	V|
25+ 0	226.2775	0.88	Q	|	|	|	V|
25+ 5	226.2829	0.78	Q	|	|	|	V|

25+10	226.2876	0.69	Q	|	|	|	V|
25+15	226.2918	0.61	Q	|	|	|	V|
25+20	226.2954	0.53	Q	|	|	|	V|
25+25	226.2987	0.47	Q	|	|	|	V|
25+30	226.3016	0.42	Q	|	|	|	V|
25+35	226.3042	0.38	Q	|	|	|	V|
25+40	226.3065	0.34	Q	|	|	|	V|
25+45	226.3086	0.30	Q	|	|	|	V|
25+50	226.3104	0.27	Q	|	|	|	V|
25+55	226.3120	0.23	Q	|	|	|	V|
26+ 0	226.3134	0.20	Q	|	|	|	V|
26+ 5	226.3147	0.18	Q	|	|	|	V|
26+10	226.3157	0.16	Q	|	|	|	V|
26+15	226.3167	0.13	Q	|	|	|	V|
26+20	226.3175	0.11	Q	|	|	|	V|
26+25	226.3181	0.10	Q	|	|	|	V|
26+30	226.3187	0.08	Q	|	|	|	V|
26+35	226.3192	0.07	Q	|	|	|	V|
26+40	226.3196	0.06	Q	|	|	|	V|
26+45	226.3199	0.05	Q	|	|	|	V|
26+50	226.3202	0.04	Q	|	|	|	V|
26+55	226.3203	0.02	Q	|	|	|	V|
27+ 0	226.3204	0.01	Q	|	|	|	V|

PROPOSED CONDITION UNIT HYDROGRAPHS

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 10/16/23 File: ONSITEPOST1100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
ONSITE UNIT HYDROGRAPH ANALYSIS
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOST.OUT- RSB

Drainage Area = 44.70(Ac.) = 0.070 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 44.70(Ac.) = 0.070 Sq. Mi.
Length along longest watercourse = 864.00(Ft.)
Length along longest watercourse measured to centroid = 576.00(Ft.)
Length along longest watercourse = 0.164 Mi.
Length along longest watercourse measured to centroid = 0.109 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 262.7778 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.027 Hr.
Lag time = 1.62 Min.
25% of lag time = 0.41 Min.
40% of lag time = 0.65 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]
       44.70            0.50                  22.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       44.70            1.28                  57.22

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.280(In)

Point rain (area averaged) =    1.280(In)
Areal adjustment factor =   99.96 %
Adjusted average point rain =    1.279(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    44.700           69.00         0.900
 Total Area Entered =     44.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.900        0.071       1.000      0.071
                                                 Sum (F) =   0.071
Area averaged mean soil loss (F) (In/Hr) =  0.071
Minimum soil loss rate ((In/Hr)) =  0.035
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.180
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        308.038         57.491             25.899
    2   0.167        616.076         36.690             16.529
    3   0.250        924.114          5.819              2.621
                              Sum = 100.000   Sum=      45.049
-----------------------------------------------------------------
```

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	4.20	0.645	0.071	(0.116)	0.574
2	0.17	4.30	0.660			

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 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
ONSITE UNIT HYDROGRAPH ANALYSIS
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOST.OUT- RSB

Drainage Area = 44.70(Ac.) = 0.070 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 44.70(Ac.) = 0.070 Sq. Mi.
Length along longest watercourse = 864.00(Ft.)
Length along longest watercourse measured to centroid = 576.00(Ft.)
Length along longest watercourse = 0.164 Mi.
Length along longest watercourse measured to centroid = 0.109 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 262.7778 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.027 Hr.
Lag time = 1.62 Min.
25% of lag time = 0.41 Min.
40% of lag time = 0.65 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]
       44.70            0.80                  35.76

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       44.70            2.00                  89.40

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =   99.98 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    44.700           69.00         0.900
 Total Area Entered =     44.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.900        0.071       1.000      0.071
                                                 Sum (F) =   0.071
Area averaged mean soil loss (F) (In/Hr) =  0.071
Minimum soil loss rate ((In/Hr)) =  0.035
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.180
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        308.038         57.491             25.899
    2   0.167        616.076         36.690             16.529
    3   0.250        924.114          5.819              2.621
                               Sum = 100.000   Sum=      45.049
------------------------------------------------------------------------

 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	0.312	(0.071)	0.056	0.256
2	0.17	1.30	0.312	(0.071)	0.056	0.256
3	0.25	1.10	0.264	(0.071)	0.048	0.216
4	0.33	1.50	0.360	(0.071)	0.065	0.295
5	0.42	1.50	0.360	(0.071)	0.065	0.295
6	0.50	1.80	0.432	0.071	(0.078)	0.361
7	0.58	1.50	0.360	(0.071)	0.065	0.295
8	0.67	1.80	0.432	0.071	(0.078)	0.361
9	0.75	1.80	0.432	0.071	(0.078)	0.361
10	0.83	1.50	0.360	(0.071)	0.065	0.295
11	0.92	1.60	0.384	(0.071)	0.069	0.315
12	1.00	1.80	0.432	0.071	(0.078)	0.361
13	1.08	2.20	0.528	0.071	(0.095)	0.457
14	1.17	2.20	0.528	0.071	(0.095)	0.457
15	1.25	2.20	0.528	0.071	(0.095)	0.457
16	1.33	2.00	0.480	0.071	(0.086)	0.409
17	1.42	2.60	0.624	0.071	(0.112)	0.553
18	1.50	2.70	0.648	0.071	(0.117)	0.577
19	1.58	2.40	0.576	0.071	(0.104)	0.505
20	1.67	2.70	0.648	0.071	(0.117)	0.577
21	1.75	3.30	0.792	0.071	(0.143)	0.721
22	1.83	3.10	0.744	0.071	(0.134)	0.673
23	1.92	2.90	0.696	0.071	(0.125)	0.625
24	2.00	3.00	0.720	0.071	(0.130)	0.649
25	2.08	3.10	0.744	0.071	(0.134)	0.673
26	2.17	4.20	1.008	0.071	(0.181)	0.937
27	2.25	5.00	1.200	0.071	(0.216)	1.129
28	2.33	3.50	0.840	0.071	(0.151)	0.769
29	2.42	6.80	1.632	0.071	(0.294)	1.561
30	2.50	7.30	1.752	0.071	(0.315)	1.681
31	2.58	8.20	1.968	0.071	(0.354)	1.897
32	2.67	5.90	1.416	0.071	(0.255)	1.345
33	2.75	2.00	0.480	0.071	(0.086)	0.409
34	2.83	1.80	0.432	0.071	(0.078)	0.361
35	2.92	1.80	0.432	0.071	(0.078)	0.361
36	3.00	0.60	0.144	(0.071)	0.026	0.118
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	21.6

Flood volume = Effective rainfall 1.80(In)
times area 44.7(Ac.)/[(In)/(Ft.)] = 6.7(Ac.Ft)
Total soil loss = 0.20(In)
Total soil loss = 0.753(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 291648.8 Cubic Feet
Total soil loss = 32809.8 Cubic Feet

Peak flow rate of this hydrograph = 81.040(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	22.5	45.0	67.5	90.0
0+ 5	0.0456	6.63	V Q				
0+10	0.1204	10.86	V Q				
0+15	0.1928	10.51	V Q				
0+20	0.2748	11.90	V Q				
0+25	0.3649	13.10	V Q				
0+30	0.4683	15.01	V Q				
0+35	0.5675	14.39	V Q				
0+40	0.6720	15.18	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
ONSITE UNIT HYDROGRAPH ANALYSIS
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOST.OUT- RSB

Drainage Area = 44.70(Ac.) = 0.070 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 44.70(Ac.) = 0.070 Sq. Mi.
Length along longest watercourse = 864.00(Ft.)
Length along longest watercourse measured to centroid = 576.00(Ft.)
Length along longest watercourse = 0.164 Mi.
Length along longest watercourse measured to centroid = 0.109 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 262.7778 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.027 Hr.
Lag time = 1.62 Min.
25% of lag time = 0.41 Min.
40% of lag time = 0.65 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]
       44.70            1.20                  53.64

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       44.70            2.80                 125.16

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =   99.98 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    44.700           69.00         0.900
 Total Area Entered =     44.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.900        0.071       1.000      0.071
                                                 Sum (F) =   0.071
Area averaged mean soil loss (F) (In/Hr) =  0.071
Minimum soil loss rate ((In/Hr)) =  0.035
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.180
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
    1   0.083        308.038         57.491             25.899
    2   0.167        616.076         36.690             16.529
    3   0.250        924.114          5.819              2.621
                               Sum = 100.000   Sum=      45.049
------------------------------------------------------------------------

 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	0.168	(0.071)	0.030	0.138
2	0.17	0.60	0.202	(0.071)	0.036	0.165
3	0.25	0.60	0.202	(0.071)	0.036	0.165
4	0.33	0.60	0.202	(0.071)	0.036	0.165
5	0.42	0.60	0.202	(0.071)	0.036	0.165
6	0.50	0.70	0.235	(0.071)	0.042	0.193
7	0.58	0.70	0.235	(0.071)	0.042	0.193
8	0.67	0.70	0.235	(0.071)	0.042	0.193
9	0.75	0.70	0.235	(0.071)	0.042	0.193
10	0.83	0.70	0.235	(0.071)	0.042	0.193
11	0.92	0.70	0.235	(0.071)	0.042	0.193
12	1.00	0.80	0.269	(0.071)	0.048	0.220
13	1.08	0.80	0.269	(0.071)	0.048	0.220
14	1.17	0.80	0.269	(0.071)	0.048	0.220
15	1.25	0.80	0.269	(0.071)	0.048	0.220
16	1.33	0.80	0.269	(0.071)	0.048	0.220
17	1.42	0.80	0.269	(0.071)	0.048	0.220
18	1.50	0.80	0.269	(0.071)	0.048	0.220
19	1.58	0.80	0.269	(0.071)	0.048	0.220
20	1.67	0.80	0.269	(0.071)	0.048	0.220
21	1.75	0.80	0.269	(0.071)	0.048	0.220
22	1.83	0.80	0.269	(0.071)	0.048	0.220
23	1.92	0.80	0.269	(0.071)	0.048	0.220
24	2.00	0.90	0.302	(0.071)	0.054	0.248
25	2.08	0.80	0.269	(0.071)	0.048	0.220
26	2.17	0.90	0.302	(0.071)	0.054	0.248
27	2.25	0.90	0.302	(0.071)	0.054	0.248
28	2.33	0.90	0.302	(0.071)	0.054	0.248
29	2.42	0.90	0.302	(0.071)	0.054	0.248
30	2.50	0.90	0.302	(0.071)	0.054	0.248
31	2.58	0.90	0.302	(0.071)	0.054	0.248
32	2.67	0.90	0.302	(0.071)	0.054	0.248
33	2.75	1.00	0.336	(0.071)	0.060	0.275
34	2.83	1.00	0.336	(0.071)	0.060	0.275
35	2.92	1.00	0.336	(0.071)	0.060	0.275
36	3.00	1.00	0.336	(0.071)	0.060	0.275
37	3.08	1.00	0.336	(0.071)	0.060	0.275
38	3.17	1.10	0.370	(0.071)	0.067	0.303
39	3.25	1.10	0.370	(0.071)	0.067	0.303
40	3.33	1.10	0.370	(0.071)	0.067	0.303
41	3.42	1.20	0.403	0.071	(0.073)	0.332
42	3.50	1.30	0.437	0.071	(0.079)	0.366
43	3.58	1.40	0.470	0.071	(0.085)	0.399
44	3.67	1.40	0.470	0.071	(0.085)	0.399
45	3.75	1.50	0.504	0.071	(0.091)	0.433
46	3.83	1.50	0.504	0.071	(0.091)	0.433

```
47   3.92     1.60      0.538          0.071    (  0.097)        0.467
48   4.00     1.60      0.538          0.071    (  0.097)        0.467
49   4.08     1.70      0.571          0.071    (  0.103)        0.500
50   4.17     1.80      0.605          0.071    (  0.109)        0.534
51   4.25     1.90      0.638          0.071    (  0.115)        0.567
52   4.33     2.00      0.672          0.071    (  0.121)        0.601
53   4.42     2.10      0.705          0.071    (  0.127)        0.635
54   4.50     2.10      0.705          0.071    (  0.127)        0.635
55   4.58     2.20      0.739          0.071    (  0.133)        0.668
56   4.67     2.30      0.773          0.071    (  0.139)        0.702
57   4.75     2.40      0.806          0.071    (  0.145)        0.735
58   4.83     2.40      0.806          0.071    (  0.145)        0.735
59   4.92     2.50      0.840          0.071    (  0.151)        0.769
60   5.00     2.60      0.873          0.071    (  0.157)        0.803
61   5.08     3.10      1.041          0.071    (  0.187)        0.971
62   5.17     3.60      1.209          0.071    (  0.218)        1.139
63   5.25     3.90      1.310          0.071    (  0.236)        1.239
64   5.33     4.20      1.411          0.071    (  0.254)        1.340
65   5.42     4.70      1.579          0.071    (  0.284)        1.508
66   5.50     5.60      1.881          0.071    (  0.339)        1.810
67   5.58     1.90      0.638          0.071    (  0.115)        0.567
68   5.67     0.90      0.302       (  0.071)       0.054        0.248
69   5.75     0.60      0.202       (  0.071)       0.036        0.165
70   5.83     0.50      0.168       (  0.071)       0.030        0.138
71   5.92     0.30      0.101       (  0.071)       0.018        0.083
72   6.00     0.20      0.067       (  0.071)       0.012        0.055
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    29.5
      Flood volume = Effective rainfall      2.46(In)
       times area      44.7(Ac.)/[(In)/(Ft.)] =       9.2(Ac.Ft)
      Total soil loss =      0.34(In)
      Total soil loss =     1.260(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =      399373.9 Cubic Feet
      Total soil loss =       54887.1 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =     75.369(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       20.0      40.0      60.0      80.0
-------------------------------------------------------------------------
  0+ 5       0.0246      3.57  VQ       |         |         |         |
  0+10       0.0698      6.56  V  Q     |         |         |         |
  0+15       0.1206      7.38  V  Q     |         |         |         |
```

```
0+20       0.1719      7.45  V  Q      |          |          |          |
0+25       0.2232      7.45  V  Q      |          |          |          |
0+30       0.2794      8.16  |V  Q     |          |          |          |
0+35       0.3388      8.62  |V  Q     |          |          |          |
0+40       0.3986      8.69  |V  Q     |          |          |          |
0+45       0.4585      8.69  | V Q     |          |          |          |
0+50       0.5184      8.69  | V Q     |          |          |          |
0+55       0.5782      8.69  | V Q     |          |          |          |
1+ 0       0.6430      9.41  | V Q     |          |          |          |
1+ 5       0.7109      9.86  |  VQ     |          |          |          |
1+10       0.7793      9.93  |  VQ     |          |          |          |
1+15       0.8477      9.93  |  VQ     |          |          |          |
1+20       0.9161      9.93  |  VQ     |          |          |          |
1+25       0.9845      9.93  |   Q     |          |          |          |
1+30       1.0530      9.93  |   Q     |          |          |          |
1+35       1.1214      9.93  |   Q     |          |          |          |
1+40       1.1898      9.93  |   QV    |          |          |          |
1+45       1.2582      9.93  |   QV    |          |          |          |
1+50       1.3266      9.93  |   QV    |          |          |          |
1+55       1.3950      9.93  |   Q V   |          |          |          |
2+ 0       1.4683     10.65  |    QV   |          |          |          |
2+ 5       1.5399     10.39  |    QV   |          |          |          |
2+10       1.6137     10.72  |    Q V  |          |          |          |
2+15       1.6902     11.10  |    Q V  |          |          |          |
2+20       1.7671
```

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 10/16/23 File: ONSITEPOST24100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
ONSITE UNIT HYDROGRAPH ANALYSIS
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOST.OUT- RSB

Drainage Area = 44.70(Ac.) = 0.070 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 44.70(Ac.) = 0.070 Sq. Mi.
Length along longest watercourse = 864.00(Ft.)
Length along longest watercourse measured to centroid = 576.00(Ft.)
Length along longest watercourse = 0.164 Mi.
Length along longest watercourse measured to centroid = 0.109 Mi.
Difference in elevation = 43.00(Ft.)
Slope along watercourse = 262.7778 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.027 Hr.
Lag time = 1.62 Min.
25% of lag time = 0.41 Min.
40% of lag time = 0.65 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

```
Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       44.70            2.00                  89.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
       44.70            5.40                 241.38

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
    44.700           69.00         0.900
 Total Area Entered =     44.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.900        0.071       1.000      0.071
                                                 Sum (F) =   0.071
Area averaged mean soil loss (F) (In/Hr) =  0.071
Minimum soil loss rate ((In/Hr)) =  0.035
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.180
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        308.038         57.491             25.899
    2   0.167        616.076         36.690             16.529
    3   0.250        924.114          5.819              2.621
                               Sum = 100.000   Sum=      45.049
------------------------------------------------------------------------

 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	0.043	(0.126)	0.008	0.035
2	0.17	0.07	0.043	(0.125)	0.008	0.035
3	0.25	0.07	0.043	(0.125)	0.008	0.035
4	0.33	0.10	0.065	(0.124)	0.012	0.053
5	0.42	0.10	0.065	(0.124)	0.012	0.053
6	0.50	0.10	0.065	(0.123)	0.012	0.053
7	0.58	0.10	0.065	(0.123)	0.012	0.053
8	0.67	0.10	0.065	(0.122)	0.012	0.053
9	0.75	0.10	0.065	(0.122)	0.012	0.053
10	0.83	0.13	0.086	(0.121)	0.016	0.071
11	0.92	0.13	0.086	(0.121)	0.016	0.071
12	1.00	0.13	0.086	(0.120)	0.016	0.071
13	1.08	0.10	0.065	(0.120)	0.012	0.053
14	1.17	0.10	0.065	(0.119)	0.012	0.053
15	1.25	0.10	0.065	(0.119)	0.012	0.053
16	1.33	0.10	0.065	(0.118)	0.012	0.053
17	1.42	0.10	0.065	(0.118)	0.012	0.053
18	1.50	0.10	0.065	(0.117)	0.012	0.053
19	1.58	0.10	0.065	(0.117)	0.012	0.053
20	1.67	0.10	0.065	(0.117)	0.012	0.053
21	1.75	0.10	0.065	(0.116)	0.012	0.053
22	1.83	0.13	0.086	(0.116)	0.016	0.071
23	1.92	0.13	0.086	(0.115)	0.016	0.071
24	2.00	0.13	0.086	(0.115)	0.016	0.071
25	2.08	0.13	0.086	(0.114)	0.016	0.071
26	2.17	0.13	0.086	(0.114)	0.016	0.071
27	2.25	0.13	0.086	(0.113)	0.016	0.071
28	2.33	0.13	0.086	(0.113)	0.016	0.071
29	2.42	0.13	0.086	(0.112)	0.016	0.071
30	2.50	0.13	0.086	(0.112)	0.016	0.071
31	2.58	0.17	0.108	(0.111)	0.019	0.089
32	2.67	0.17	0.108	(0.111)	0.019	0.089
33	2.75	0.17	0.108	(0.110)	0.019	0.089
34	2.83	0.17	0.108	(0.110)	0.019	0.089
35	2.92	0.17	0.108	(0.110)	0.019	0.089
36	3.00	0.17	0.108	(0.109)	0.019	0.089
37	3.08	0.17	0.108	(0.109)	0.019	0.089
38	3.17	0.17	0.108	(0.108)	0.019	0.089
39	3.25	0.17	0.108	(0.108)	0.019	0.089
40	3.33	0.17	0.108	(0.107)	0.019	0.089
41	3.42	0.17	0.108	(0.107)	0.019	0.089
42	3.50	0.17	0.108	(0.106)	0.019	0.089
43	3.58	0.17	0.108	(0.106)	0.019	0.089
44	3.67	0.17	0.108	(0.106)	0.019	0.089
45	3.75	0.17	0.108	(0.105)	0.019	0.089
46	3.83	0.20	0.130	(0.105)	0.023	0.106

47	3.92	0.20	0.130	(0.104)	0.023	0.106
48	4.00	0.20	0.130	(0.104)	0.023	0.106
49	4.08	0.20	0.130	(0.103)	0.023	0.106
50	4.17	0.20	0.130	(0.103)	0.023	0.106
51	4.25	0.20	0.130	(0.102)	0.023	0.106
52	4.33	0.23	0.151	(0.102)	0.027	0.124
53	4.42	0.23	0.151	(0.102)	0.027	0.124
54	4.50	0.23	0.151	(0.101)	0.027	0.124
55	4.58	0.23	0.151	(0.101)	0.027	0.124
56	4.67	0.23	0.151	(0.100)	0.027	0.124
57	4.75	0.23	0.151	(0.100)	0.027	0.124
58	4.83	0.27	0.173	(0.099)	0.031	0.142
59	4.92	0.27	0.173	(0.099)	0.031	0.142
60	5.00	0.27	0.173	(0.099)	0.031	0.142
61	5.08	0.20	0.130	(0.098)	0.023	0.106
62	5.17	0.20	0.130	(0.098)	0.023	0.106
63	5.25	0.20	0.130	(0.097)	0.023	0.106
64	5.33	0.23	0.151	(0.097)	0.027	0.124
65	5.42	0.23	0.151	(0.096)	0.027	0.124
66	5.50	0.23	0.151	(0.096)	0.027	0.124
67	5.58	0.27	0.173	(0.096)	0.031	0.142
68	5.67	0.27	0.173	(0.095)	0.031	0.142
69	5.75	0.27	0.173	(0.095)	0.031	0.142
70	5.83	0.27	0.173	(0.094)	0.031	0.142
71	5.92	0.27	0.173	(0.094)	0.031	0.142
72	6.00	0.27	0.173	(0.093)	0.031	0.142
73	6.08	0.30	0.194	(0.093)	0.035	0.159
74	6.17	0.30	0.194	(0.093)	0.035	0.159
75	6.25	0.30	0.194	(0.092)	0.035	0.159
76	6.33	0.30	0.194	(0.092)	0.035	0.159
77	6.42	0.30	0.194	(0.091)	0.035	0.159
78	6.50	0.30	0.194	(0.091)	0.035	0.159
79	6.58	0.33	0.216	(0.091)	0.039	0.177
80	6.67	0.33	0.216	(0.090)	0.039	0.177
81	6.75	0.33	0.216	(0.090)	0.039	0.177
82	6.83	0.33	0.216	(0.089)	0.039	0.177
83	6.92	0.33	0.216	(0.089)	0.039	0.177
84	7.00	0.33	0.216	(0.089)	0.039	0.177
85	7.08	0.33	0.216	(0.088)	0.039	0.177
86	7.17	0.33	0.216	(0.088)	0.039	0.177
87	7.25	0.33	0.216	(0.087)	0.039	0.177
88	7.33	0.37	0.238	(0.087)	0.043	0.195
89	7.42	0.37	0.238	(0.087)	0.043	0.195
90	7.50	0.37	0.238	(0.086)	0.043	0.195
91	7.58	0.40	0.259	(0.086)	0.047	0.213
92	7.67	0.40	0.259	(0.085)	0.047	0.213
93	7.75	0.40	0.259	(0.085)	0.047	0.213
94	7.83	0.43	0.281	(0.085)	0.051	0.230
95	7.92	0.43	0.281	(0.084)	0.051	0.230
96	8.00	0.43	0.281	(0.084)	0.051	0.230

97	8.08	0.50	0.324	(0.083)	0.058	0.266
98	8.17	0.50	0.324	(0.083)	0.058	0.266
99	8.25	0.50	0.324	(0.083)	0.058	0.266
100	8.33	0.50	0.324	(0.082)	0.058	0.266
101	8.42	0.50	0.324	(0.082)	0.058	0.266
102	8.50	0.50	0.324	(0.082)	0.058	0.266
103	8.58	0.53	0.346	(0.081)	0.062	0.283
104	8.67	0.53	0.346	(0.081)	0.062	0.283
105	8.75	0.53	0.346	(0.080)	0.062	0.283
106	8.83	0.57	0.367	(0.080)	0.066	0.301
107	8.92	0.57	0.367	(0.080)	0.066	0.301
108	9.00	0.57	0.367	(0.079)	0.066	0.301
109	9.08	0.63	0.410	(0.079)	0.074	0.336
110	9.17	0.63	0.410	(0.078)	0.074	0.336
111	9.25	0.63	0.410	(0.078)	0.074	0.336
112	9.33	0.67	0.432	0.078	(0.078)	0.354
113	9.42	0.67	0.432	0.077	(0.078)	0.355
114	9.50	0.67	0.432	0.077	(0.078)	0.355
115	9.58	0.70	0.454	0.077	(0.082)	0.377
116	9.67	0.70	0.454	0.076	(0.082)	0.377
117	9.75	0.70	0.454	0.076	(0.082)	0.378
118	9.83	0.73	0.475	0.076	(0.086)	0.400
119	9.92	0.73	0.475	0.075	(0.086)	0.400
120	10.00	0.73	0.475	0.075	(0.086)	0.400
121	10.08	0.50	0.324	(0.074)	0.058	0.266
122	10.17	0.50	0.324	(0.074)	0.058	0.266
123	10.25	0.50	0.324	(0.074)	0.058	0.266
124	10.33	0.50	0.324	(0.073)	0.058	0.266
125	10.42	0.50	0.324	(0.073)	0.058	0.266
126	10.50	0.50	0.324	(0.073)	0.058	0.266
127	10.58	0.67	0.432	0.072	(0.078)	0.360
128	10.67	0.67	0.432	0.072	(0.078)	0.360
129	10.75	0.67	0.432	0.072	(0.078)	0.360
130	10.83	0.67	0.432	0.071	(0.078)	0.361
131	10.92	0.67	0.432	0.071	(0.078)	0.361
132	11.00	0.67	0.432	0.071	(0.078)	0.361
133	11.08	0.63	0.410	0.070	(0.074)	0.340
134	11.17	0.63	0.410	0.070	(0.074)	0.341
135	11.25	0.63	0.410	0.069	(0.074)	0.341
136	11.33	0.63	0.410	0.069	(0.074)	0.341
137	11.42	0.63	0.410	0.069	(0.074)	0.342
138	11.50	0.63	0.410	0.068	(0.074)	0.342
139	11.58	0.57	0.367	(0.068)	0.066	0.301
140	11.67	0.57	0.367	(0.068)	0.066	0.301
141	11.75	0.57	0.367	(0.067)	0.066	0.301
142	11.83	0.60	0.389	0.067	(0.070)	0.322
143	11.92	0.60	0.389	0.067	(0.070)	0.322
144	12.00	0.60	0.389	0.066	(0.070)	0.322
145	12.08	0.83	0.540	0.066	(0.097)	0.474
146	12.17	0.83	0.540	0.066	(0.097)	0.474

147	12.25	0.83	0.540	0.065	(0.097)	0.474
148	12.33	0.87	0.562	0.065	(0.101)	0.496
149	12.42	0.87	0.562	0.065	(0.101)	0.497
150	12.50	0.87	0.562	0.064	(0.101)	0.497
151	12.58	0.93	0.605	0.064	(0.109)	0.541
152	12.67	0.93	0.605	0.064	(0.109)	0.541
153	12.75	0.93	0.605	0.064	(0.109)	0.541
154	12.83	0.97	0.626	0.063	(0.113)	0.563
155	12.92	0.97	0.626	0.063	(0.113)	0.563
156	13.00	0.97	0.626	0.063	(0.113)	0.564
157	13.08	1.13	0.734	0.062	(0.132)	0.672
158	13.17	1.13	0.734	0.062	(0.132)	0.672
159	13.25	1.13	0.734	0.062	(0.132)	0.673
160	13.33	1.13	0.734	0.061	(0.132)	0.673
161	13.42	1.13	0.734	0.061	(0.132)	0.673
162	13.50	1.13	0.734	0.061	(0.132)	0.674
163	13.58	0.77	0.497	0.060	(0.089)	0.436
164	13.67	0.77	0.497	0.060	(0.089)	0.437
165	13.75	0.77	0.497	0.060	(0.089)	0.437
166	13.83	0.77	0.497	0.059	(0.089)	0.437
167	13.92	0.77	0.497	0.059	(0.089)	0.438
168	14.00	0.77	0.497	0.059	(0.089)	0.438
169	14.08	0.90	0.583	0.059	(0.105)	0.525
170	14.17	0.90	0.583	0.058	(0.105)	0.525
171	14.25	0.90	0.583	0.058	(0.105)	0.525
172	14.33	0.87	0.562	0.058	(0.101)	0.504
173	14.42	0.87	0.562	0.057	(0.101)	0.504
174	14.50	0.87	0.562	0.057	(0.101)	0.504
175	14.58	0.87	0.562	0.057	(0.101)	0.505
176	14.67	0.87	0.562	0.056	(0.101)	0.505
177	14.75	0.87	0.562	0.056	(0.101)	0.505
178	14.83	0.83	0.540	0.056	(0.097)	0.484
179	14.92	0.83	0.540	0.056	(0.097)	0.484
180	15.00	0.83	0.540	0.055	(0.097)	0.485
181	15.08	0.80	0.518	0.055	(0.093)	0.463
182	15.17	0.80	0.518	0.055	(0.093)	0.464
183	15.25	0.80	0.518	0.054	(0.093)	0.464
184	15.33	0.77	0.497	0.054	(0.089)	0.443
185	15.42	0.77	0.497	0.054	(0.089)	0.443
186	15.50	0.77	0.497	0.054	(0.089)	0.443
187	15.58	0.63	0.410	0.053	(0.074)	0.357
188	15.67	0.63	0.410	0.053	(0.074)	0.357
189	15.75	0.63	0.410	0.053	(0.074)	0.358
190	15.83	0.63	0.410	0.053	(0.074)	0.358
191	15.92	0.63	0.410	0.052	(0.074)	0.358
192	16.00	0.63	0.410	0.052	(0.074)	0.358
193	16.08	0.13	0.086	(0.052)	0.016	0.071
194	16.17	0.13	0.086	(0.051)	0.016	0.071
195	16.25	0.13	0.086	(0.051)	0.016	0.071
196	16.33	0.13	0.086	(0.051)	0.016	0.071

197	16.42	0.13	0.086	(0.051)	0.016	0.071
198	16.50	0.13	0.086	(0.050)	0.016	0.071
199	16.58	0.10	0.065	(0.050)	0.012	0.053
200	16.67	0.10	0.065	(0.050)	0.012	0.053
201	16.75	0.10	0.065	(0.050)	0.012	0.053
202	16.83	0.10	0.065	(0.049)	0.012	0.053
203	16.92	0.10	0.065	(0.049)	0.012	0.053
204	17.00	0.10	0.065	(0.049)	0.012	0.053
205	17.08	0.17	0.108	(0.049)	0.019	0.089
206	17.17	0.17	0.108	(0.048)	0.019	0.089
207	17.25	0.17	0.108	(0.048)	0.019	0.089
208	17.33	0.17	0.108	(0.048)	0.019	0.089
209	17.42	0.17	0.108	(0.048)	0.019	0.089
210	17.50	0.17	0.108	(0.047)	0.019	0.089
211	17.58	0.17	0.108	(0.047)	0.019	0.089
212	17.67	0.17	0.108	(0.047)	0.019	0.089
213	17.75	0.17	0.108	(0.047)	0.019	0.089
214	17.83	0.13	0.086	(0.047)	0.016	0.071
215	17.92	0.13	0.086	(0.046)	0.016	0.071
216	18.00	0.13	0.086	(0.046)	0.016	0.071
217	18.08	0.13	0.086	(0.046)	0.016	0.071
218	18.17	0.13	0.086	(0.046)	0.016	0.071
219	18.25	0.13	0.086	(0.045)	0.016	0.071
220	18.33	0.13	0.086	(0.045)	0.016	0.071
221	18.42	0.13	0.086	(0.045)	0.016	0.071
222	18.50	0.13	0.086	(0.045)	0.016	0.071
223	18.58	0.10	0.065	(0.045)	0.012	0.053
224	18.67	0.10	0.065	(0.044)	0.012	0.053
225	18.75	0.10	0.065	(0.044)	0.012	0.053
226	18.83	0.07	0.043	(0.044)	0.008	0.035
227	18.92	0.07	0.043	(0.044)	0.008	0.035
228	19.00	0.07	0.043	(0.043)	0.008	0.035
229	19.08	0.10	0.065	(0.043)	0.012	0.053
230	19.17	0.10	0.065	(0.043)	0.012	0.053
231	19.25	0.10	0.065	(0.043)	0.012	0.053
232	19.33	0.13	0.086	(0.043)	0.016	0.071
233	19.42	0.13	0.086	(0.042)	0.016	0.071
234	19.50	0.13	0.086	(0.042)	0.016	0.071
235	19.58	0.10	0.065	(0.042)	0.012	0.053
236	19.67	0.10	0.065	(0.042)	0.012	0.053
237	19.75	0.10	0.065	(0.042)	0.012	0.053
238	19.83	0.07	0.043	(0.041)	0.008	0.035
239	19.92	0.07	0.043	(0.041)	0.008	0.035
240	20.00	0.07	0.043	(0.041)	0.008	0.035
241	20.08	0.10	0.065	(0.041)	0.012	0.053
242	20.17	0.10	0.065	(0.041)	0.012	0.053
243	20.25	0.10	0.065	(0.041)	0.012	0.053
244	20.33	0.10	0.065	(0.040)	0.012	0.053
245	20.42	0.10	0.065	(0.040)	0.012	0.053
246	20.50	0.10	0.065	(0.040)	0.012	0.053

247	20.58	0.10	0.065	(0.040)	0.012	0.053
248	20.67	0.10	0.065	(0.040)	0.012	0.053
249	20.75	0.10	0.065	(0.040)	0.012	0.053
250	20.83	0.07	0.043	(0.039)	0.008	0.035
251	20.92	0.07	0.043	(0.039)	0.008	0.035
252	21.00	0.07	0.043	(0.039)	0.008	0.035
253	21.08	0.10	0.065	(0.039)	0.012	0.053
254	21.17	0.10	0.065	(0.039)	0.012	0.053
255	21.25	0.10	0.065	(0.039)	0.012	0.053
256	21.33	0.07	0.043	(0.038)	0.008	0.035
257	21.42	0.07	0.043	(0.038)	0.008	0.035
258	21.50	0.07	0.043	(0.038)	0.008	0.035
259	21.58	0.10	0.065	(0.038)	0.012	0.053
260	21.67	0.10	0.065	(0.038)	0.012	0.053
261	21.75	0.10	0.065	(0.038)	0.012	0.053
262	21.83	0.07	0.043	(0.038)	0.008	0.035
263	21.92	0.07	0.043	(0.038)	0.008	0.035
264	22.00	0.07	0.043	(0.037)	0.008	0.035
265	22.08	0.10	0.065	(0.037)	0.012	0.053
266	22.17	0.10	0.065	(0.037)	0.012	0.053
267	22.25	0.10	0.065	(0.037)	0.012	0.053
268	22.33	0.07	0.043	(0.037)	0.008	0.035
269	22.42	0.07	0.043	(0.037)	0.008	0.035
270	22.50	0.07	0.043	(0.037)	0.008	0.035
271	22.58	0.07	0.043	(0.037)	0.008	0.035
272	22.67	0.07	0.043	(0.036)	0.008	0.035
273	22.75	0.07	0.043	(0.036)	0.008	0.035
274	22.83	0.07	0.043	(0.036)	0.008	0.035
275	22.92	0.07	0.043	(0.036)	0.008	0.035
276	23.00	0.07	0.043	(0.036)	0.008	0.035
277	23.08	0.07	0.043	(0.036)	0.008	0.035
278	23.17	0.07	0.043	(0.036)	0.008	0.035
279	23.25	0.07	0.043	(0.036)	0.008	0.035
280	23.33	0.07	0.043	(0.036)	0.008	0.035
281	23.42	0.07	0.043	(0.036)	0.008	0.035
282	23.50	0.07	0.043	(0.036)	0.008	0.035
283	23.58	0.07	0.043	(0.036)	0.008	0.035
284	23.67	0.07	0.043	(0.036)	0.008	0.035
285	23.75	0.07	0.043	(0.036)	0.008	0.035
286	23.83	0.07	0.043	(0.035)	0.008	0.035
287	23.92	0.07	0.043	(0.035)	0.008	0.035
288	24.00	0.07	0.043	(0.035)	0.008	0.035

(Loss Rate Not Used)

Sum = 100.0 Sum = 55.2

Flood volume = Effective rainfall 4.60(In)
times area 44.7(Ac.)/[(In)/(Ft.)] = 17.1(Ac.Ft)
Total soil loss = 0.80(In)
Total soil loss = 2.971(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 746735.9 Cubic Feet

Total soil loss = 129397.0 Cubic Feet

Peak flow rate of this hydrograph = 30.357(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	10.0	20.0	30.0	40.0
0+ 5	0.0063	0.92	Q				
0+10	0.0167	1.50	VQ				
0+15	0.0277	1.60	VQ				
0+20	0.0418	2.06	V Q				
0+25	0.0580	2.35	V Q				
0+30	0.0745	2.39	V Q				
0+35	0.0910	2.39	V Q				
0+40	0.1075	2.39	V Q				
0+45	0.1240	2.39	V Q				
0+50	0.1436	2.85	V Q				
0+55	0.1653	3.15	V Q				
1+ 0	0.1873	3.19	V Q				
1+ 5	0.2061	2.73	V Q				
1+10	0.2229	2.44	V Q				
1+15	0.2394	2.39	V Q				
1+20	0.2559	2.39	V Q				
1+25	0.2724	2.39	V Q				
1+30	0.2889	2.39	V Q				
1+35	0.3054	2.39	V Q				
1+40	0.3219	2.39	V Q				
1+45	0.3384	2.39	V Q				
1+50	0.3580	2.85	V Q				
1+55	0.3797	3.15	V Q				
2+ 0	0.4017	3.19	V Q				
2+ 5	0.4237	3.19	V Q				
2+10	0.4457	3.19	|V Q				
2+15	0.4677	3.19	|V Q				
2+20	0.4897	3.19	|V Q				
2+25	0.5116	3.19	|V Q				
2+30	0.5336	3.19	|V Q				
2+35	0.5588	3.65	|V Q				
2+40	0.5860	3.94	|V Q				
2+45	0.6134	3.99	|V Q				
2+50	0.6409	3.99	|V Q				
2+55	0.6684	3.99	|V Q				
3+ 0	0.6959	3.99	|V Q				
3+ 5	0.7234	3.99	|V Q				

3+10	0.7509	3.99	V Q				
3+15	0.7784	3.99	V Q				
3+20	0.8059	3.99	V Q				
3+25	0.8333	3.99	V Q				
3+30	0.8608	3.99	VQ				
3+35	0.8883	3.99	VQ				
3+40	0.9158	3.99	VQ				
3+45	0.9433	3.99	VQ				
3+50	0.9739	4.45	V Q				
3+55	1.0066	4.74	V Q				
4+ 0	1.0396	4.79	V Q				
4+ 5	1.0726	4.79	V Q				
4+10	1.1056	4.79	V Q				
4+15	1.1386	4.79	V Q				
4+20	1.1747	5.25	V Q				
4+25	1.2129	5.54	V Q				
4+30	1.2514	5.59	V Q				
4+35	1.2898	5.59	V Q				
4+40	1.3283	5.59	V Q				
4+45	1.3668	5.59	V Q				
4+50	1.4084	6.05	V Q				
4+55	1.4521	6.34	V Q				
5+ 0	1.4961	6.39	V Q				
5+ 5	1.5337	5.47	V Q				
5+10	1.5674	4.88	VQ				
5+15	1.6004	4.79	VQ				
5+20	1.6365	5.25	V Q				
5+25	1.6747	5.54	V Q				
5+30	1.7132	5.59	V Q				
5+35	1.7548	6.05	V Q				
5+40	1.7985	6.34	V Q				
5+45	1.8424	6.39	V Q				
5+50	1.8864	6.39	V Q				
5+55	1.9304	6.39	V Q				
6+ 0	1.9744	6.39	V Q				
6+ 5	2.0215	6.84	V Q				
6+10	2.0707	7.14	V Q				
6+15	2.1202	7.18	V Q				
6+20	2.1696	7.18	V Q				
6+25	2.2191	7.18	V Q				
6+30	2.2686	7.18	V Q				
6+35	2.3212	7.64	V Q				
6+40	2.3759	7.94	V Q				
6+45	2.4309	7.98	V Q				
6+50	2.4858	7.98	V Q				
6+55	2.5408	7.98	V Q				
7+ 0	2.5958	7.98	VQ				
7+ 5	2.6508	7.98	VQ				
7+10	2.7057	7.98	VQ				
7+15	2.7607	7.98	VQ				

7+20	2.8189	8.44	V Q				
7+25	2.8790	8.73	V Q				
7+30	2.9395	8.78	V Q				
7+35	3.0031	9.24	V Q				
7+40	3.0688	9.53	V Q				
7+45	3.1347	9.58	V Q				
7+50	3.2039	10.04	V Q				
7+55	3.2750	10.33	V Q				
8+ 0	3.3465	10.38	V Q				
8+ 5	3.4243	11.30	V |Q				
8+10	3.5061	11.88	V |Q				
8+15	3.5886	11.97	V |Q				
8+20	3.6710	11.97	V |Q				
8+25	3.7535	11.97	V |Q				
8+30	3.8360	11.97	V |Q				
8+35	3.9216	12.43	V| Q				
8+40	4.0092	12.73	V| Q				
8+45	4.0972	12.77	V| Q				
8+50	4.1883	13.23	V| Q				
8+55	4.2815	13.52	V| Q				
9+ 0	4.3749	13.57	V Q				
9+ 5	4.4747	14.49	V Q				
9+10	4.5785	15.07	V Q				
9+15	4.6830	15.17	V Q				
9+20	4.7906	15.63	|V Q				
9+25	4.9003	15.93	|V Q				
9+30	5.0104	15.99	|V Q				
9+35	5.1245	16.57	|V Q				
9+40	5.2412	16.94	| V Q				
9+45	5.3584	17.01	| V Q				
9+50	5.4795	17.59	| V Q				
9+55	5.6033	17.96	| V Q				
10+ 0	5.7275	18.04	| V Q				
10+ 5	5.8277	14.55	| VQ				
10+10	5.9126	12.33	| QV				
10+15	5.9951	11.97	|Q V				
10+20	6.0775	11.97	|Q V				
10+25	6.1600	11.97	|Q V				
10+30	6.2425	11.97	|Q V				
10+35	6.3417	14.41	| Q				
10+40	6.4517	15.97	| Q				
10+45	6.5635	16.24	| VQ				
10+50	6.6755	16.25	| VQ				
10+55	6.7875	16.27	| VQ				
11+ 0	6.8996	16.28	| Q				
11+ 5	7.0080	15.74	| QV				
11+10	7.1141	15.40	| QV				
11+15	7.2198	15.36	| QV				
11+20	7.3257	15.37	| Q V				
11+25	7.4317	15.39	| Q V				

11+30	7.5377	15.40		Q V			
11+35	7.6366	14.35		Q V			
11+40	7.7308	13.68		Q V			
11+45	7.8242	13.57		Q V			
11+50	7.9214	14.10		Q V			
11+55	8.0209	14.45		Q V			
12+ 0	8.1209	14.52		Q V			
12+ 5	8.2480	18.45		QV			
12+10	8.3924	20.97		VQ			
12+15	8.5396	21.38		V|Q			
12+20	8.6908	21.95		VQ			
12+25	8.8446	22.33		V Q			
12+30	8.9988	22.40		V Q			
12+35	9.1609	23.53		|V Q			
12+40	9.3280	24.26		|V Q			
12+45	9.4959	24.39		| V Q			
12+50	9.6679	24.96		| V Q			
12+55	9.8423	25.33		| V Q			
13+ 0	10.0173	25.40		| V Q			
13+ 5	10.2116	28.22		| V Q			
13+10	10.4184	30.02		| V Q			
13+15	10.6271	30.31		| V Q			
13+20	10.8360	30.33		| V Q			
13+25	11.0450	30.34		| V Q			
13+30	11.2541	30.36		| V Q			
13+35	11.4208	24.21		| Q V			
13+40	11.5606	20.30		Q V			
13+45	11.6962	19.69		Q| V			
13+50	11.8319	19.70		Q| V			
13+55	11.9677	19.72		Q| V			
14+ 0	12.1036	19.73		Q| V			
14+ 5	12.2550	21.98		|Q V			
14+10	12.4164	23.43		| Q V			
14+15	12.5794	23.67		| Q V|		
14+20	12.7386	23.12		| Q V|		
14+25	12.8955	22.78		| Q V			
14+30	13.0520	22.73		| Q V			
14+35	13.2087	22.75		| Q V			
14+40	13.3654	22.76		| Q |V			
14+45	13.5222	22.77		| Q |V			
14+50	13.6753	22.23		| Q |V			
14+55	13.8260	21.88		|Q | V			
15+ 0	13.9764	21.84		|Q | V			
15+ 5	14.1230	21.29		|Q | V			
15+10	14.2673	20.95		Q | V			
15+15	14.4112	20.90		Q | V			
15+20	14.5514	20.36		Q | V			
15+25	14.6892	20.01		Q | V			
15+30	14.8267	19.97		Q| | V			
15+35	14.9489	17.74		Q | | V			

15+40	15.0613	16.32	|		|	Q	|		|	V	|
15+45	15.1723	16.11	|		|	Q	|		|	V	|
15+50	15.2833	16.12	|		|	Q	|		|	V	|
15+55	15.3944	16.13	|		|	Q	|		|	V	|
16+ 0	15.5056	16.15	|		|	Q	|		|	V	|
16+ 5	15.5656	8.70	|	Q	|		|		|	V	|
16+10	15.5927	3.95	|	Q	|		|		|	V	|
16+15	15.6147	3.19	|	Q	|		|		|	V	|
16+20	15.6367	3.19	|	Q	|		|		|	V	|
16+25	15.6587	3.19	|	Q	|		|		|	V	|
16+30	15.6807	3.19	|	Q	|		|		|	V	|
16+35	15.6995	2.73	| Q		|		|		|	V	|
16+40	15.7163	2.44	| Q		|		|		|	V	|
16+45	15.7328	2.39	| Q		|		|		|	V	|
16+50	15.7493	2.39	| Q		|		|		|	V	|
16+55	15.7658	2.39	| Q		|		|		|	V	|
17+ 0	15.7823	2.39	| Q		|		|		|	V	|
17+ 5	15.8051	3.31	|	Q	|		|		|	V	|
17+10	15.8320	3.90	|	Q	|		|		|	V	|
17+15	15.8595	3.99	|	Q	|		|		|	V	|
17+20	15.8870	3.99	|	Q	|		|		|	V	|
17+25	15.9144	3.99	|	Q	|		|		|	V	|
17+30	15.9419	3.99	|	Q	|		|		|	V	|
17+35	15.9694	3.99	|	Q	|		|		|	V	|
17+40	15.9969	3.99	|	Q	|		|		|	V	|
17+45	16.0244	3.99	|	Q	|		|		|	V	|
17+50	16.0487	3.53	|	Q	|		|		|	V	|
17+55	16.0710	3.24	|	Q	|		|		|	V	|
18+ 0	16.0930	3.19	|	Q	|		|		|	V	|
18+ 5	16.1150	3.19	|	Q	|		|		|	V	|
18+10	16.1370	3.19	|	Q	|		|		|	V	|
18+15	16.1590	3.19	|	Q	|		|		|	V	|
18+20	16.1810	3.19	|	Q	|		|		|	V	|
18+25	16.2030	3.19	|	Q	|		|		|	V	|
18+30	16.2250	3.19	|	Q	|		|		|	V	|
18+35	16.2438	2.73	| Q		|		|		|	V	|
18+40	16.2606	2.44	| Q		|		|		|	V	|
18+45	16.2771	2.39	| Q		|		|		|	V	|
18+50	16.2904	1.94	|Q		|		|		|	V	|
18+55	16.3017	1.64	|Q		|		|		|	V	|
19+ 0	16.3127	1.60	|Q		|		|		|	V	|
19+ 5	16.3269	2.06	| Q		|		|		|	V	|
19+10	16.3431	2.35	| Q		|		|		|	V	|
19+15	16.3596	2.39	| Q		|		|		|	V	|
19+20	16.3792	2.85	| Q		|		|		|	V	|
19+25	16.4009	3.15	|	Q	|		|		|	V	|
19+30	16.4229	3.19	|	Q	|		|		|	V	|
19+35	16.4417	2.73	| Q		|		|		|	V	|
19+40	16.4585	2.44	| Q		|		|		|	V	|
19+45	16.4750	2.39	| Q		|		|		|	V	|

19+50	16.4883	1.94	Q				V
19+55	16.4997	1.64	Q				V
20+ 0	16.5107	1.60	Q				V
20+ 5	16.5248	2.06	Q				V
20+10	16.5410	2.35	Q				V
20+15	16.5575	2.39	Q				V
20+20	16.5740	2.39	Q				V
20+25	16.5905	2.39	Q				V
20+30	16.6070	2.39	Q				V
20+35	16.6234	2.39	Q				V
20+40	16.6399	2.39	Q				V
20+45	16.6564	2.39	Q				V
20+50	16.6698	1.94	Q				V
20+55	16.6811	1.64	Q				V
21+ 0	16.6921	1.60	Q				V
21+ 5	16.7062	2.06	Q				V
21+10	16.7224	2.35	Q				V
21+15	16.7389	2.39	Q				V
21+20	16.7522	1.94	Q				V
21+25	16.7635	1.64	Q				V
21+30	16.7745	1.60	Q				V
21+35	16.7887	2.06	Q				V
21+40	16.8049	2.35	Q				V
21+45	16.8214	2.39	Q				V
21+50	16.8347	1.94	Q				V
21+55	16.8460	1.64	Q				V
22+ 0	16.8570	1.60	Q				V
22+ 5	16.8712	2.06	Q				V
22+10	16.8873	2.35	Q				V
22+15	16.9038	2.39	Q				V
22+20	16.9172	1.94	Q				V
22+25	16.9285	1.64	Q				V
22+30	16.9395	1.60	Q				V
22+35	16.9505	1.60	Q				V
22+40	16.9615	1.60	Q				V
22+45	16.9725	1.60	Q				V
22+50	16.9834	1.60	Q				V
22+55	16.9944	1.60	Q				V
23+ 0	17.0054	1.60	Q				V
23+ 5	17.0164	1.60	Q				V
23+10	17.0274	1.60	Q				V
23+15	17.0384	1.60	Q				V
23+20	17.0494	1.60	Q				V
23+25	17.0604	1.60	Q				V
23+30	17.0714	1.60	Q				V
23+35	17.0824	1.60	Q				V
23+40	17.0934	1.60	Q				V
23+45	17.1044	1.60	Q				V
23+50	17.1154	1.60	Q				V
23+55	17.1264	1.60	Q				V

```
   24+ 0      17.1374      1.60  |Q        |         |         |        V|
   24+ 5      17.1421      0.68  Q         |         |         |        V|
   24+10      17.1427      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 05/10/24 File: ONSITEPOSTW1242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.370        0.383       1.000      0.383
                                                 Sum (F) =   0.383
Area averaged mean soil loss (F) (In/Hr) =  0.383
Minimum soil loss rate ((In/Hr)) =  0.191
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.016	(0.679)	0.010	0.006
2	0.17	0.07	0.016	(0.676)	0.010	0.006
3	0.25	0.07	0.016	(0.673)	0.010	0.006
4	0.33	0.10	0.024	(0.671)	0.014	0.010
5	0.42	0.10	0.024	(0.668)	0.014	0.010
6	0.50	0.10	0.024	(0.666)	0.014	0.010
7	0.58	0.10	0.024	(0.663)	0.014	0.010
8	0.67	0.10	0.024	(0.660)	0.014	0.010
9	0.75	0.10	0.024	(0.658)	0.014	0.010
10	0.83	0.13	0.032	(0.655)	0.019	0.013
11	0.92	0.13	0.032	(0.653)	0.019	0.013
12	1.00	0.13	0.032	(0.650)	0.019	0.013
13	1.08	0.10	0.024	(0.647)	0.014	0.010
14	1.17	0.10	0.024	(0.645)	0.014	0.010
15	1.25	0.10	0.024	(0.642)	0.014	0.010
16	1.33	0.10	0.024	(0.640)	0.014	0.010
17	1.42	0.10	0.024	(0.637)	0.014	0.010
18	1.50	0.10	0.024	(0.635)	0.014	0.010
19	1.58	0.10	0.024	(0.632)	0.014	0.010
20	1.67	0.10	0.024	(0.630)	0.014	0.010
21	1.75	0.10	0.024	(0.627)	0.014	0.010
22	1.83	0.13	0.032	(0.625)	0.019	0.013
23	1.92	0.13	0.032	(0.622)	0.019	0.013
24	2.00	0.13	0.032	(0.620)	0.019	0.013
25	2.08	0.13	0.032	(0.617)	0.019	0.013
26	2.17	0.13	0.032	(0.615)	0.019	0.013
27	2.25	0.13	0.032	(0.612)	0.019	0.013
28	2.33	0.13	0.032	(0.610)	0.019	0.013
29	2.42	0.13	0.032	(0.607)	0.019	0.013
30	2.50	0.13	0.032	(0.605)	0.019	0.013
31	2.58	0.17	0.040	(0.602)	0.024	0.016
32	2.67	0.17	0.040	(0.600)	0.024	0.016
33	2.75	0.17	0.040	(0.597)	0.024	0.016
34	2.83	0.17	0.040	(0.595)	0.024	0.016
35	2.92	0.17	0.040	(0.592)	0.024	0.016
36	3.00	0.17	0.040	(0.590)	0.024	0.016
37	3.08	0.17	0.040	(0.587)	0.024	0.016
38	3.17	0.17	0.040	(0.585)	0.024	0.016
39	3.25	0.17	0.040	(0.583)	0.024	0.016
40	3.33	0.17	0.040	(0.580)	0.024	0.016
41	3.42	0.17	0.040	(0.578)	0.024	0.016
42	3.50	0.17	0.040	(0.575)	0.024	0.016
43	3.58	0.17	0.040	(0.573)	0.024	0.016
44	3.67	0.17	0.040	(0.570)	0.024	0.016
45	3.75	0.17	0.040	(0.568)	0.024	0.016
46	3.83	0.20	0.048	(0.566)	0.029	0.019
47	3.92	0.20	0.048	(0.563)	0.029	0.019

48	4.00	0.20	0.048	(0.561)	0.029	0.019
49	4.08	0.20	0.048	(0.559)	0.029	0.019
50	4.17	0.20	0.048	(0.556)	0.029	0.019
51	4.25	0.20	0.048	(0.554)	0.029	0.019
52	4.33	0.23	0.056	(0.551)	0.034	0.022
53	4.42	0.23	0.056	(0.549)	0.034	0.022
54	4.50	0.23	0.056	(0.547)	0.034	0.022
55	4.58	0.23	0.056	(0.544)	0.034	0.022
56	4.67	0.23	0.056	(0.542)	0.034	0.022
57	4.75	0.23	0.056	(0.540)	0.034	0.022
58	4.83	0.27	0.064	(0.537)	0.039	0.025
59	4.92	0.27	0.064	(0.535)	0.039	0.025
60	5.00	0.27	0.064	(0.533)	0.039	0.025
61	5.08	0.20	0.048	(0.530)	0.029	0.019
62	5.17	0.20	0.048	(0.528)	0.029	0.019
63	5.25	0.20	0.048	(0.526)	0.029	0.019
64	5.33	0.23	0.056	(0.523)	0.034	0.022
65	5.42	0.23	0.056	(0.521)	0.034	0.022
66	5.50	0.23	0.056	(0.519)	0.034	0.022
67	5.58	0.27	0.064	(0.517)	0.039	0.025
68	5.67	0.27	0.064	(0.514)	0.039	0.025
69	5.75	0.27	0.064	(0.512)	0.039	0.025
70	5.83	0.27	0.064	(0.510)	0.039	0.025
71	5.92	0.27	0.064	(0.508)	0.039	0.025
72	6.00	0.27	0.064	(0.505)	0.039	0.025
73	6.08	0.30	0.072	(0.503)	0.043	0.029
74	6.17	0.30	0.072	(0.501)	0.043	0.029
75	6.25	0.30	0.072	(0.499)	0.043	0.029
76	6.33	0.30	0.072	(0.496)	0.043	0.029
77	6.42	0.30	0.072	(0.494)	0.043	0.029
78	6.50	0.30	0.072	(0.492)	0.043	0.029
79	6.58	0.33	0.080	(0.490)	0.048	0.032
80	6.67	0.33	0.080	(0.488)	0.048	0.032
81	6.75	0.33	0.080	(0.485)	0.048	0.032
82	6.83	0.33	0.080	(0.483)	0.048	0.032
83	6.92	0.33	0.080	(0.481)	0.048	0.032
84	7.00	0.33	0.080	(0.479)	0.048	0.032
85	7.08	0.33	0.080	(0.477)	0.048	0.032
86	7.17	0.33	0.080	(0.474)	0.048	0.032
87	7.25	0.33	0.080	(0.472)	0.048	0.032
88	7.33	0.37	0.088	(0.470)	0.053	0.035
89	7.42	0.37	0.088	(0.468)	0.053	0.035
90	7.50	0.37	0.088	(0.466)	0.053	0.035
91	7.58	0.40	0.096	(0.464)	0.058	0.038
92	7.67	0.40	0.096	(0.462)	0.058	0.038
93	7.75	0.40	0.096	(0.459)	0.058	0.038
94	7.83	0.43	0.104	(0.457)	0.063	0.041
95	7.92	0.43	0.104	(0.455)	0.063	0.041
96	8.00	0.43	0.104	(0.453)	0.063	0.041
97	8.08	0.50	0.120	(0.451)	0.072	0.048

98	8.17	0.50	0.120	(0.449)	0.072	0.048
99	8.25	0.50	0.120	(0.447)	0.072	0.048
100	8.33	0.50	0.120	(0.445)	0.072	0.048
101	8.42	0.50	0.120	(0.443)	0.072	0.048
102	8.50	0.50	0.120	(0.441)	0.072	0.048
103	8.58	0.53	0.128	(0.438)	0.077	0.051
104	8.67	0.53	0.128	(0.436)	0.077	0.051
105	8.75	0.53	0.128	(0.434)	0.077	0.051
106	8.83	0.57	0.136	(0.432)	0.082	0.054
107	8.92	0.57	0.136	(0.430)	0.082	0.054
108	9.00	0.57	0.136	(0.428)	0.082	0.054
109	9.08	0.63	0.152	(0.426)	0.092	0.060
110	9.17	0.63	0.152	(0.424)	0.092	0.060
111	9.25	0.63	0.152	(0.422)	0.092	0.060
112	9.33	0.67	0.160	(0.420)	0.097	0.063
113	9.42	0.67	0.160	(0.418)	0.097	0.063
114	9.50	0.67	0.160	(0.416)	0.097	0.063
115	9.58	0.70	0.168	(0.414)	0.101	0.067
116	9.67	0.70	0.168	(0.412)	0.101	0.067
117	9.75	0.70	0.168	(0.410)	0.101	0.067
118	9.83	0.73	0.176	(0.408)	0.106	0.070
119	9.92	0.73	0.176	(0.406)	0.106	0.070
120	10.00	0.73	0.176	(0.404)	0.106	0.070
121	10.08	0.50	0.120	(0.402)	0.072	0.048
122	10.17	0.50	0.120	(0.400)	0.072	0.048
123	10.25	0.50	0.120	(0.398)	0.072	0.048
124	10.33	0.50	0.120	(0.396)	0.072	0.048
125	10.42	0.50	0.120	(0.395)	0.072	0.048
126	10.50	0.50	0.120	(0.393)	0.072	0.048
127	10.58	0.67	0.160	(0.391)	0.097	0.063
128	10.67	0.67	0.160	(0.389)	0.097	0.063
129	10.75	0.67	0.160	(0.387)	0.097	0.063
130	10.83	0.67	0.160	(0.385)	0.097	0.063
131	10.92	0.67	0.160	(0.383)	0.097	0.063
132	11.00	0.67	0.160	(0.381)	0.097	0.063
133	11.08	0.63	0.152	(0.379)	0.092	0.060
134	11.17	0.63	0.152	(0.377)	0.092	0.060
135	11.25	0.63	0.152	(0.376)	0.092	0.060
136	11.33	0.63	0.152	(0.374)	0.092	0.060
137	11.42	0.63	0.152	(0.372)	0.092	0.060
138	11.50	0.63	0.152	(0.370)	0.092	0.060
139	11.58	0.57	0.136	(0.368)	0.082	0.054
140	11.67	0.57	0.136	(0.366)	0.082	0.054
141	11.75	0.57	0.136	(0.365)	0.082	0.054
142	11.83	0.60	0.144	(0.363)	0.087	0.057
143	11.92	0.60	0.144	(0.361)	0.087	0.057
144	12.00	0.60	0.144	(0.359)	0.087	0.057
145	12.08	0.83	0.200	(0.357)	0.121	0.079
146	12.17	0.83	0.200	(0.356)	0.121	0.079
147	12.25	0.83	0.200	(0.354)	0.121	0.079

148	12.33	0.87	0.208	(0.352)	0.126	0.082
149	12.42	0.87	0.208	(0.350)	0.126	0.082
150	12.50	0.87	0.208	(0.348)	0.126	0.082
151	12.58	0.93	0.224	(0.347)	0.135	0.089
152	12.67	0.93	0.224	(0.345)	0.135	0.089
153	12.75	0.93	0.224	(0.343)	0.135	0.089
154	12.83	0.97	0.232	(0.342)	0.140	0.092
155	12.92	0.97	0.232	(0.340)	0.140	0.092
156	13.00	0.97	0.232	(0.338)	0.140	0.092
157	13.08	1.13	0.272	(0.336)	0.164	0.108
158	13.17	1.13	0.272	(0.335)	0.164	0.108
159	13.25	1.13	0.272	(0.333)	0.164	0.108
160	13.33	1.13	0.272	(0.331)	0.164	0.108
161	13.42	1.13	0.272	(0.330)	0.164	0.108
162	13.50	1.13	0.272	(0.328)	0.164	0.108
163	13.58	0.77	0.184	(0.326)	0.111	0.073
164	13.67	0.77	0.184	(0.325)	0.111	0.073
165	13.75	0.77	0.184	(0.323)	0.111	0.073
166	13.83	0.77	0.184	(0.321)	0.111	0.073
167	13.92	0.77	0.184	(0.320)	0.111	0.073
168	14.00	0.77	0.184	(0.318)	0.111	0.073
169	14.08	0.90	0.216	(0.316)	0.130	0.086
170	14.17	0.90	0.216	(0.315)	0.130	0.086
171	14.25	0.90	0.216	(0.313)	0.130	0.086
172	14.33	0.87	0.208	(0.312)	0.126	0.082
173	14.42	0.87	0.208	(0.310)	0.126	0.082
174	14.50	0.87	0.208	(0.308)	0.126	0.082
175	14.58	0.87	0.208	(0.307)	0.126	0.082
176	14.67	0.87	0.208	(0.305)	0.126	0.082
177	14.75	0.87	0.208	(0.304)	0.126	0.082
178	14.83	0.83	0.200	(0.302)	0.121	0.079
179	14.92	0.83	0.200	(0.301)	0.121	0.079
180	15.00	0.83	0.200	(0.299)	0.121	0.079
181	15.08	0.80	0.192	(0.297)	0.116	0.076
182	15.17	0.80	0.192	(0.296)	0.116	0.076
183	15.25	0.80	0.192	(0.294)	0.116	0.076
184	15.33	0.77	0.184	(0.293)	0.111	0.073
185	15.42	0.77	0.184	(0.291)	0.111	0.073
186	15.50	0.77	0.184	(0.290)	0.111	0.073
187	15.58	0.63	0.152	(0.288)	0.092	0.060
188	15.67	0.63	0.152	(0.287)	0.092	0.060
189	15.75	0.63	0.152	(0.285)	0.092	0.060
190	15.83	0.63	0.152	(0.284)	0.092	0.060
191	15.92	0.63	0.152	(0.283)	0.092	0.060
192	16.00	0.63	0.152	(0.281)	0.092	0.060
193	16.08	0.13	0.032	(0.280)	0.019	0.013
194	16.17	0.13	0.032	(0.278)	0.019	0.013
195	16.25	0.13	0.032	(0.277)	0.019	0.013
196	16.33	0.13	0.032	(0.275)	0.019	0.013
197	16.42	0.13	0.032	(0.274)	0.019	0.013

198	16.50	0.13	0.032	(0.273)	0.019	0.013
199	16.58	0.10	0.024	(0.271)	0.014	0.010
200	16.67	0.10	0.024	(0.270)	0.014	0.010
201	16.75	0.10	0.024	(0.268)	0.014	0.010
202	16.83	0.10	0.024	(0.267)	0.014	0.010
203	16.92	0.10	0.024	(0.266)	0.014	0.010
204	17.00	0.10	0.024	(0.264)	0.014	0.010
205	17.08	0.17	0.040	(0.263)	0.024	0.016
206	17.17	0.17	0.040	(0.262)	0.024	0.016
207	17.25	0.17	0.040	(0.260)	0.024	0.016
208	17.33	0.17	0.040	(0.259)	0.024	0.016
209	17.42	0.17	0.040	(0.258)	0.024	0.016
210	17.50	0.17	0.040	(0.257)	0.024	0.016
211	17.58	0.17	0.040	(0.255)	0.024	0.016
212	17.67	0.17	0.040	(0.254)	0.024	0.016
213	17.75	0.17	0.040	(0.253)	0.024	0.016
214	17.83	0.13	0.032	(0.251)	0.019	0.013
215	17.92	0.13	0.032	(0.250)	0.019	0.013
216	18.00	0.13	0.032	(0.249)	0.019	0.013
217	18.08	0.13	0.032	(0.248)	0.019	0.013
218	18.17	0.13	0.032	(0.247)	0.019	0.013
219	18.25	0.13	0.032	(0.245)	0.019	0.013
220	18.33	0.13	0.032	(0.244)	0.019	0.013
221	18.42	0.13	0.032	(0.243)	0.019	0.013
222	18.50	0.13	0.032	(0.242)	0.019	0.013
223	18.58	0.10	0.024	(0.241)	0.014	0.010
224	18.67	0.10	0.024	(0.239)	0.014	0.010
225	18.75	0.10	0.024	(0.238)	0.014	0.010
226	18.83	0.07	0.016	(0.237)	0.010	0.006
227	18.92	0.07	0.016	(0.236)	0.010	0.006
228	19.00	0.07	0.016	(0.235)	0.010	0.006
229	19.08	0.10	0.024	(0.234)	0.014	0.010
230	19.17	0.10	0.024	(0.233)	0.014	0.010
231	19.25	0.10	0.024	(0.232)	0.014	0.010
232	19.33	0.13	0.032	(0.231)	0.019	0.013
233	19.42	0.13	0.032	(0.229)	0.019	0.013
234	19.50	0.13	0.032	(0.228)	0.019	0.013
235	19.58	0.10	0.024	(0.227)	0.014	0.010
236	19.67	0.10	0.024	(0.226)	0.014	0.010
237	19.75	0.10	0.024	(0.225)	0.014	0.010
238	19.83	0.07	0.016	(0.224)	0.010	0.006
239	19.92	0.07	0.016	(0.223)	0.010	0.006
240	20.00	0.07	0.016	(0.222)	0.010	0.006
241	20.08	0.10	0.024	(0.221)	0.014	0.010
242	20.17	0.10	0.024	(0.220)	0.014	0.010
243	20.25	0.10	0.024	(0.219)	0.014	0.010
244	20.33	0.10	0.024	(0.218)	0.014	0.010
245	20.42	0.10	0.024	(0.218)	0.014	0.010
246	20.50	0.10	0.024	(0.217)	0.014	0.010
247	20.58	0.10	0.024	(0.216)	0.014	0.010

248	20.67	0.10	0.024	(0.215)	0.014	0.010
249	20.75	0.10	0.024	(0.214)	0.014	0.010
250	20.83	0.07	0.016	(0.213)	0.010	0.006
251	20.92	0.07	0.016	(0.212)	0.010	0.006
252	21.00	0.07	0.016	(0.211)	0.010	0.006
253	21.08	0.10	0.024	(0.210)	0.014	0.010
254	21.17	0.10	0.024	(0.210)	0.014	0.010
255	21.25	0.10	0.024	(0.209)	0.014	0.010
256	21.33	0.07	0.016	(0.208)	0.010	0.006
257	21.42	0.07	0.016	(0.207)	0.010	0.006
258	21.50	0.07	0.016	(0.206)	0.010	0.006
259	21.58	0.10	0.024	(0.206)	0.014	0.010
260	21.67	0.10	0.024	(0.205)	0.014	0.010
261	21.75	0.10	0.024	(0.204)	0.014	0.010
262	21.83	0.07	0.016	(0.204)	0.010	0.006
263	21.92	0.07	0.016	(0.203)	0.010	0.006
264	22.00	0.07	0.016	(0.202)	0.010	0.006
265	22.08	0.10	0.024	(0.201)	0.014	0.010
266	22.17	0.10	0.024	(0.201)	0.014	0.010
267	22.25	0.10	0.024	(0.200)	0.014	0.010
268	22.33	0.07	0.016	(0.200)	0.010	0.006
269	22.42	0.07	0.016	(0.199)	0.010	0.006
270	22.50	0.07	0.016	(0.198)	0.010	0.006
271	22.58	0.07	0.016	(0.198)	0.010	0.006
272	22.67	0.07	0.016	(0.197)	0.010	0.006
273	22.75	0.07	0.016	(0.197)	0.010	0.006
274	22.83	0.07	0.016	(0.196)	0.010	0.006
275	22.92	0.07	0.016	(0.196)	0.010	0.006
276	23.00	0.07	0.016	(0.195)	0.010	0.006
277	23.08	0.07	0.016	(0.195)	0.010	0.006
278	23.17	0.07	0.016	(0.194)	0.010	0.006
279	23.25	0.07	0.016	(0.194)	0.010	0.006
280	23.33	0.07	0.016	(0.193)	0.010	0.006
281	23.42	0.07	0.016	(0.193)	0.010	0.006
282	23.50	0.07	0.016	(0.193)	0.010	0.006
283	23.58	0.07	0.016	(0.192)	0.010	0.006
284	23.67	0.07	0.016	(0.192)	0.010	0.006
285	23.75	0.07	0.016	(0.192)	0.010	0.006
286	23.83	0.07	0.016	(0.192)	0.010	0.006
287	23.92	0.07	0.016	(0.192)	0.010	0.006
288	24.00	0.07	0.016	(0.191)	0.010	0.006

(Loss Rate Not Used)

Sum = 100.0 Sum = 9.5

Flood volume = Effective rainfall 0.79(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 1.21(In)
Total soil loss = 0.493(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 14087.2 Cubic Feet
Total soil loss = 21486.5 Cubic Feet

Peak flow rate of this hydrograph = 0.532(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0002	0.02	Q				
0+10	0.0004	0.03	Q				
0+15	0.0006	0.03	Q				
0+20	0.0009	0.04	Q				
0+25	0.0012	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	0.0025	0.05	Q				
0+50	0.0029	0.06	Q				
0+55	0.0033	0.06	Q				
1+ 0	0.0038	0.06	Q				
1+ 5	0.0041	0.05	Q				
1+10	0.0044	0.05	Q				
1+15	0.0048	0.05	Q				
1+20	0.0051	0.05	Q				
1+25	0.0054	0.05	Q				
1+30	0.0057	0.05	Q				
1+35	0.0061	0.05	Q				
1+40	0.0064	0.05	Q				
1+45	0.0067	0.05	Q				
1+50	0.0071	0.06	Q				
1+55	0.0075	0.06	Q				
2+ 0	0.0080	0.06	Q				
2+ 5	0.0084	0.06	QV				
2+10	0.0088	0.06	QV				
2+15	0.0093	0.06	QV				
2+20	0.0097	0.06	QV				
2+25	0.0101	0.06	QV				
2+30	0.0106	0.06	QV				
2+35	0.0111	0.07	QV				
2+40	0.0116	0.08	QV				
2+45	0.0121	0.08	QV				
2+50	0.0127	0.08	QV				
2+55	0.0132	0.08	QV				
3+ 0	0.0138	0.08	QV				
3+ 5	0.0143	0.08	QV				
3+10	0.0148	0.08	QV				

3+15	0.0154	0.08	QV	|	|	|	|
3+20	0.0159	0.08	QV	|	|	|	|
3+25	0.0165	0.08	Q V	|	|	|	|
3+30	0.0170	0.08	Q V	|	|	|	|
3+35	0.0175	0.08	Q V	|	|	|	|
3+40	0.0181	0.08	Q V	|	|	|	|
3+45	0.0186	0.08	Q V	|	|	|	|
3+50	0.0192	0.09	Q V	|	|	|	|
3+55	0.0199	0.09	Q V	|	|	|	|
4+ 0	0.0205	0.09	Q V	|	|	|	|
4+ 5	0.0212	0.09	Q V	|	|	|	|
4+10	0.0218	0.09	Q V	|	|	|	|
4+15	0.0225	0.09	Q V	|	|	|	|
4+20	0.0232	0.11	Q V	|	|	|	|
4+25	0.0239	0.11	Q V	|	|	|	|
4+30	0.0247	0.11	Q V	|	|	|	|
4+35	0.0254	0.11	Q V	|	|	|	|
4+40	0.0262	0.11	Q V	|	|	|	|
4+45	0.0270	0.11	Q V	|	|	|	|
4+50	0.0278	0.12	Q V	|	|	|	|
4+55	0.0286	0.13	Q V	|	|	|	|
5+ 0	0.0295	0.13	Q V	|	|	|	|
5+ 5	0.0302	0.10	Q V	|	|	|	|
5+10	0.0309	0.09	Q V	|	|	|	|
5+15	0.0315	0.09	Q V	|	|	|	|
5+20	0.0322	0.11	Q V	|	|	|	|
5+25	0.0330	0.11	Q V	|	|	|	|
5+30	0.0337	0.11	Q V	|	|	|	|
5+35	0.0346	0.12	Q V	|	|	|	|
5+40	0.0354	0.13	Q V	|	|	|	|
5+45	0.0363	0.13	Q V	|	|	|	|
5+50	0.0372	0.13	Q V	|	|	|	|
5+55	0.0380	0.13	Q V	|	|	|	|
6+ 0	0.0389	0.13	Q V	|	|	|	|
6+ 5	0.0398	0.14	Q V	|	|	|	|
6+10	0.0408	0.14	Q V	|	|	|	|
6+15	0.0418	0.14	Q V	|	|	|	|
6+20	0.0427	0.14	Q V	|	|	|	|
6+25	0.0437	0.14	Q V	|	|	|	|
6+30	0.0447	0.14	Q V	|	|	|	|
6+35	0.0457	0.15	Q V	|	|	|	|
6+40	0.0468	0.16	Q V	|	|	|	|
6+45	0.0479	0.16	Q V	|	|	|	|
6+50	0.0490	0.16	Q V	|	|	|	|
6+55	0.0500	0.16	Q V	|	|	|	|
7+ 0	0.0511	0.16	Q V	|	|	|	|
7+ 5	0.0522	0.16	Q V	|	|	|	|
7+10	0.0533	0.16	Q V	|	|	|	|
7+15	0.0544	0.16	Q V	|	|	|	|
7+20	0.0555	0.17	Q V	|	|	|	|

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 7+25       0.0567      0.17  Q      V  |          |          |          |
 7+30       0.0579      0.17  Q      V  |          |          |          |
 7+35       0.0591      0.18  Q      V  |          |          |          |
 7+40       0.0604      0.19  Q      V  |          |          |          |
 7+45       0.0617      0.19  Q      V  |          |          |          |
 7+50       0.0631      0.20  Q      V  |          |          |          |
 7+55       0.0645      0.20  Q      V  |          |          |          |
 8+ 0       0.0659      0.20  Q       V |          |          |          |
 8+ 5       0.0675      0.23  Q       V |          |          |          |
 8+10       0.0691      0.23  Q       V |          |          |          |
 8+15       0.0707      0.23  Q       V |          |          |          |
 8+20       0.0723      0.23  Q       V |          |          |          |
 8+25       0.0739      0.23  Q        V|          |          |          |
 8+30       0.0755      0.23  Q        V|          |          |          |
 8+35       0.0772      0.25  Q        V|          |          |          |
 8+40       0.0790      0.25  |Q       V|          |          |          |
 8+45       0.0807      0.25  |Q       V|          |          |          |
 8+50       0.0825      0.26  |Q        V          |          |          |
 8+55       0.0843      0.27  |Q        V          |          |          |
 9+ 0       0.0862      0.27  |Q        V          |          |          |
 9+ 5       0.0881      0.29  |Q        V          |          |          |
 9+10       0.0902      0.30  |Q        |V         |          |          |
 9+15       0.0922      0.30  |Q        |V         |          |          |
 9+20       0.0944      0.31  |Q        |V         |          |          |
 9+25       0.0965      0.31  |Q        |V         |          |          |
 9+30       0.0987      0.31  |Q        | V        |          |          |
 9+35       0.1009      0.32  |Q        | V        |          |          |
 9+40       0.1032      0.33  |Q        | V        |          |          |
 9+45       0.1054      0.33  |Q        |  V       |          |          |
 9+50       0.1078      0.34  |Q        |  V       |          |          |
 9+55       0.1102      0.34  |Q        |  V       |          |          |
10+ 0       0.1125      0.34  |Q        |  V       |          |          |
10+ 5       0.1144      0.27  |Q        |   V      |          |          |
10+10       0.1160      0.23  Q         |   V      |          |          |
10+15       0.1176      0.23  Q         |   V      |          |          |
10+20       0.1192      0.23  Q         |   V      |          |          |
10+25       0.1208      0.23  Q         |   V      |          |          |
10+30       0.1224      0.23  Q         |    V     |          |          |
10+35       0.1244      0.29  |Q        |    V     |          |          |
10+40       0.1266      0.31  |Q        |    V     |          |          |
10+45       0.1288      0.31  |Q        |    V     |          |          |
10+50       0.1309      0.31  |Q        |     V    |          |          |
10+55       0.1331      0.31  |Q        |     V    |          |          |
11+ 0       0.1352      0.31  |Q        |     V    |          |          |
11+ 5       0.1373      0.30  |Q        |     V    |          |          |
11+10       0.1394      0.30  |Q        |      V   |          |          |
11+15       0.1414      0.30  |Q        |      V   |          |          |
11+20       0.1434      0.30  |Q        |      V   |          |          |
11+25       0.1455      0.30  |Q        |      V   |          |          |
11+30       0.1475      0.30  |Q        |       V  |          |          |
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11+35       0.1494      0.27  |Q        |        V |          |          |
11+40       0.1513      0.27  |Q        |        V |          |          |
11+45       0.1531      0.27  |Q        |        V |          |          |
11+50       0.1550      0.28  |Q        |         V|          |          |
11+55       0.1570      0.28  |Q        |         V|          |          |
12+ 0       0.1589      0.28  |Q        |         V|          |          |
12+ 5       0.1614      0.36  |Q        |         V|          |          |
12+10       0.1641      0.39  |Q        |          V          |          |
12+15       0.1668      0.39  |Q        |          V          |          |
12+20       0.1695      0.40  |Q        |          V          |          |
12+25       0.1723      0.41  |Q        |          |V         |          |
12+30       0.1751      0.41  |Q        |          |V         |          |
12+35       0.1781      0.43  |Q        |          | V        |          |
12+40       0.1811      0.44  |Q        |          | V        |          |
12+45       0.1841      0.44  |Q        |          | V        |          |
12+50       0.1872      0.45  |Q        |          |  V       |          |
12+55       0.1904      0.45  |Q        |          |  V       |          |
13+ 0       0.1935      0.45  |Q        |          |  V       |          |
13+ 5       0.1970      0.51  | Q       |          |   V      |          |
13+10       0.2007      0.53  | Q       |          |   V      |          |
13+15       0.2043      0.53  | Q       |          |    V     |          |
13+20       0.2080      0.53  | Q       |          |    V     |          |
13+25       0.2117      0.53  | Q       |          |     V    |          |
13+30       0.2153      0.53  | Q       |          |     V    |          |
13+35       0.2181      0.41  |Q        |          |     V    |          |
13+40       0.2206      0.36  |Q        |          |      V   |          |
13+45       0.2231      0.36  |Q        |          |      V   |          |
13+50       0.2256      0.36  |Q        |          |      V   |          |
13+55       0.2281      0.36  |Q        |          |       V  |          |
14+ 0       0.2305      0.36  |Q        |          |       V  |          |
14+ 5       0.2333      0.41  |Q        |          |       V  |          |
14+10       0.2362      0.42  |Q        |          |        V |          |
14+15       0.2391      0.42  |Q        |          |        V |          |
14+20       0.2420      0.41  |Q        |          |        V |          |
14+25       0.2448      0.41  |Q        |          |         V          |
14+30       0.2476      0.41  |Q        |          |         V          |
14+35       0.2504      0.41  |Q        |          |         V          |
14+40       0.2532      0.41  |Q        |          |         |V         |
14+45       0.2560      0.41  |Q        |          |         |V         |
14+50       0.2587      0.40  |Q        |          |         | V        |
14+55       0.2614      0.39  |Q        |          |         | V        |
15+ 0       0.2641      0.39  |Q        |          |         | V        |
15+ 5       0.2667      0.38  |Q        |          |         | V        |
15+10       0.2693      0.38  |Q        |          |         |  V       |
15+15       0.2719      0.38  |Q        |          |         |  V       |
15+20       0.2744      0.36  |Q        |          |         |  V       |
15+25       0.2769      0.36  |Q        |          |         |   V      |
15+30       0.2794      0.36  |Q        |          |         |   V      |
15+35       0.2815      0.31  |Q        |          |         |   V      |
15+40       0.2836      0.30  |Q        |          |         |    V     |
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15+45       0.2856      0.30  |Q        |          |          |    V     |
15+50       0.2877      0.30  |Q        |          |          |    V     |
15+55       0.2897      0.30  |Q        |          |          |    V     |
16+ 0       0.2918      0.30  |Q        |          |          |     V    |
16+ 5       0.2927      0.13  Q         |          |          |     V    |
16+10       0.2931      0.06  Q         |          |          |     V    |
16+15       0.2935      0.06  Q         |          |          |     V    |
16+20       0.2940      0.06  Q         |          |          |     V    |
16+25       0.2944      0.06  Q         |          |          |     V    |
16+30       0.2948      0.06  Q         |          |          |     V    |
16+35       0.2952      0.05  Q         |          |          |     V    |
16+40       0.2955      0.05  Q         |          |          |     V    |
16+45       0.2958      0.05  Q         |          |          |     V    |
16+50       0.2961      0.05  Q         |          |          |     V    |
16+55       0.2965      0.05  Q         |          |          |     V    |
17+ 0       0.2968      0.05  Q         |          |          |     V    |
17+ 5       0.2973      0.07  Q         |          |          |     V    |
17+10       0.2978      0.08  Q         |          |          |     V    |
17+15       0.2983      0.08  Q         |          |          |     V    |
17+20       0.2989      0.08  Q         |          |          |     V    |
17+25       0.2994      0.08  Q         |          |          |      V   |
17+30       0.3000      0.08  Q         |          |          |      V   |
17+35       0.3005      0.08  Q         |          |          |      V   |
17+40       0.3010      0.08  Q         |          |          |      V   |
17+45       0.3016      0.08  Q         |          |          |      V   |
17+50       0.3020      0.07  Q         |          |          |      V   |
17+55       0.3025      0.06  Q         |          |          |      V   |
18+ 0       0.3029      0.06  Q         |          |          |      V   |
18+ 5       0.3033      0.06  Q         |          |          |      V   |
18+10       0.3038      0.06  Q         |          |          |      V   |
18+15       0.3042      0.06  Q         |          |          |      V   |
18+20       0.3046      0.06  Q         |          |          |      V   |
18+25       0.3051      0.06  Q         |          |          |      V   |
18+30       0.3055      0.06  Q         |          |          |      V   |
18+35       0.3058      0.05  Q         |          |          |      V   |
18+40       0.3062      0.05  Q         |          |          |      V   |
18+45       0.3065      0.05  Q         |          |          |      V   |
18+50       0.3067      0.04  Q         |          |          |      V   |
18+55       0.3070      0.03  Q         |          |          |      V   |
19+ 0       0.3072      0.03  Q         |          |          |      V   |
19+ 5       0.3075      0.04  Q         |          |          |       V  |
19+10       0.3078      0.05  Q         |          |          |       V  |
19+15       0.3081      0.05  Q         |          |          |       V  |
19+20       0.3085      0.06  Q         |          |          |       V  |
19+25       0.3089      0.06  Q         |          |          |       V  |
19+30       0.3094      0.06  Q         |          |          |       V  |
19+35       0.3097      0.05  Q         |          |          |       V  |
19+40       0.3100      0.05  Q         |          |          |       V  |
19+45       0.3104      0.05  Q         |          |          |       V  |
19+50       0.3106      0.04  Q         |          |          |       V  |
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19+55	0.3108	0.03	Q	|	|	|	V |
20+ 0	0.3110	0.03	Q	|	|	|	V |
20+ 5	0.3113	0.04	Q	|	|	|	V |
20+10	0.3117	0.05	Q	|	|	|	V |
20+15	0.3120	0.05	Q	|	|	|	V |
20+20	0.3123	0.05	Q	|	|	|	V |
20+25	0.3126	0.05	Q	|	|	|	V |
20+30	0.3130	0.05	Q	|	|	|	V |
20+35	0.3133	0.05	Q	|	|	|	V |
20+40	0.3136	0.05	Q	|	|	|	V |
20+45	0.3139	0.05	Q	|	|	|	V |
20+50	0.3142	0.04	Q	|	|	|	V |
20+55	0.3144	0.03	Q	|	|	|	V |
21+ 0	0.3146	0.03	Q	|	|	|	V |
21+ 5	0.3149	0.04	Q	|	|	|	V |
21+10	0.3152	0.05	Q	|	|	|	V |
21+15	0.3155	0.05	Q	|	|	|	V|
21+20	0.3158	0.04	Q	|	|	|	V|
21+25	0.3160	0.03	Q	|	|	|	V|
21+30	0.3162	0.03	Q	|	|	|	V|
21+35	0.3165	0.04	Q	|	|	|	V|
21+40	0.3168	0.05	Q	|	|	|	V|
21+45	0.3172	0.05	Q	|	|	|	V|
21+50	0.3174	0.04	Q	|	|	|	V|
21+55	0.3176	0.03	Q	|	|	|	V|
22+ 0	0.3178	0.03	Q	|	|	|	V|
22+ 5	0.3181	0.04	Q	|	|	|	V|
22+10	0.3185	0.05	Q	|	|	|	V|
22+15	0.3188	0.05	Q	|	|	|	V|
22+20	0.3190	0.04	Q	|	|	|	V|
22+25	0.3192	0.03	Q	|	|	|	V|
22+30	0.3195	0.03	Q	|	|	|	V|
22+35	0.3197	0.03	Q	|	|	|	V|
22+40	0.3199	0.03	Q	|	|	|	V|
22+45	0.3201	0.03	Q	|	|	|	V|
22+50	0.3203	0.03	Q	|	|	|	V|
22+55	0.3205	0.03	Q	|	|	|	V|
23+ 0	0.3207	0.03	Q	|	|	|	V|
23+ 5	0.3210	0.03	Q	|	|	|	V|
23+10	0.3212	0.03	Q	|	|	|	V|
23+15	0.3214	0.03	Q	|	|	|	V|
23+20	0.3216	0.03	Q	|	|	|	V|
23+25	0.3218	0.03	Q	|	|	|	V|
23+30	0.3220	0.03	Q	|	|	|	V|
23+35	0.3223	0.03	Q	|	|	|	V|
23+40	0.3225	0.03	Q	|	|	|	V|
23+45	0.3227	0.03	Q	|	|	|	V|
23+50	0.3229	0.03	Q	|	|	|	V|
23+55	0.3231	0.03	Q	|	|	|	V|
24+ 0	0.3233	0.03	Q	|	|	|	V|

```
   24+ 5       0.3234      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 05/10/24 File: ONSITEPOSTW1110.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            0.50                  2.45

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            1.30                  6.37

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
-----------------------------------------------------------------
```

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	3.30	0.328	(0.249)	0.198	0.130
2	0.17	4.20	0.418	0.249	(0.252)	0.169
3	0.25	4.40	0.438	0.249	(0.264)	0.189
4	0.33	4.80	0.478	0.249	(0.288)	0.229
5	0.42	5.20	0.517	0.249	(0.312)	0.269
6	0.50	6.20	0.617	0.249	(0.373)	0.368
7	0.58	6.80	0.677	0.249	(0.409)	0.428
8	0.67	8.80	0.876	0.249	(0.529)	0.627
9	0.75	13.90	1.383	0.249	(0.835)	1.134
10	0.83	31.40	3.124	0.249	(1.887)	2.875
11	0.92	7.20	0.716	0.249	(0.433)	0.468
12	1.00	3.80	0.378	(0.249)	0.228	0.150
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	7.0

Flood volume = Effective rainfall 0.59(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.24(In)
Total soil loss = 0.099(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 10428.9 Cubic Feet
Total soil loss = 4318.1 Cubic Feet

Peak flow rate of this hydrograph = 11.810(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	0.0032	0.46	Q				
0+10	0.0086	0.78	|Q				
0+15	0.0148	0.91	|QV				
0+20	0.0222	1.08		QV				
0+25	0.0310	1.27		Q V				
0+30	0.0426	1.68		Q V				
0+35	0.0566	2.03		Q V|			
0+40	0.0760	2.82		Q	V			
0+45	0.1098	4.91		Q| V			
0+50	0.1911	11.81				Q |V	
0+55	0.2299	5.62		|Q			V	
1+ 0	0.2380	1.18		Q				V|

```
    1+ 5       0.2394      0.21  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 05/10/24 File: ONSITEPOSTW1310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            0.80                    3.92

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.00                    9.80

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.202	(0.249)	0.122	0.080
2	0.17	1.30	0.202	(0.249)	0.122	0.080
3	0.25	1.10	0.171	(0.249)	0.103	0.068
4	0.33	1.50	0.233	(0.249)	0.141	0.092
5	0.42	1.50	0.233	(0.249)	0.141	0.092
6	0.50	1.80	0.279	(0.249)	0.169	0.111
7	0.58	1.50	0.233	(0.249)	0.141	0.092
8	0.67	1.80	0.279	(0.249)	0.169	0.111
9	0.75	1.80	0.279	(0.249)	0.169	0.111
10	0.83	1.50	0.233	(0.249)	0.141	0.092
11	0.92	1.60	0.248	(0.249)	0.150	0.098
12	1.00	1.80	0.279	(0.249)	0.169	0.111
13	1.08	2.20	0.342	(0.249)	0.206	0.135
14	1.17	2.20	0.342	(0.249)	0.206	0.135
15	1.25	2.20	0.342	(0.249)	0.206	0.135
16	1.33	2.00	0.310	(0.249)	0.188	0.123
17	1.42	2.60	0.404	(0.249)	0.244	0.160
18	1.50	2.70	0.419	0.249	(0.253)	0.170
19	1.58	2.40	0.373	(0.249)	0.225	0.148
20	1.67	2.70	0.419	0.249	(0.253)	0.170
21	1.75	3.30	0.512	0.249	(0.309)	0.264
22	1.83	3.10	0.481	0.249	(0.291)	0.233
23	1.92	2.90	0.450	0.249	(0.272)	0.202
24	2.00	3.00	0.466	0.249	(0.281)	0.217
25	2.08	3.10	0.481	0.249	(0.291)	0.233
26	2.17	4.20	0.652	0.249	(0.394)	0.403
27	2.25	5.00	0.776	0.249	(0.469)	0.528
28	2.33	3.50	0.543	0.249	(0.328)	0.295
29	2.42	6.80	1.056	0.249	(0.638)	0.807
30	2.50	7.30	1.133	0.249	(0.684)	0.885
31	2.58	8.20	1.273	0.249	(0.769)	1.024
32	2.67	5.90	0.916	0.249	(0.553)	0.667
33	2.75	2.00	0.310	(0.249)	0.188	0.123
34	2.83	1.80	0.279	(0.249)	0.169	0.111
35	2.92	1.80	0.279	(0.249)	0.169	0.111
36	3.00	0.60	0.093	(0.249)	0.056	0.037
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.5

Flood volume = Effective rainfall 0.70(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.59(In)
Total soil loss = 0.241(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 12527.3 Cubic Feet
Total soil loss = 10483.1 Cubic Feet

Peak flow rate of this hydrograph = 4.869(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	0.0020	0.28	VQ				
0+10	0.0047	0.39	VQ				
0+15	0.0071	0.35	VQ				
0+20	0.0100	0.42	|Q				
0+25	0.0131	0.46	|Q				
0+30	0.0167	0.52	| Q				
0+35	0.0200	0.48	|QV				
0+40	0.0236	0.52	| QV				
0+45	0.0274	0.55	| QV				
0+50	0.0307	0.48	|Q V				
0+55	0.0340	0.48	|Q V				
1+ 0	0.0377	0.53	| Q V				
1+ 5	0.0420	0.63	| Q V				
1+10	0.0466	0.67	| Q V				
1+15	0.0512	0.67	| Q V				
1+20	0.0555	0.62	| Q V				
1+25	0.0606	0.74	| Q V				
1+30	0.0663	0.83	| Q V|				
1+35	0.0716	0.76	| Q V|				
1+40	0.0771	0.81	| Q V				
1+45	0.0852	1.17	| Q |V				
1+50	0.0934	1.19	| Q | V				
1+55	0.1006	1.04	| Q | V				
2+ 0	0.1078	1.05	| Q | V				
2+ 5	0.1156	1.13	| Q | V				
2+10	0.1277	1.76	| Q | V				
2+15	0.1445	2.44	| Q| V				
2+20	0.1567	1.78	| Q | |V				
2+25	0.1793	3.28	| | Q | V				
2+30	0.2087	4.26	| | Q | V|				
2+35	0.2422	4.87	| | Q| | V				
2+40	0.2683	3.79	| | Q | | V				
2+45	0.2776	1.36	| Q | | V				
2+50	0.2815	0.56	| Q | | V|				
2+55	0.2853	0.55	| Q | | V|				
3+ 0	0.2872	0.28	|Q | | V|				
3+ 5	0.2876	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 05/10/24 File: ONSITEPOSTW1610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            1.20                  5.88

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.80                 13.72

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

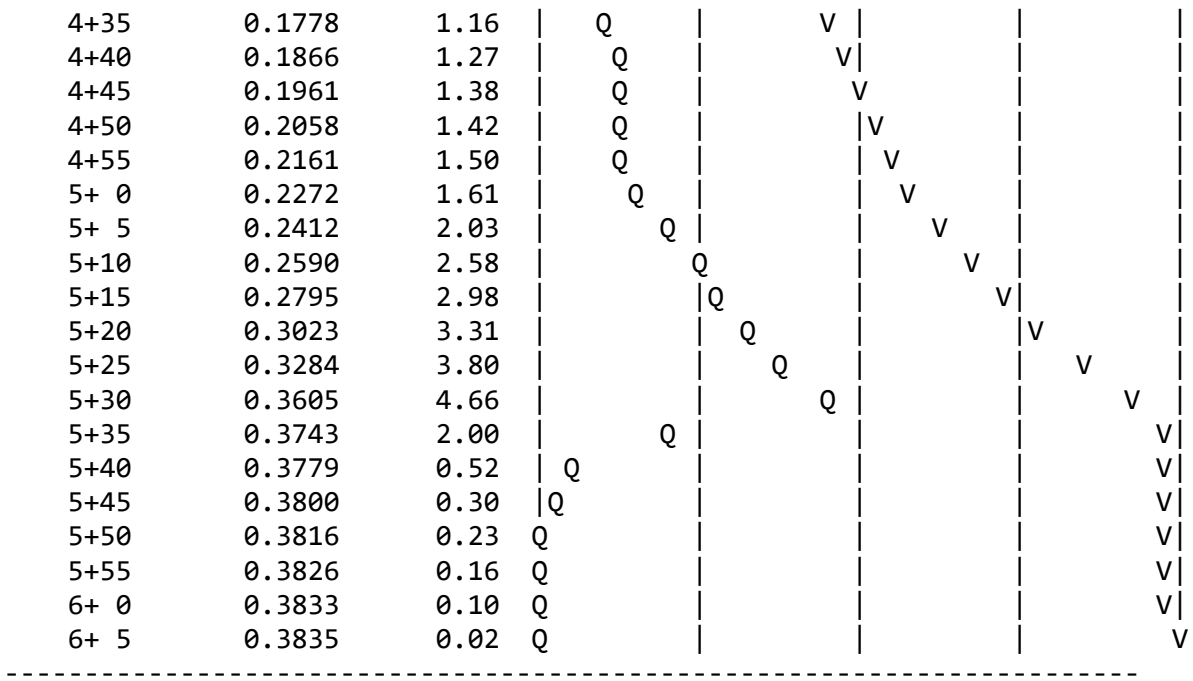
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.249)	0.067	0.044
2	0.17	0.60	0.134	(0.249)	0.081	0.053
3	0.25	0.60	0.134	(0.249)	0.081	0.053
4	0.33	0.60	0.134	(0.249)	0.081	0.053
5	0.42	0.60	0.134	(0.249)	0.081	0.053
6	0.50	0.70	0.156	(0.249)	0.094	0.062
7	0.58	0.70	0.156	(0.249)	0.094	0.062
8	0.67	0.70	0.156	(0.249)	0.094	0.062
9	0.75	0.70	0.156	(0.249)	0.094	0.062
10	0.83	0.70	0.156	(0.249)	0.094	0.062
11	0.92	0.70	0.156	(0.249)	0.094	0.062
12	1.00	0.80	0.178	(0.249)	0.108	0.071
13	1.08	0.80	0.178	(0.249)	0.108	0.071
14	1.17	0.80	0.178	(0.249)	0.108	0.071
15	1.25	0.80	0.178	(0.249)	0.108	0.071
16	1.33	0.80	0.178	(0.249)	0.108	0.071
17	1.42	0.80	0.178	(0.249)	0.108	0.071
18	1.50	0.80	0.178	(0.249)	0.108	0.071
19	1.58	0.80	0.178	(0.249)	0.108	0.071
20	1.67	0.80	0.178	(0.249)	0.108	0.071
21	1.75	0.80	0.178	(0.249)	0.108	0.071
22	1.83	0.80	0.178	(0.249)	0.108	0.071
23	1.92	0.80	0.178	(0.249)	0.108	0.071
24	2.00	0.90	0.201	(0.249)	0.121	0.079
25	2.08	0.80	0.178	(0.249)	0.108	0.071
26	2.17	0.90	0.201	(0.249)	0.121	0.079
27	2.25	0.90	0.201	(0.249)	0.121	0.079
28	2.33	0.90	0.201	(0.249)	0.121	0.079
29	2.42	0.90	0.201	(0.249)	0.121	0.079
30	2.50	0.90	0.201	(0.249)	0.121	0.079
31	2.58	0.90	0.201	(0.249)	0.121	0.079
32	2.67	0.90	0.201	(0.249)	0.121	0.079
33	2.75	1.00	0.223	(0.249)	0.135	0.088
34	2.83	1.00	0.223	(0.249)	0.135	0.088
35	2.92	1.00	0.223	(0.249)	0.135	0.088
36	3.00	1.00	0.223	(0.249)	0.135	0.088
37	3.08	1.00	0.223	(0.249)	0.135	0.088
38	3.17	1.10	0.245	(0.249)	0.148	0.097
39	3.25	1.10	0.245	(0.249)	0.148	0.097
40	3.33	1.10	0.245	(0.249)	0.148	0.097
41	3.42	1.20	0.268	(0.249)	0.162	0.106
42	3.50	1.30	0.290	(0.249)	0.175	0.115
43	3.58	1.40	0.312	(0.249)	0.189	0.124
44	3.67	1.40	0.312	(0.249)	0.189	0.124
45	3.75	1.50	0.334	(0.249)	0.202	0.132
46	3.83	1.50	0.334	(0.249)	0.202	0.132
47	3.92	1.60	0.357	(0.249)	0.215	0.141

```
48   4.00     1.60      0.357       (  0.249)       0.215        0.141
49   4.08     1.70      0.379       (  0.249)       0.229        0.150
50   4.17     1.80      0.401       (  0.249)       0.242        0.159
51   4.25     1.90      0.424          0.249    (  0.256)        0.175
52   4.33     2.00      0.446          0.249    (  0.269)        0.197
53   4.42     2.10      0.468          0.249    (  0.283)        0.220
54   4.50     2.10      0.468          0.249    (  0.283)        0.220
55   4.58     2.20      0.491          0.249    (  0.296)        0.242
56   4.67     2.30      0.513          0.249    (  0.310)        0.264
57   4.75     2.40      0.535          0.249    (  0.323)        0.287
58   4.83     2.40      0.535          0.249    (  0.323)        0.287
59   4.92     2.50      0.557          0.249    (  0.337)        0.309
60   5.00     2.60      0.580          0.249    (  0.350)        0.331
61   5.08     3.10      0.691          0.249    (  0.418)        0.443
62   5.17     3.60      0.803          0.249    (  0.485)        0.554
63   5.25     3.90      0.870          0.249    (  0.525)        0.621
64   5.33     4.20      0.937          0.249    (  0.566)        0.688
65   5.42     4.70      1.048          0.249    (  0.633)        0.799
66   5.50     5.60      1.249          0.249    (  0.754)        1.000
67   5.58     1.90      0.424          0.249    (  0.256)        0.175
68   5.67     0.90      0.201       (  0.249)       0.121        0.079
69   5.75     0.60      0.134       (  0.249)       0.081        0.053
70   5.83     0.50      0.111       (  0.249)       0.067        0.044
71   5.92     0.30      0.067       (  0.249)       0.040        0.026
72   6.00     0.20      0.045       (  0.249)       0.027        0.018
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    11.3
      Flood volume = Effective rainfall      0.94(In)
       times area       4.9(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
      Total soil loss =      0.92(In)
      Total soil loss =     0.375(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =       16704.9 Cubic Feet
      Total soil loss =       16347.3 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      4.665(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       0.0011      0.16  Q         |         |         |         |
  0+10       0.0028      0.25  Q         |         |         |         |
  0+15       0.0046      0.26  VQ        |         |         |         |
  0+20       0.0064      0.26  VQ        |         |         |         |
```

```
0+25       0.0082      0.26  VQ        |         |         |         |
0+30       0.0102      0.29  |Q        |         |         |         |
0+35       0.0123      0.31  |Q        |         |         |         |
0+40       0.0144      0.31  |Q        |         |         |         |
0+45       0.0165      0.31  |Q        |         |         |         |
0+50       0.0186      0.31  |Q        |         |         |         |
0+55       0.0207      0.31  |QV       |         |         |         |
1+ 0       0.0231      0.34  |QV       |         |         |         |
1+ 5       0.0255      0.35  |QV       |         |         |         |
1+10       0.0279      0.35  |QV       |         |         |         |
1+15       0.0303      0.35  |Q V      |         |         |         |
1+20       0.0327      0.35  |Q V      |         |         |         |
1+25       0.0351      0.35  |Q V      |         |         |         |
1+30       0.0375      0.35  |Q V      |         |         |         |
1+35       0.0399      0.35  |Q  V     |         |         |         |
1+40       0.0423      0.35  |Q  V     |         |         |         |
1+45       0.0447      0.35  |Q  V     |         |         |         |
1+50       0.0471      0.35  |Q  V     |         |         |         |
1+55       0.0495      0.35  |Q   V    |         |         |         |
2+ 0       0.0521      0.38  |Q   V    |         |         |         |
2+ 5       0.0546      0.36  |Q   V    |         |         |         |
2+10       0.0572      0.38  |Q   V    |         |         |         |
2+15       0.0599      0.39  |Q    V   |         |         |         |
2+20       0.0626      0.39  |Q    V   |         |         |         |
2+25       0.0654      0.39  |Q    V   |         |         |         |
2+30       0.0681      0.39  |Q     V  |         |         |         |
2+35       0.0708      0.39  |Q     V  |         |         |         |
2+40       0.0735      0.39  |Q     V  |         |         |         |
2+45       0.0764      0.42  |Q     V  |         |         |         |
2+50       0.0794      0.44  |Q      V |         |         |         |
2+55       0.0824      0.44  |Q      V |         |         |         |
3+ 0       0.0854      0.44  |Q      V |         |         |         |
3+ 5       0.0884      0.44  |Q       V|         |         |         |
3+10       0.0916      0.47  |Q       V|         |         |         |
3+15       0.0949      0.48  |Q       V|         |         |         |
3+20       0.0982      0.48  |Q        V         |         |         |
3+25       0.1018      0.51  | Q       V         |         |         |
3+30       0.1056      0.56  | Q       |V        |         |         |
3+35       0.1097      0.60  | Q       |V        |         |         |
3+40       0.1139      0.61  | Q       |V        |         |         |
3+45       0.1183      0.64  | Q       | V       |         |         |
3+50       0.1228      0.65  | Q       | V       |         |         |
3+55       0.1276      0.69  | Q       |  V      |         |         |
4+ 0       0.1324      0.70  | Q       |  V      |         |         |
4+ 5       0.1374      0.73  | Q       |   V     |         |         |
4+10       0.1427      0.77  |  Q      |   V     |         |         |
4+15       0.1485      0.84  |  Q      |    V    |         |         |
4+20       0.1550      0.94  |  Q      |     V   |         |         |
4+25       0.1623      1.05  |   Q     |     V   |         |         |
4+30       0.1698      1.09  |   Q     |      V  |         |         |
```


4+35 0.1778 1.16
4+40 0.1866 1.27
4+45 0.1961 1.38
4+50 0.2058 1.42
4+55 0.2161 1.50
5+ 0 0.2272 1.61
5+ 5 0.2412 2.03
5+10 0.2590 2.58
5+15 0.2795 2.98
5+20 0.3023 3.31
5+25 0.3284 3.80
5+30 0.3605 4.66
5+35 0.3743 2.00
5+40 0.3779 0.52
5+45 0.3800 0.30
5+50 0.3816 0.23
5+55 0.3826 0.16
6+ 0 0.3833 0.10
6+ 5 0.3835 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 05/10/24 File: ONSITEPOSTW12410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	(0.441)	0.016	0.011
2	0.17	0.07	0.027	(0.439)	0.016	0.011
3	0.25	0.07	0.027	(0.437)	0.016	0.011
4	0.33	0.10	0.041	(0.436)	0.025	0.016
5	0.42	0.10	0.041	(0.434)	0.025	0.016
6	0.50	0.10	0.041	(0.432)	0.025	0.016
7	0.58	0.10	0.041	(0.431)	0.025	0.016
8	0.67	0.10	0.041	(0.429)	0.025	0.016
9	0.75	0.10	0.041	(0.427)	0.025	0.016
10	0.83	0.13	0.054	(0.426)	0.033	0.022
11	0.92	0.13	0.054	(0.424)	0.033	0.022
12	1.00	0.13	0.054	(0.422)	0.033	0.022
13	1.08	0.10	0.041	(0.421)	0.025	0.016
14	1.17	0.10	0.041	(0.419)	0.025	0.016
15	1.25	0.10	0.041	(0.417)	0.025	0.016
16	1.33	0.10	0.041	(0.416)	0.025	0.016
17	1.42	0.10	0.041	(0.414)	0.025	0.016
18	1.50	0.10	0.041	(0.412)	0.025	0.016
19	1.58	0.10	0.041	(0.411)	0.025	0.016
20	1.67	0.10	0.041	(0.409)	0.025	0.016
21	1.75	0.10	0.041	(0.407)	0.025	0.016
22	1.83	0.13	0.054	(0.406)	0.033	0.022
23	1.92	0.13	0.054	(0.404)	0.033	0.022
24	2.00	0.13	0.054	(0.402)	0.033	0.022
25	2.08	0.13	0.054	(0.401)	0.033	0.022
26	2.17	0.13	0.054	(0.399)	0.033	0.022
27	2.25	0.13	0.054	(0.398)	0.033	0.022
28	2.33	0.13	0.054	(0.396)	0.033	0.022
29	2.42	0.13	0.054	(0.394)	0.033	0.022
30	2.50	0.13	0.054	(0.393)	0.033	0.022
31	2.58	0.17	0.068	(0.391)	0.041	0.027
32	2.67	0.17	0.068	(0.390)	0.041	0.027
33	2.75	0.17	0.068	(0.388)	0.041	0.027
34	2.83	0.17	0.068	(0.386)	0.041	0.027
35	2.92	0.17	0.068	(0.385)	0.041	0.027
36	3.00	0.17	0.068	(0.383)	0.041	0.027
37	3.08	0.17	0.068	(0.382)	0.041	0.027
38	3.17	0.17	0.068	(0.380)	0.041	0.027
39	3.25	0.17	0.068	(0.378)	0.041	0.027
40	3.33	0.17	0.068	(0.377)	0.041	0.027
41	3.42	0.17	0.068	(0.375)	0.041	0.027
42	3.50	0.17	0.068	(0.374)	0.041	0.027
43	3.58	0.17	0.068	(0.372)	0.041	0.027
44	3.67	0.17	0.068	(0.371)	0.041	0.027
45	3.75	0.17	0.068	(0.369)	0.041	0.027
46	3.83	0.20	0.082	(0.367)	0.049	0.032
47	3.92	0.20	0.082	(0.366)	0.049	0.032

48	4.00	0.20	0.082	(0.364)	0.049	0.032
49	4.08	0.20	0.082	(0.363)	0.049	0.032
50	4.17	0.20	0.082	(0.361)	0.049	0.032
51	4.25	0.20	0.082	(0.360)	0.049	0.032
52	4.33	0.23	0.095	(0.358)	0.057	0.038
53	4.42	0.23	0.095	(0.357)	0.057	0.038
54	4.50	0.23	0.095	(0.355)	0.057	0.038
55	4.58	0.23	0.095	(0.354)	0.057	0.038
56	4.67	0.23	0.095	(0.352)	0.057	0.038
57	4.75	0.23	0.095	(0.351)	0.057	0.038
58	4.83	0.27	0.109	(0.349)	0.066	0.043
59	4.92	0.27	0.109	(0.348)	0.066	0.043
60	5.00	0.27	0.109	(0.346)	0.066	0.043
61	5.08	0.20	0.082	(0.345)	0.049	0.032
62	5.17	0.20	0.082	(0.343)	0.049	0.032
63	5.25	0.20	0.082	(0.342)	0.049	0.032
64	5.33	0.23	0.095	(0.340)	0.057	0.038
65	5.42	0.23	0.095	(0.339)	0.057	0.038
66	5.50	0.23	0.095	(0.337)	0.057	0.038
67	5.58	0.27	0.109	(0.336)	0.066	0.043
68	5.67	0.27	0.109	(0.334)	0.066	0.043
69	5.75	0.27	0.109	(0.333)	0.066	0.043
70	5.83	0.27	0.109	(0.331)	0.066	0.043
71	5.92	0.27	0.109	(0.330)	0.066	0.043
72	6.00	0.27	0.109	(0.328)	0.066	0.043
73	6.08	0.30	0.122	(0.327)	0.074	0.048
74	6.17	0.30	0.122	(0.325)	0.074	0.048
75	6.25	0.30	0.122	(0.324)	0.074	0.048
76	6.33	0.30	0.122	(0.322)	0.074	0.048
77	6.42	0.30	0.122	(0.321)	0.074	0.048
78	6.50	0.30	0.122	(0.320)	0.074	0.048
79	6.58	0.33	0.136	(0.318)	0.082	0.054
80	6.67	0.33	0.136	(0.317)	0.082	0.054
81	6.75	0.33	0.136	(0.315)	0.082	0.054
82	6.83	0.33	0.136	(0.314)	0.082	0.054
83	6.92	0.33	0.136	(0.312)	0.082	0.054
84	7.00	0.33	0.136	(0.311)	0.082	0.054
85	7.08	0.33	0.136	(0.310)	0.082	0.054
86	7.17	0.33	0.136	(0.308)	0.082	0.054
87	7.25	0.33	0.136	(0.307)	0.082	0.054
88	7.33	0.37	0.150	(0.305)	0.090	0.059
89	7.42	0.37	0.150	(0.304)	0.090	0.059
90	7.50	0.37	0.150	(0.303)	0.090	0.059
91	7.58	0.40	0.163	(0.301)	0.099	0.065
92	7.67	0.40	0.163	(0.300)	0.099	0.065
93	7.75	0.40	0.163	(0.298)	0.099	0.065
94	7.83	0.43	0.177	(0.297)	0.107	0.070
95	7.92	0.43	0.177	(0.296)	0.107	0.070
96	8.00	0.43	0.177	(0.294)	0.107	0.070
97	8.08	0.50	0.204	(0.293)	0.123	0.081

98	8.17	0.50	0.204	(0.292)	0.123	0.081
99	8.25	0.50	0.204	(0.290)	0.123	0.081
100	8.33	0.50	0.204	(0.289)	0.123	0.081
101	8.42	0.50	0.204	(0.287)	0.123	0.081
102	8.50	0.50	0.204	(0.286)	0.123	0.081
103	8.58	0.53	0.218	(0.285)	0.131	0.086
104	8.67	0.53	0.218	(0.283)	0.131	0.086
105	8.75	0.53	0.218	(0.282)	0.131	0.086
106	8.83	0.57	0.231	(0.281)	0.140	0.092
107	8.92	0.57	0.231	(0.279)	0.140	0.092
108	9.00	0.57	0.231	(0.278)	0.140	0.092
109	9.08	0.63	0.258	(0.277)	0.156	0.102
110	9.17	0.63	0.258	(0.276)	0.156	0.102
111	9.25	0.63	0.258	(0.274)	0.156	0.102
112	9.33	0.67	0.272	(0.273)	0.164	0.108
113	9.42	0.67	0.272	(0.272)	0.164	0.108
114	9.50	0.67	0.272	(0.270)	0.164	0.108
115	9.58	0.70	0.285	(0.269)	0.172	0.113
116	9.67	0.70	0.285	(0.268)	0.172	0.113
117	9.75	0.70	0.285	(0.266)	0.172	0.113
118	9.83	0.73	0.299	(0.265)	0.181	0.118
119	9.92	0.73	0.299	(0.264)	0.181	0.118
120	10.00	0.73	0.299	(0.263)	0.181	0.118
121	10.08	0.50	0.204	(0.261)	0.123	0.081
122	10.17	0.50	0.204	(0.260)	0.123	0.081
123	10.25	0.50	0.204	(0.259)	0.123	0.081
124	10.33	0.50	0.204	(0.258)	0.123	0.081
125	10.42	0.50	0.204	(0.256)	0.123	0.081
126	10.50	0.50	0.204	(0.255)	0.123	0.081
127	10.58	0.67	0.272	(0.254)	0.164	0.108
128	10.67	0.67	0.272	(0.253)	0.164	0.108
129	10.75	0.67	0.272	(0.251)	0.164	0.108
130	10.83	0.67	0.272	(0.250)	0.164	0.108
131	10.92	0.67	0.272	(0.249)	0.164	0.108
132	11.00	0.67	0.272	(0.248)	0.164	0.108
133	11.08	0.63	0.258	(0.246)	0.156	0.102
134	11.17	0.63	0.258	(0.245)	0.156	0.102
135	11.25	0.63	0.258	(0.244)	0.156	0.102
136	11.33	0.63	0.258	(0.243)	0.156	0.102
137	11.42	0.63	0.258	(0.242)	0.156	0.102
138	11.50	0.63	0.258	(0.240)	0.156	0.102
139	11.58	0.57	0.231	(0.239)	0.140	0.092
140	11.67	0.57	0.231	(0.238)	0.140	0.092
141	11.75	0.57	0.231	(0.237)	0.140	0.092
142	11.83	0.60	0.245	(0.236)	0.148	0.097
143	11.92	0.60	0.245	(0.234)	0.148	0.097
144	12.00	0.60	0.245	(0.233)	0.148	0.097
145	12.08	0.83	0.340	(0.232)	0.205	0.135
146	12.17	0.83	0.340	(0.231)	0.205	0.135
147	12.25	0.83	0.340	(0.230)	0.205	0.135

148	12.33	0.87	0.353	(	0.229)	0.213		0.140
149	12.42	0.87	0.353	(	0.227)	0.213		0.140
150	12.50	0.87	0.353	(	0.226)	0.213		0.140
151	12.58	0.93	0.381		0.225	(0.230)		0.155
152	12.67	0.93	0.381		0.224	(0.230)		0.157
153	12.75	0.93	0.381		0.223	(0.230)		0.158
154	12.83	0.97	0.394		0.222	(0.238)		0.172
155	12.92	0.97	0.394		0.221	(0.238)		0.174
156	13.00	0.97	0.394		0.220	(0.238)		0.175
157	13.08	1.13	0.462		0.218	(0.279)		0.244
158	13.17	1.13	0.462		0.217	(0.279)		0.245
159	13.25	1.13	0.462		0.216	(0.279)		0.246
160	13.33	1.13	0.462		0.215	(0.279)		0.247
161	13.42	1.13	0.462		0.214	(0.279)		0.248
162	13.50	1.13	0.462		0.213	(0.279)		0.249
163	13.58	0.77	0.313	(	0.212)	0.189		0.124
164	13.67	0.77	0.313	(	0.211)	0.189		0.124
165	13.75	0.77	0.313	(	0.210)	0.189		0.124
166	13.83	0.77	0.313	(	0.209)	0.189		0.124
167	13.92	0.77	0.313	(	0.208)	0.189		0.124
168	14.00	0.77	0.313	(	0.207)	0.189		0.124
169	14.08	0.90	0.367		0.205	(0.222)		0.162
170	14.17	0.90	0.367		0.204	(0.222)		0.163
171	14.25	0.90	0.367		0.203	(0.222)		0.164
172	14.33	0.87	0.353		0.202	(0.213)		0.151
173	14.42	0.87	0.353		0.201	(0.213)		0.152
174	14.50	0.87	0.353		0.200	(0.213)		0.153
175	14.58	0.87	0.353		0.199	(0.213)		0.154
176	14.67	0.87	0.353		0.198	(0.213)		0.155
177	14.75	0.87	0.353		0.197	(0.213)		0.156
178	14.83	0.83	0.340		0.196	(0.205)		0.144
179	14.92	0.83	0.340		0.195	(0.205)		0.145
180	15.00	0.83	0.340		0.194	(0.205)		0.146
181	15.08	0.80	0.326		0.193	(0.197)		0.133
182	15.17	0.80	0.326		0.192	(0.197)		0.134
183	15.25	0.80	0.326		0.191	(0.197)		0.135
184	15.33	0.77	0.313	(	0.190)	0.189		0.124
185	15.42	0.77	0.313	(	0.189)	0.189		0.124
186	15.50	0.77	0.313		0.188	(0.189)		0.124
187	15.58	0.63	0.258	(	0.187)	0.156		0.102
188	15.67	0.63	0.258	(	0.186)	0.156		0.102
189	15.75	0.63	0.258	(	0.185)	0.156		0.102
190	15.83	0.63	0.258	(	0.184)	0.156		0.102
191	15.92	0.63	0.258	(	0.184)	0.156		0.102
192	16.00	0.63	0.258	(	0.183)	0.156		0.102
193	16.08	0.13	0.054	(	0.182)	0.033		0.022
194	16.17	0.13	0.054	(	0.181)	0.033		0.022
195	16.25	0.13	0.054	(	0.180)	0.033		0.022
196	16.33	0.13	0.054	(	0.179)	0.033		0.022
197	16.42	0.13	0.054	(	0.178)	0.033		0.022

198	16.50	0.13	0.054	(0.177)	0.033	0.022
199	16.58	0.10	0.041	(0.176)	0.025	0.016
200	16.67	0.10	0.041	(0.175)	0.025	0.016
201	16.75	0.10	0.041	(0.174)	0.025	0.016
202	16.83	0.10	0.041	(0.174)	0.025	0.016
203	16.92	0.10	0.041	(0.173)	0.025	0.016
204	17.00	0.10	0.041	(0.172)	0.025	0.016
205	17.08	0.17	0.068	(0.171)	0.041	0.027
206	17.17	0.17	0.068	(0.170)	0.041	0.027
207	17.25	0.17	0.068	(0.169)	0.041	0.027
208	17.33	0.17	0.068	(0.168)	0.041	0.027
209	17.42	0.17	0.068	(0.167)	0.041	0.027
210	17.50	0.17	0.068	(0.167)	0.041	0.027
211	17.58	0.17	0.068	(0.166)	0.041	0.027
212	17.67	0.17	0.068	(0.165)	0.041	0.027
213	17.75	0.17	0.068	(0.164)	0.041	0.027
214	17.83	0.13	0.054	(0.163)	0.033	0.022
215	17.92	0.13	0.054	(0.163)	0.033	0.022
216	18.00	0.13	0.054	(0.162)	0.033	0.022
217	18.08	0.13	0.054	(0.161)	0.033	0.022
218	18.17	0.13	0.054	(0.160)	0.033	0.022
219	18.25	0.13	0.054	(0.159)	0.033	0.022
220	18.33	0.13	0.054	(0.159)	0.033	0.022
221	18.42	0.13	0.054	(0.158)	0.033	0.022
222	18.50	0.13	0.054	(0.157)	0.033	0.022
223	18.58	0.10	0.041	(0.156)	0.025	0.016
224	18.67	0.10	0.041	(0.156)	0.025	0.016
225	18.75	0.10	0.041	(0.155)	0.025	0.016
226	18.83	0.07	0.027	(0.154)	0.016	0.011
227	18.92	0.07	0.027	(0.153)	0.016	0.011
228	19.00	0.07	0.027	(0.153)	0.016	0.011
229	19.08	0.10	0.041	(0.152)	0.025	0.016
230	19.17	0.10	0.041	(0.151)	0.025	0.016
231	19.25	0.10	0.041	(0.150)	0.025	0.016
232	19.33	0.13	0.054	(0.150)	0.033	0.022
233	19.42	0.13	0.054	(0.149)	0.033	0.022
234	19.50	0.13	0.054	(0.148)	0.033	0.022
235	19.58	0.10	0.041	(0.148)	0.025	0.016
236	19.67	0.10	0.041	(0.147)	0.025	0.016
237	19.75	0.10	0.041	(0.146)	0.025	0.016
238	19.83	0.07	0.027	(0.146)	0.016	0.011
239	19.92	0.07	0.027	(0.145)	0.016	0.011
240	20.00	0.07	0.027	(0.144)	0.016	0.011
241	20.08	0.10	0.041	(0.144)	0.025	0.016
242	20.17	0.10	0.041	(0.143)	0.025	0.016
243	20.25	0.10	0.041	(0.142)	0.025	0.016
244	20.33	0.10	0.041	(0.142)	0.025	0.016
245	20.42	0.10	0.041	(0.141)	0.025	0.016
246	20.50	0.10	0.041	(0.141)	0.025	0.016
247	20.58	0.10	0.041	(0.140)	0.025	0.016

248	20.67	0.10	0.041	(0.139)	0.025	0.016
249	20.75	0.10	0.041	(0.139)	0.025	0.016
250	20.83	0.07	0.027	(0.138)	0.016	0.011
251	20.92	0.07	0.027	(0.138)	0.016	0.011
252	21.00	0.07	0.027	(0.137)	0.016	0.011
253	21.08	0.10	0.041	(0.137)	0.025	0.016
254	21.17	0.10	0.041	(0.136)	0.025	0.016
255	21.25	0.10	0.041	(0.136)	0.025	0.016
256	21.33	0.07	0.027	(0.135)	0.016	0.011
257	21.42	0.07	0.027	(0.135)	0.016	0.011
258	21.50	0.07	0.027	(0.134)	0.016	0.011
259	21.58	0.10	0.041	(0.134)	0.025	0.016
260	21.67	0.10	0.041	(0.133)	0.025	0.016
261	21.75	0.10	0.041	(0.133)	0.025	0.016
262	21.83	0.07	0.027	(0.132)	0.016	0.011
263	21.92	0.07	0.027	(0.132)	0.016	0.011
264	22.00	0.07	0.027	(0.131)	0.016	0.011
265	22.08	0.10	0.041	(0.131)	0.025	0.016
266	22.17	0.10	0.041	(0.130)	0.025	0.016
267	22.25	0.10	0.041	(0.130)	0.025	0.016
268	22.33	0.07	0.027	(0.130)	0.016	0.011
269	22.42	0.07	0.027	(0.129)	0.016	0.011
270	22.50	0.07	0.027	(0.129)	0.016	0.011
271	22.58	0.07	0.027	(0.128)	0.016	0.011
272	22.67	0.07	0.027	(0.128)	0.016	0.011
273	22.75	0.07	0.027	(0.128)	0.016	0.011
274	22.83	0.07	0.027	(0.127)	0.016	0.011
275	22.92	0.07	0.027	(0.127)	0.016	0.011
276	23.00	0.07	0.027	(0.127)	0.016	0.011
277	23.08	0.07	0.027	(0.126)	0.016	0.011
278	23.17	0.07	0.027	(0.126)	0.016	0.011
279	23.25	0.07	0.027	(0.126)	0.016	0.011
280	23.33	0.07	0.027	(0.126)	0.016	0.011
281	23.42	0.07	0.027	(0.125)	0.016	0.011
282	23.50	0.07	0.027	(0.125)	0.016	0.011
283	23.58	0.07	0.027	(0.125)	0.016	0.011
284	23.67	0.07	0.027	(0.125)	0.016	0.011
285	23.75	0.07	0.027	(0.125)	0.016	0.011
286	23.83	0.07	0.027	(0.125)	0.016	0.011
287	23.92	0.07	0.027	(0.124)	0.016	0.011
288	24.00	0.07	0.027	(0.124)	0.016	0.011

(Loss Rate Not Used)

Sum = 100.0 Sum = 16.8

Flood volume = Effective rainfall 1.40(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 2.00(In)
Total soil loss = 0.817(Ac.Ft)
Total rainfall = 3.40(In)
Flood volume = 24873.5 Cubic Feet
Total soil loss = 35580.2 Cubic Feet

Peak flow rate of this hydrograph = 1.230(CFS)

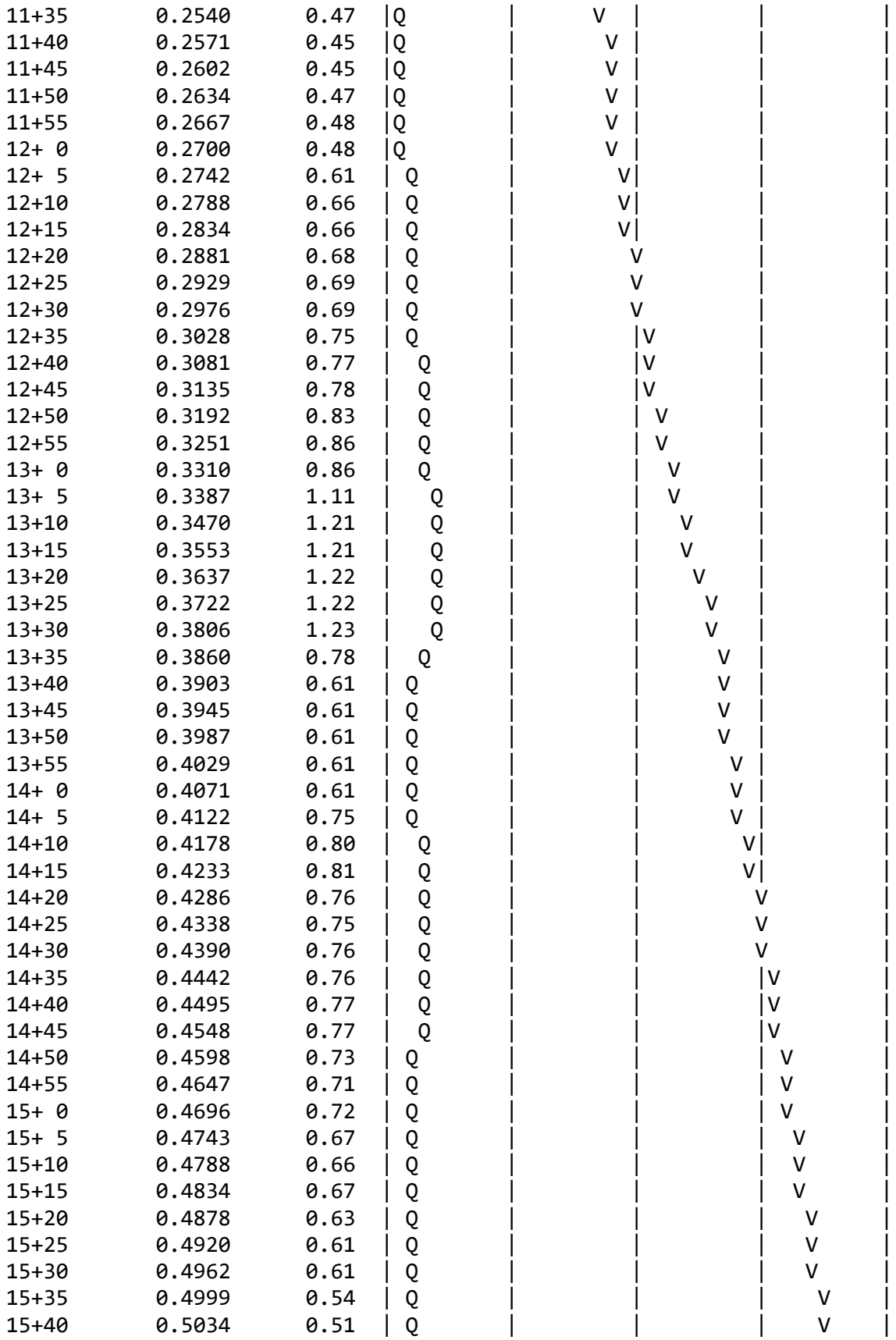
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0003	0.04	Q				
0+10	0.0006	0.05	Q				
0+15	0.0010	0.05	Q				
0+20	0.0015	0.07	Q				
0+25	0.0020	0.08	Q				
0+30	0.0026	0.08	Q				
0+35	0.0031	0.08	Q				
0+40	0.0037	0.08	Q				
0+45	0.0042	0.08	Q				
0+50	0.0049	0.10	Q				
0+55	0.0057	0.11	Q				
1+ 0	0.0064	0.11	Q				
1+ 5	0.0070	0.09	Q				
1+10	0.0075	0.08	Q				
1+15	0.0081	0.08	Q				
1+20	0.0086	0.08	Q				
1+25	0.0092	0.08	Q				
1+30	0.0097	0.08	Q				
1+35	0.0103	0.08	Q				
1+40	0.0108	0.08	Q				
1+45	0.0114	0.08	Q				
1+50	0.0121	0.10	Q				
1+55	0.0128	0.11	Q				
2+ 0	0.0135	0.11	Q				
2+ 5	0.0143	0.11	Q				
2+10	0.0150	0.11	QV				
2+15	0.0157	0.11	QV				
2+20	0.0165	0.11	QV				
2+25	0.0172	0.11	QV				
2+30	0.0179	0.11	QV				
2+35	0.0188	0.13	QV				
2+40	0.0197	0.13	QV				
2+45	0.0206	0.13	QV				
2+50	0.0215	0.13	QV				
2+55	0.0225	0.13	QV				
3+ 0	0.0234	0.13	QV				
3+ 5	0.0243	0.13	QV				
3+10	0.0252	0.13	QV				

3+15	0.0261	0.13	QV	|	|	|	|
3+20	0.0270	0.13	QV	|	|	|	|
3+25	0.0280	0.13	QV	|	|	|	|
3+30	0.0289	0.13	Q V	|	|	|	|
3+35	0.0298	0.13	Q V	|	|	|	|
3+40	0.0307	0.13	Q V	|	|	|	|
3+45	0.0316	0.13	Q V	|	|	|	|
3+50	0.0327	0.15	Q V	|	|	|	|
3+55	0.0338	0.16	Q V	|	|	|	|
4+ 0	0.0349	0.16	Q V	|	|	|	|
4+ 5	0.0360	0.16	Q V	|	|	|	|
4+10	0.0371	0.16	Q V	|	|	|	|
4+15	0.0382	0.16	Q V	|	|	|	|
4+20	0.0394	0.18	Q V	|	|	|	|
4+25	0.0407	0.19	Q V	|	|	|	|
4+30	0.0420	0.19	Q V	|	|	|	|
4+35	0.0432	0.19	Q V	|	|	|	|
4+40	0.0445	0.19	Q V	|	|	|	|
4+45	0.0458	0.19	Q V	|	|	|	|
4+50	0.0472	0.21	Q V	|	|	|	|
4+55	0.0487	0.21	Q V	|	|	|	|
5+ 0	0.0502	0.21	Q V	|	|	|	|
5+ 5	0.0514	0.17	Q V	|	|	|	|
5+10	0.0525	0.16	Q V	|	|	|	|
5+15	0.0536	0.16	Q V	|	|	|	|
5+20	0.0548	0.18	Q V	|	|	|	|
5+25	0.0561	0.19	Q V	|	|	|	|
5+30	0.0573	0.19	Q V	|	|	|	|
5+35	0.0588	0.21	Q V	|	|	|	|
5+40	0.0602	0.21	Q V	|	|	|	|
5+45	0.0617	0.21	Q V	|	|	|	|
5+50	0.0632	0.21	Q V	|	|	|	|
5+55	0.0646	0.21	Q V	|	|	|	|
6+ 0	0.0661	0.21	Q V	|	|	|	|
6+ 5	0.0677	0.23	Q V	|	|	|	|
6+10	0.0693	0.24	Q V	|	|	|	|
6+15	0.0710	0.24	Q V	|	|	|	|
6+20	0.0726	0.24	Q V	|	|	|	|
6+25	0.0743	0.24	Q V	|	|	|	|
6+30	0.0759	0.24	Q V	|	|	|	|
6+35	0.0777	0.26	|Q V	|	|	|	|
6+40	0.0795	0.27	|Q V	|	|	|	|
6+45	0.0814	0.27	|Q V	|	|	|	|
6+50	0.0832	0.27	|Q V	|	|	|	|
6+55	0.0850	0.27	|Q V	|	|	|	|
7+ 0	0.0869	0.27	|Q V	|	|	|	|
7+ 5	0.0887	0.27	|Q V	|	|	|	|
7+10	0.0905	0.27	|Q V	|	|	|	|
7+15	0.0924	0.27	|Q V	|	|	|	|
7+20	0.0943	0.29	|Q V	|	|	|	|

7+25	0.0963	0.29	Q V				
7+30	0.0984	0.29	Q V				
7+35	0.1005	0.31	Q V				
7+40	0.1027	0.32	Q V				
7+45	0.1049	0.32	Q V				
7+50	0.1072	0.34	Q V				
7+55	0.1096	0.35	Q V				
8+ 0	0.1120	0.35	Q V				
8+ 5	0.1146	0.38	Q V				
8+10	0.1174	0.40	Q V				
8+15	0.1201	0.40	Q V				
8+20	0.1229	0.40	Q V				
8+25	0.1256	0.40	Q V				
8+30	0.1284	0.40	Q V				
8+35	0.1313	0.42	Q V				
8+40	0.1342	0.43	Q V				
8+45	0.1371	0.43	Q V				
8+50	0.1402	0.44	Q V				
8+55	0.1433	0.45	Q V				
9+ 0	0.1464	0.45	Q V				
9+ 5	0.1498	0.49	Q V				
9+10	0.1533	0.51	Q V				
9+15	0.1568	0.51	Q V				
9+20	0.1604	0.52	Q V				
9+25	0.1640	0.53	Q V				
9+30	0.1677	0.53	Q V				
9+35	0.1715	0.55	Q V				
9+40	0.1753	0.56	Q V				
9+45	0.1792	0.56	Q V				
9+50	0.1832	0.58	Q V				
9+55	0.1872	0.59	Q V				
10+ 0	0.1912	0.59	Q V				
10+ 5	0.1943	0.45	Q V				
10+10	0.1971	0.40	Q V				
10+15	0.1998	0.40	Q V				
10+20	0.2026	0.40	Q V				
10+25	0.2053	0.40	Q V				
10+30	0.2081	0.40	Q V				
10+35	0.2115	0.49	Q V				
10+40	0.2151	0.53	Q V				
10+45	0.2188	0.53	Q V				
10+50	0.2225	0.53	Q V				
10+55	0.2261	0.53	Q V				
11+ 0	0.2298	0.53	Q V				
11+ 5	0.2333	0.51	Q V				
11+10	0.2368	0.51	Q V				
11+15	0.2403	0.51	Q V				
11+20	0.2438	0.51	Q V				
11+25	0.2473	0.51	Q V				
11+30	0.2507	0.51	Q V				



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15+45       0.5068      0.51  | Q       |         |         |    V    |
15+50       0.5103      0.51  | Q       |         |         |    V    |
15+55       0.5138      0.51  | Q       |         |         |    V    |
16+ 0       0.5173      0.51  | Q       |         |         |     V   |
16+ 5       0.5188      0.22  Q         |         |         |     V   |
16+10       0.5195      0.11  Q         |         |         |     V   |
16+15       0.5203      0.11  Q         |         |         |     V   |
16+20       0.5210      0.11  Q         |         |         |     V   |
16+25       0.5217      0.11  Q         |         |         |     V   |
16+30       0.5224      0.11  Q         |         |         |     V   |
16+35       0.5230      0.09  Q         |         |         |     V   |
16+40       0.5236      0.08  Q         |         |         |     V   |
16+45       0.5241      0.08  Q         |         |         |     V   |
16+50       0.5247      0.08  Q         |         |         |     V   |
16+55       0.5252      0.08  Q         |         |         |     V   |
17+ 0       0.5258      0.08  Q         |         |         |     V   |
17+ 5       0.5266      0.12  Q         |         |         |     V   |
17+10       0.5275      0.13  Q         |         |         |     V   |
17+15       0.5284      0.13  Q         |         |         |      V  |
17+20       0.5294      0.13  Q         |         |         |      V  |
17+25       0.5303      0.13  Q         |         |         |      V  |
17+30       0.5312      0.13  Q         |         |         |      V  |
17+35       0.5321      0.13  Q         |         |         |      V  |
17+40       0.5330      0.13  Q         |         |         |      V  |
17+45       0.5339      0.13  Q         |         |         |      V  |
17+50       0.5347      0.11  Q         |         |         |      V  |
17+55       0.5355      0.11  Q         |         |         |      V  |
18+ 0       0.5362      0.11  Q         |         |         |      V  |
18+ 5       0.5369      0.11  Q         |         |         |      V  |
18+10       0.5377      0.11  Q         |         |         |      V  |
18+15       0.5384      0.11  Q         |         |         |      V  |
18+20       0.5391      0.11  Q         |         |         |      V  |
18+25       0.5399      0.11  Q         |         |         |      V  |
18+30       0.5406      0.11  Q         |         |         |      V  |
18+35       0.5412      0.09  Q         |         |         |      V  |
18+40       0.5417      0.08  Q         |         |         |      V  |
18+45       0.5423      0.08  Q         |         |         |      V  |
18+50       0.5427      0.06  Q         |         |         |       V |
18+55       0.5431      0.05  Q         |         |         |       V |
19+ 0       0.5434      0.05  Q         |         |         |       V |
19+ 5       0.5439      0.07  Q         |         |         |       V |
19+10       0.5445      0.08  Q         |         |         |       V |
19+15       0.5450      0.08  Q         |         |         |       V |
19+20       0.5457      0.10  Q         |         |         |       V |
19+25       0.5464      0.11  Q         |         |         |       V |
19+30       0.5472      0.11  Q         |         |         |       V |
19+35       0.5478      0.09  Q         |         |         |       V |
19+40       0.5483      0.08  Q         |         |         |       V |
19+45       0.5489      0.08  Q         |         |         |       V |
19+50       0.5493      0.06  Q         |         |         |       V |
```

19+55	0.5497	0.05	Q	|	|	|	V |
20+ 0	0.5500	0.05	Q	|	|	|	V |
20+ 5	0.5505	0.07	Q	|	|	|	V |
20+10	0.5511	0.08	Q	|	|	|	V |
20+15	0.5516	0.08	Q	|	|	|	V |
20+20	0.5522	0.08	Q	|	|	|	V |
20+25	0.5527	0.08	Q	|	|	|	V |
20+30	0.5533	0.08	Q	|	|	|	V |
20+35	0.5538	0.08	Q	|	|	|	V |
20+40	0.5544	0.08	Q	|	|	|	V |
20+45	0.5549	0.08	Q	|	|	|	V |
20+50	0.5553	0.06	Q	|	|	|	V |
20+55	0.5557	0.05	Q	|	|	|	V |
21+ 0	0.5561	0.05	Q	|	|	|	V |
21+ 5	0.5566	0.07	Q	|	|	|	V |
21+10	0.5571	0.08	Q	|	|	|	V|
21+15	0.5577	0.08	Q	|	|	|	V|
21+20	0.5581	0.06	Q	|	|	|	V|
21+25	0.5585	0.05	Q	|	|	|	V|
21+30	0.5588	0.05	Q	|	|	|	V|
21+35	0.5593	0.07	Q	|	|	|	V|
21+40	0.5599	0.08	Q	|	|	|	V|
21+45	0.5604	0.08	Q	|	|	|	V|
21+50	0.5608	0.06	Q	|	|	|	V|
21+55	0.5612	0.05	Q	|	|	|	V|
22+ 0	0.5616	0.05	Q	|	|	|	V|
22+ 5	0.5621	0.07	Q	|	|	|	V|
22+10	0.5626	0.08	Q	|	|	|	V|
22+15	0.5632	0.08	Q	|	|	|	V|
22+20	0.5636	0.06	Q	|	|	|	V|
22+25	0.5640	0.05	Q	|	|	|	V|
22+30	0.5643	0.05	Q	|	|	|	V|
22+35	0.5647	0.05	Q	|	|	|	V|
22+40	0.5651	0.05	Q	|	|	|	V|
22+45	0.5654	0.05	Q	|	|	|	V|
22+50	0.5658	0.05	Q	|	|	|	V|
22+55	0.5662	0.05	Q	|	|	|	V|
23+ 0	0.5665	0.05	Q	|	|	|	V|
23+ 5	0.5669	0.05	Q	|	|	|	V|
23+10	0.5673	0.05	Q	|	|	|	V|
23+15	0.5676	0.05	Q	|	|	|	V|
23+20	0.5680	0.05	Q	|	|	|	V|
23+25	0.5683	0.05	Q	|	|	|	V|
23+30	0.5687	0.05	Q	|	|	|	V|
23+35	0.5691	0.05	Q	|	|	|	V|
23+40	0.5694	0.05	Q	|	|	|	V|
23+45	0.5698	0.05	Q	|	|	|	V|
23+50	0.5702	0.05	Q	|	|	|	V|
23+55	0.5705	0.05	Q	|	|	|	V|
24+ 0	0.5709	0.05	Q	|	|	|	V|

```
   24+ 5       0.5710      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 05/09/24 File: ONSITEPOSTW11100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            0.50                  2.45

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            1.30                  6.37

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
-----------------------------------------------------------------
```

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	3.30	0.515	0.249	(0.311)	0.266
2	0.17	4.20	0.655	0.249	(0.396)	0.407
3	0.25	4.40	0.686	0.249	(0.415)	0.438
4	0.33	4.80	0.749	0.249	(0.452)	0.500
5	0.42	5.20	0.811	0.249	(0.490)	0.563
6	0.50	6.20	0.967	0.249	(0.584)	0.718
7	0.58	6.80	1.061	0.249	(0.641)	0.812
8	0.67	8.80	1.373	0.249	(0.829)	1.124
9	0.75	13.90	2.168	0.249	(1.310)	1.920
10	0.83	31.40	4.898	0.249	(2.959)	4.650
11	0.92	7.20	1.123	0.249	(0.678)	0.874
12	1.00	3.80	0.593	0.249	(0.358)	0.344
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	12.6

Flood volume = Effective rainfall 1.05(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.25(In)
Total soil loss = 0.102(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 18699.2 Cubic Feet
Total soil loss = 4422.9 Cubic Feet

Peak flow rate of this hydrograph = 19.215(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	0.0065	0.95	VQ
0+10	0.0190	1.82	|V Q
0+15	0.0336	2.12	| VQ
0+20	0.0501	2.39	| Q
0+25	0.0686	2.69	| QV
0+30	0.0916	3.34	| Q V
0+35	0.1183	3.88	| Q |V
0+40	0.1536	5.12	| Q V
0+45	0.2114	8.39	| Q V|
0+50	0.3437	19.21	| | | V Q |
0+55	0.4093	9.52	| | Q| | V |
1+ 0	0.4260	2.43	| Q | | V|

```
    1+ 5       0.4293      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 05/09/24 File: ONSITEPOSTW13100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            0.80                    3.92

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.00                    9.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.312	(0.249)	0.188	0.124
2	0.17	1.30	0.312	(0.249)	0.188	0.124
3	0.25	1.10	0.264	(0.249)	0.159	0.105
4	0.33	1.50	0.360	(0.249)	0.217	0.143
5	0.42	1.50	0.360	(0.249)	0.217	0.143
6	0.50	1.80	0.432	0.249	(0.261)	0.183
7	0.58	1.50	0.360	(0.249)	0.217	0.143
8	0.67	1.80	0.432	0.249	(0.261)	0.183
9	0.75	1.80	0.432	0.249	(0.261)	0.183
10	0.83	1.50	0.360	(0.249)	0.217	0.143
11	0.92	1.60	0.384	(0.249)	0.232	0.152
12	1.00	1.80	0.432	0.249	(0.261)	0.183
13	1.08	2.20	0.528	0.249	(0.319)	0.279
14	1.17	2.20	0.528	0.249	(0.319)	0.279
15	1.25	2.20	0.528	0.249	(0.319)	0.279
16	1.33	2.00	0.480	0.249	(0.290)	0.231
17	1.42	2.60	0.624	0.249	(0.377)	0.375
18	1.50	2.70	0.648	0.249	(0.391)	0.399
19	1.58	2.40	0.576	0.249	(0.348)	0.327
20	1.67	2.70	0.648	0.249	(0.391)	0.399
21	1.75	3.30	0.792	0.249	(0.478)	0.543
22	1.83	3.10	0.744	0.249	(0.449)	0.495
23	1.92	2.90	0.696	0.249	(0.420)	0.447
24	2.00	3.00	0.720	0.249	(0.435)	0.471
25	2.08	3.10	0.744	0.249	(0.449)	0.495
26	2.17	4.20	1.008	0.249	(0.609)	0.759
27	2.25	5.00	1.200	0.249	(0.725)	0.951
28	2.33	3.50	0.840	0.249	(0.507)	0.591
29	2.42	6.80	1.632	0.249	(0.986)	1.383
30	2.50	7.30	1.752	0.249	(1.058)	1.503
31	2.58	8.20	1.968	0.249	(1.189)	1.719
32	2.67	5.90	1.416	0.249	(0.855)	1.167
33	2.75	2.00	0.480	0.249	(0.290)	0.231
34	2.83	1.80	0.432	0.249	(0.261)	0.183
35	2.92	1.80	0.432	0.249	(0.261)	0.183
36	3.00	0.60	0.144	(0.249)	0.087	0.057
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	15.6

Flood volume = Effective rainfall 1.30(In)
times area 4.9(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.70(In)
Total soil loss = 0.287(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 23064.9 Cubic Feet
Total soil loss = 12508.3 Cubic Feet

Peak flow rate of this hydrograph = 8.197(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	0.0030	0.44	VQ				
0+10	0.0072	0.61	V Q				
0+15	0.0110	0.54	V Q				
0+20	0.0155	0.65	VQ				
0+25	0.0203	0.70	VQ				
0+30	0.0262	0.85	V Q				
0+35	0.0314	0.76	VQ				
0+40	0.0373	0.85	VQ				
0+45	0.0435	0.91	Q				
0+50	0.0487	0.76	Q				
0+55	0.0538	0.74	Q V				
1+ 0	0.0598	0.86	QV				
1+ 5	0.0684	1.25	QV				
1+10	0.0779	1.38	Q				
1+15	0.0874	1.38	QV				
1+20	0.0957	1.21	Q V				
1+25	0.1071	1.66	Q V				
1+30	0.1205	1.94	Q V				
1+35	0.1323	1.72	Q V				
1+40	0.1452	1.87	Q V				
1+45	0.1623	2.49	Q V				
1+50	0.1796	2.51	Q V				
1+55	0.1953	2.28	Q V				
2+ 0	0.2111	2.30	Q V				
2+ 5	0.2277	2.41	Q V				
2+10	0.2511	3.39	Q V				
2+15	0.2816	4.44	Q V				
2+20	0.3052	3.42	Q V				
2+25	0.3447	5.74	Q V				
2+30	0.3947	7.26	Q				
2+35	0.4512	8.20	Q V				
2+40	0.4961	6.53	Q V				
2+45	0.5129	2.43	Q V				
2+50	0.5196	0.97	Q V				
2+55	0.5258	0.91	Q V				
3+ 0	0.5290	0.46	Q V				
3+ 5	0.5295	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 05/09/24 File: ONSITEPOSTW16100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            1.20                  5.88

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            2.80                 13.72

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

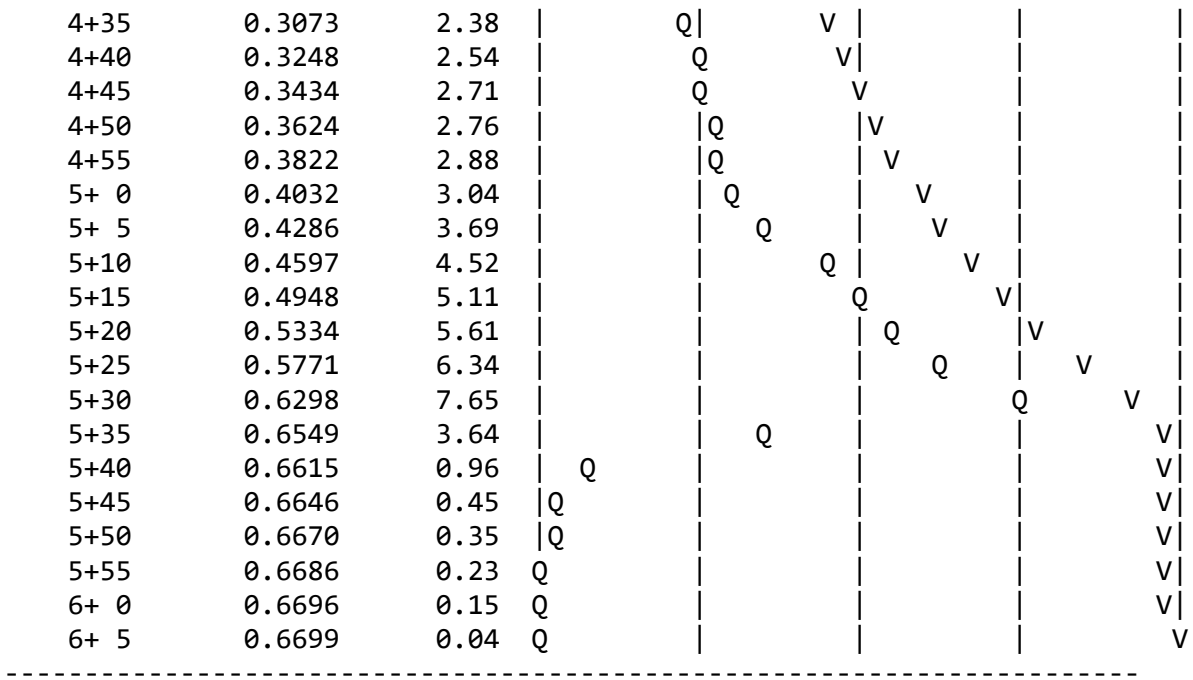
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	(0.249)	0.101	0.067
2	0.17	0.60	0.202	(0.249)	0.122	0.080
3	0.25	0.60	0.202	(0.249)	0.122	0.080
4	0.33	0.60	0.202	(0.249)	0.122	0.080
5	0.42	0.60	0.202	(0.249)	0.122	0.080
6	0.50	0.70	0.235	(0.249)	0.142	0.093
7	0.58	0.70	0.235	(0.249)	0.142	0.093
8	0.67	0.70	0.235	(0.249)	0.142	0.093
9	0.75	0.70	0.235	(0.249)	0.142	0.093
10	0.83	0.70	0.235	(0.249)	0.142	0.093
11	0.92	0.70	0.235	(0.249)	0.142	0.093
12	1.00	0.80	0.269	(0.249)	0.162	0.106
13	1.08	0.80	0.269	(0.249)	0.162	0.106
14	1.17	0.80	0.269	(0.249)	0.162	0.106
15	1.25	0.80	0.269	(0.249)	0.162	0.106
16	1.33	0.80	0.269	(0.249)	0.162	0.106
17	1.42	0.80	0.269	(0.249)	0.162	0.106
18	1.50	0.80	0.269	(0.249)	0.162	0.106
19	1.58	0.80	0.269	(0.249)	0.162	0.106
20	1.67	0.80	0.269	(0.249)	0.162	0.106
21	1.75	0.80	0.269	(0.249)	0.162	0.106
22	1.83	0.80	0.269	(0.249)	0.162	0.106
23	1.92	0.80	0.269	(0.249)	0.162	0.106
24	2.00	0.90	0.302	(0.249)	0.183	0.120
25	2.08	0.80	0.269	(0.249)	0.162	0.106
26	2.17	0.90	0.302	(0.249)	0.183	0.120
27	2.25	0.90	0.302	(0.249)	0.183	0.120
28	2.33	0.90	0.302	(0.249)	0.183	0.120
29	2.42	0.90	0.302	(0.249)	0.183	0.120
30	2.50	0.90	0.302	(0.249)	0.183	0.120
31	2.58	0.90	0.302	(0.249)	0.183	0.120
32	2.67	0.90	0.302	(0.249)	0.183	0.120
33	2.75	1.00	0.336	(0.249)	0.203	0.133
34	2.83	1.00	0.336	(0.249)	0.203	0.133
35	2.92	1.00	0.336	(0.249)	0.203	0.133
36	3.00	1.00	0.336	(0.249)	0.203	0.133
37	3.08	1.00	0.336	(0.249)	0.203	0.133
38	3.17	1.10	0.370	(0.249)	0.223	0.146
39	3.25	1.10	0.370	(0.249)	0.223	0.146
40	3.33	1.10	0.370	(0.249)	0.223	0.146
41	3.42	1.20	0.403	(0.249)	0.244	0.160
42	3.50	1.30	0.437	0.249	(0.264)	0.188
43	3.58	1.40	0.470	0.249	(0.284)	0.222
44	3.67	1.40	0.470	0.249	(0.284)	0.222
45	3.75	1.50	0.504	0.249	(0.304)	0.255
46	3.83	1.50	0.504	0.249	(0.304)	0.255
47	3.92	1.60	0.538	0.249	(0.325)	0.289

```
48   4.00     1.60      0.538          0.249    (  0.325)        0.289
49   4.08     1.70      0.571          0.249    (  0.345)        0.323
50   4.17     1.80      0.605          0.249    (  0.365)        0.356
51   4.25     1.90      0.638          0.249    (  0.386)        0.390
52   4.33     2.00      0.672          0.249    (  0.406)        0.423
53   4.42     2.10      0.706          0.249    (  0.426)        0.457
54   4.50     2.10      0.706          0.249    (  0.426)        0.457
55   4.58     2.20      0.739          0.249    (  0.446)        0.491
56   4.67     2.30      0.773          0.249    (  0.467)        0.524
57   4.75     2.40      0.806          0.249    (  0.487)        0.558
58   4.83     2.40      0.806          0.249    (  0.487)        0.558
59   4.92     2.50      0.840          0.249    (  0.507)        0.591
60   5.00     2.60      0.874          0.249    (  0.528)        0.625
61   5.08     3.10      1.042          0.249    (  0.629)        0.793
62   5.17     3.60      1.210          0.249    (  0.731)        0.961
63   5.25     3.90      1.310          0.249    (  0.791)        1.062
64   5.33     4.20      1.411          0.249    (  0.852)        1.163
65   5.42     4.70      1.579          0.249    (  0.954)        1.331
66   5.50     5.60      1.882          0.249    (  1.136)        1.633
67   5.58     1.90      0.638          0.249    (  0.386)        0.390
68   5.67     0.90      0.302       (  0.249)       0.183        0.120
69   5.75     0.60      0.202       (  0.249)       0.122        0.080
70   5.83     0.50      0.168       (  0.249)       0.101        0.067
71   5.92     0.30      0.101       (  0.249)       0.061        0.040
72   6.00     0.20      0.067       (  0.249)       0.041        0.027
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    19.7
      Flood volume = Effective rainfall      1.64(In)
       times area       4.9(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
      Total soil loss =      1.16(In)
      Total soil loss =     0.473(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       29180.2 Cubic Feet
      Total soil loss =       20622.6 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      7.652(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      0.24  Q         |         |         |         |
  0+10       0.0042      0.38  VQ        |         |         |         |
  0+15       0.0069      0.39  VQ        |         |         |         |
  0+20       0.0097      0.39  VQ        |         |         |         |
```

```
0+25       0.0124      0.39  VQ        |         |         |         |
0+30       0.0154      0.44  VQ        |         |         |         |
0+35       0.0186      0.46  |Q        |         |         |         |
0+40       0.0218      0.46  |Q        |         |         |         |
0+45       0.0249      0.46  |Q        |         |         |         |
0+50       0.0281      0.46  |Q        |         |         |         |
0+55       0.0313      0.46  |Q        |         |         |         |
1+ 0       0.0348      0.51  | Q       |         |         |         |
1+ 5       0.0384      0.53  | Q       |         |         |         |
1+10       0.0420      0.53  | Q       |         |         |         |
1+15       0.0456      0.53  | Q       |         |         |         |
1+20       0.0492      0.53  | Q       |         |         |         |
1+25       0.0529      0.53  | QV      |         |         |         |
1+30       0.0565      0.53  | QV      |         |         |         |
1+35       0.0601      0.53  | QV      |         |         |         |
1+40       0.0637      0.53  | QV      |         |         |         |
1+45       0.0674      0.53  | Q V     |         |         |         |
1+50       0.0710      0.53  | Q V     |         |         |         |
1+55       0.0746      0.53  | Q V     |         |         |         |
2+ 0       0.0785      0.57  | Q V     |         |         |         |
2+ 5       0.0823      0.54  | Q V     |         |         |         |
2+10       0.0862      0.57  | Q  V    |         |         |         |
2+15       0.0903      0.59  | Q  V    |         |         |         |
2+20       0.0944      0.59  | Q  V    |         |         |         |
2+25       0.0985      0.59  | Q  V    |         |         |         |
2+30       0.1025      0.59  | Q   V   |         |         |         |
2+35       0.1066      0.59  | Q   V   |         |         |         |
2+40       0.1107      0.59  | Q   V   |         |         |         |
2+45       0.1151      0.64  | Q   V   |         |         |         |
2+50       0.1196      0.66  | Q    V  |         |         |         |
2+55       0.1242      0.66  | Q    V  |         |         |         |
3+ 0       0.1287      0.66  | Q    V  |         |         |         |
3+ 5       0.1332      0.66  | Q    V  |         |         |         |
3+10       0.1381      0.70  | Q     V |         |         |         |
3+15       0.1430      0.72  | Q     V |         |         |         |
3+20       0.1480      0.72  | Q     V |         |         |         |
3+25       0.1533      0.77  |  Q     V|         |         |         |
3+30       0.1595      0.89  |  Q     V|         |         |         |
3+35       0.1667      1.05  |   Q    V|         |         |         |
3+40       0.1742      1.10  |   Q     V         |         |         |
3+45       0.1826      1.22  |   Q     V         |         |         |
3+50       0.1913      1.26  |    Q    |V        |         |         |
3+55       0.2008      1.38  |    Q    |V        |         |         |
4+ 0       0.2106      1.43  |    Q    | V       |         |         |
4+ 5       0.2213      1.55  |     Q   |  V      |         |         |
4+10       0.2331      1.71  |     Q   |  V      |         |         |
4+15       0.2460      1.88  |      Q  |   V     |         |         |
4+20       0.2601      2.05  |       Q |    V    |         |         |
4+25       0.2754      2.21  |       Q |     V   |         |         |
4+30       0.2909      2.26  |        Q|      V  |         |         |
```


4+35 0.3073 2.38
4+40 0.3248 2.54
4+45 0.3434 2.71
4+50 0.3624 2.76
4+55 0.3822 2.88
5+ 0 0.4032 3.04
5+ 5 0.4286 3.69
5+10 0.4597 4.52
5+15 0.4948 5.11
5+20 0.5334 5.61
5+25 0.5771 6.34
5+30 0.6298 7.65
5+35 0.6549 3.64
5+40 0.6615 0.96
5+45 0.6646 0.45
5+50 0.6670 0.35
5+55 0.6686 0.23
6+ 0 0.6696 0.15
6+ 5 0.6699 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 05/09/24 File: ONSITEPOSTW124100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA W-1
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTW1.OUT- RSB

Drainage Area = 4.90(Ac.) = 0.008 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.90(Ac.) = 0.008 Sq. Mi.
Length along longest watercourse = 454.00(Ft.)
Length along longest watercourse measured to centroid = 59.00(Ft.)
Length along longest watercourse = 0.086 Mi.
Length along longest watercourse measured to centroid = 0.011 Mi.
Difference in elevation = 16.00(Ft.)
Slope along watercourse = 186.0793 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.016 Hr.
Lag time = 0.95 Min.
25% of lag time = 0.24 Min.
40% of lag time = 0.38 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]
        4.90            2.00                  9.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.90            5.40                 26.46

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.900           69.00         0.370
 Total Area Entered =      4.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.370        0.249       1.000      0.249
                                                 Sum (F) =   0.249
Area averaged mean soil loss (F) (In/Hr) =  0.249
Minimum soil loss rate ((In/Hr)) =  0.124
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.604
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        525.420         72.140              3.562
    2   0.167       1050.841         27.860              1.376
                               Sum = 100.000   Sum=       4.938
------------------------------------------------------------------------

 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	0.043	(0.441)	0.026	0.017
2	0.17	0.07	0.043	(0.439)	0.026	0.017
3	0.25	0.07	0.043	(0.437)	0.026	0.017
4	0.33	0.10	0.065	(0.436)	0.039	0.026
5	0.42	0.10	0.065	(0.434)	0.039	0.026
6	0.50	0.10	0.065	(0.432)	0.039	0.026
7	0.58	0.10	0.065	(0.431)	0.039	0.026
8	0.67	0.10	0.065	(0.429)	0.039	0.026
9	0.75	0.10	0.065	(0.427)	0.039	0.026
10	0.83	0.13	0.086	(0.426)	0.052	0.034
11	0.92	0.13	0.086	(0.424)	0.052	0.034
12	1.00	0.13	0.086	(0.422)	0.052	0.034
13	1.08	0.10	0.065	(0.421)	0.039	0.026
14	1.17	0.10	0.065	(0.419)	0.039	0.026
15	1.25	0.10	0.065	(0.417)	0.039	0.026
16	1.33	0.10	0.065	(0.416)	0.039	0.026
17	1.42	0.10	0.065	(0.414)	0.039	0.026
18	1.50	0.10	0.065	(0.412)	0.039	0.026
19	1.58	0.10	0.065	(0.411)	0.039	0.026
20	1.67	0.10	0.065	(0.409)	0.039	0.026
21	1.75	0.10	0.065	(0.407)	0.039	0.026
22	1.83	0.13	0.086	(0.406)	0.052	0.034
23	1.92	0.13	0.086	(0.404)	0.052	0.034
24	2.00	0.13	0.086	(0.402)	0.052	0.034
25	2.08	0.13	0.086	(0.401)	0.052	0.034
26	2.17	0.13	0.086	(0.399)	0.052	0.034
27	2.25	0.13	0.086	(0.398)	0.052	0.034
28	2.33	0.13	0.086	(0.396)	0.052	0.034
29	2.42	0.13	0.086	(0.394)	0.052	0.034
30	2.50	0.13	0.086	(0.393)	0.052	0.034
31	2.58	0.17	0.108	(0.391)	0.065	0.043
32	2.67	0.17	0.108	(0.390)	0.065	0.043
33	2.75	0.17	0.108	(0.388)	0.065	0.043
34	2.83	0.17	0.108	(0.386)	0.065	0.043
35	2.92	0.17	0.108	(0.385)	0.065	0.043
36	3.00	0.17	0.108	(0.383)	0.065	0.043
37	3.08	0.17	0.108	(0.382)	0.065	0.043
38	3.17	0.17	0.108	(0.380)	0.065	0.043
39	3.25	0.17	0.108	(0.378)	0.065	0.043
40	3.33	0.17	0.108	(0.377)	0.065	0.043
41	3.42	0.17	0.108	(0.375)	0.065	0.043
42	3.50	0.17	0.108	(0.374)	0.065	0.043
43	3.58	0.17	0.108	(0.372)	0.065	0.043
44	3.67	0.17	0.108	(0.371)	0.065	0.043
45	3.75	0.17	0.108	(0.369)	0.065	0.043
46	3.83	0.20	0.130	(0.367)	0.078	0.051
47	3.92	0.20	0.130	(0.366)	0.078	0.051

48	4.00	0.20	0.130	(0.364)	0.078	0.051
49	4.08	0.20	0.130	(0.363)	0.078	0.051
50	4.17	0.20	0.130	(0.361)	0.078	0.051
51	4.25	0.20	0.130	(0.360)	0.078	0.051
52	4.33	0.23	0.151	(0.358)	0.091	0.060
53	4.42	0.23	0.151	(0.357)	0.091	0.060
54	4.50	0.23	0.151	(0.355)	0.091	0.060
55	4.58	0.23	0.151	(0.354)	0.091	0.060
56	4.67	0.23	0.151	(0.352)	0.091	0.060
57	4.75	0.23	0.151	(0.351)	0.091	0.060
58	4.83	0.27	0.173	(0.349)	0.104	0.068
59	4.92	0.27	0.173	(0.348)	0.104	0.068
60	5.00	0.27	0.173	(0.346)	0.104	0.068
61	5.08	0.20	0.130	(0.345)	0.078	0.051
62	5.17	0.20	0.130	(0.343)	0.078	0.051
63	5.25	0.20	0.130	(0.342)	0.078	0.051
64	5.33	0.23	0.151	(0.340)	0.091	0.060
65	5.42	0.23	0.151	(0.339)	0.091	0.060
66	5.50	0.23	0.151	(0.337)	0.091	0.060
67	5.58	0.27	0.173	(0.336)	0.104	0.068
68	5.67	0.27	0.173	(0.334)	0.104	0.068
69	5.75	0.27	0.173	(0.333)	0.104	0.068
70	5.83	0.27	0.173	(0.331)	0.104	0.068
71	5.92	0.27	0.173	(0.330)	0.104	0.068
72	6.00	0.27	0.173	(0.328)	0.104	0.068
73	6.08	0.30	0.194	(0.327)	0.117	0.077
74	6.17	0.30	0.194	(0.325)	0.117	0.077
75	6.25	0.30	0.194	(0.324)	0.117	0.077
76	6.33	0.30	0.194	(0.322)	0.117	0.077
77	6.42	0.30	0.194	(0.321)	0.117	0.077
78	6.50	0.30	0.194	(0.320)	0.117	0.077
79	6.58	0.33	0.216	(0.318)	0.130	0.086
80	6.67	0.33	0.216	(0.317)	0.130	0.086
81	6.75	0.33	0.216	(0.315)	0.130	0.086
82	6.83	0.33	0.216	(0.314)	0.130	0.086
83	6.92	0.33	0.216	(0.312)	0.130	0.086
84	7.00	0.33	0.216	(0.311)	0.130	0.086
85	7.08	0.33	0.216	(0.310)	0.130	0.086
86	7.17	0.33	0.216	(0.308)	0.130	0.086
87	7.25	0.33	0.216	(0.307)	0.130	0.086
88	7.33	0.37	0.238	(0.305)	0.144	0.094
89	7.42	0.37	0.238	(0.304)	0.144	0.094
90	7.50	0.37	0.238	(0.303)	0.144	0.094
91	7.58	0.40	0.259	(0.301)	0.157	0.103
92	7.67	0.40	0.259	(0.300)	0.157	0.103
93	7.75	0.40	0.259	(0.298)	0.157	0.103
94	7.83	0.43	0.281	(0.297)	0.170	0.111
95	7.92	0.43	0.281	(0.296)	0.170	0.111
96	8.00	0.43	0.281	(0.294)	0.170	0.111
97	8.08	0.50	0.324	(0.293)	0.196	0.128

98	8.17	0.50	0.324	(	0.292)	0.196		0.128
99	8.25	0.50	0.324	(	0.290)	0.196		0.128
100	8.33	0.50	0.324	(	0.289)	0.196		0.128
101	8.42	0.50	0.324	(	0.287)	0.196		0.128
102	8.50	0.50	0.324	(	0.286)	0.196		0.128
103	8.58	0.53	0.346	(	0.285)	0.209		0.137
104	8.67	0.53	0.346	(	0.283)	0.209		0.137
105	8.75	0.53	0.346	(	0.282)	0.209		0.137
106	8.83	0.57	0.367	(	0.281)	0.222		0.145
107	8.92	0.57	0.367	(	0.279)	0.222		0.145
108	9.00	0.57	0.367	(	0.278)	0.222		0.145
109	9.08	0.63	0.410	(	0.277)	0.248		0.163
110	9.17	0.63	0.410	(	0.276)	0.248		0.163
111	9.25	0.63	0.410	(	0.274)	0.248		0.163
112	9.33	0.67	0.432	(	0.273)	0.261		0.171
113	9.42	0.67	0.432	(	0.272)	0.261		0.171
114	9.50	0.67	0.432	(	0.270)	0.261		0.171
115	9.58	0.70	0.454		0.269	(	0.274)	0.185
116	9.67	0.70	0.454		0.268	(	0.274)	0.186
117	9.75	0.70	0.454		0.266	(	0.274)	0.187
118	9.83	0.73	0.475		0.265	(	0.287)	0.210
119	9.92	0.73	0.475		0.264	(	0.287)	0.211
120	10.00	0.73	0.475		0.263	(	0.287)	0.213
121	10.08	0.50	0.324	(	0.261)	0.196		0.128
122	10.17	0.50	0.324	(	0.260)	0.196		0.128
123	10.25	0.50	0.324	(	0.259)	0.196		0.128
124	10.33	0.50	0.324	(	0.258)	0.196		0.128
125	10.42	0.50	0.324	(	0.256)	0.196		0.128
126	10.50	0.50	0.324	(	0.255)	0.196		0.128
127	10.58	0.67	0.432		0.254	(	0.261)	0.178
128	10.67	0.67	0.432		0.253	(	0.261)	0.179
129	10.75	0.67	0.432		0.251	(	0.261)	0.181
130	10.83	0.67	0.432		0.250	(	0.261)	0.182
131	10.92	0.67	0.432		0.249	(	0.261)	0.183
132	11.00	0.67	0.432		0.248	(	0.261)	0.184
133	11.08	0.63	0.410		0.246	(	0.248)	0.164
134	11.17	0.63	0.410		0.245	(	0.248)	0.165
135	11.25	0.63	0.410		0.244	(	0.248)	0.166
136	11.33	0.63	0.410		0.243	(	0.248)	0.168
137	11.42	0.63	0.410		0.242	(	0.248)	0.169
138	11.50	0.63	0.410		0.240	(	0.248)	0.170
139	11.58	0.57	0.367	(	0.239)	0.222		0.145
140	11.67	0.57	0.367	(	0.238)	0.222		0.145
141	11.75	0.57	0.367	(	0.237)	0.222		0.145
142	11.83	0.60	0.389	(	0.236)	0.235		0.154
143	11.92	0.60	0.389		0.234	(	0.235)	0.154
144	12.00	0.60	0.389		0.233	(	0.235)	0.156
145	12.08	0.83	0.540		0.232	(	0.326)	0.308
146	12.17	0.83	0.540		0.231	(	0.326)	0.309
147	12.25	0.83	0.540		0.230	(	0.326)	0.310

148	12.33	0.87	0.562		0.229	(0.339)	0.333
149	12.42	0.87	0.562		0.227	(0.339)	0.334
150	12.50	0.87	0.562		0.226	(0.339)	0.335
151	12.58	0.93	0.605		0.225	(0.365)	0.380
152	12.67	0.93	0.605		0.224	(0.365)	0.381
153	12.75	0.93	0.605		0.223	(0.365)	0.382
154	12.83	0.97	0.626		0.222	(0.378)	0.405
155	12.92	0.97	0.626		0.221	(0.378)	0.406
156	13.00	0.97	0.626		0.220	(0.378)	0.407
157	13.08	1.13	0.734		0.218	(0.444)	0.516
158	13.17	1.13	0.734		0.217	(0.444)	0.517
159	13.25	1.13	0.734		0.216	(0.444)	0.518
160	13.33	1.13	0.734		0.215	(0.444)	0.519
161	13.42	1.13	0.734		0.214	(0.444)	0.520
162	13.50	1.13	0.734		0.213	(0.444)	0.521
163	13.58	0.77	0.497		0.212	(0.300)	0.285
164	13.67	0.77	0.497		0.211	(0.300)	0.286
165	13.75	0.77	0.497		0.210	(0.300)	0.287
166	13.83	0.77	0.497		0.209	(0.300)	0.288
167	13.92	0.77	0.497		0.208	(0.300)	0.289
168	14.00	0.77	0.497		0.207	(0.300)	0.290
169	14.08	0.90	0.583		0.205	(0.352)	0.378
170	14.17	0.90	0.583		0.204	(0.352)	0.379
171	14.25	0.90	0.583		0.203	(0.352)	0.380
172	14.33	0.87	0.562		0.202	(0.339)	0.359
173	14.42	0.87	0.562		0.201	(0.339)	0.360
174	14.50	0.87	0.562		0.200	(0.339)	0.361
175	14.58	0.87	0.562		0.199	(0.339)	0.362
176	14.67	0.87	0.562		0.198	(0.339)	0.363
177	14.75	0.87	0.562		0.197	(0.339)	0.364
178	14.83	0.83	0.540		0.196	(0.326)	0.344
179	14.92	0.83	0.540		0.195	(0.326)	0.345
180	15.00	0.83	0.540		0.194	(0.326)	0.346
181	15.08	0.80	0.518		0.193	(0.313)	0.325
182	15.17	0.80	0.518		0.192	(0.313)	0.326
183	15.25	0.80	0.518		0.191	(0.313)	0.327
184	15.33	0.77	0.497		0.190	(0.300)	0.307
185	15.42	0.77	0.497		0.189	(0.300)	0.308
186	15.50	0.77	0.497		0.188	(0.300)	0.308
187	15.58	0.63	0.410		0.187	(0.248)	0.223
188	15.67	0.63	0.410		0.186	(0.248)	0.224
189	15.75	0.63	0.410		0.185	(0.248)	0.225
190	15.83	0.63	0.410		0.184	(0.248)	0.226
191	15.92	0.63	0.410		0.184	(0.248)	0.227
192	16.00	0.63	0.410		0.183	(0.248)	0.228
193	16.08	0.13	0.086	(0.182)		0.052	0.034
194	16.17	0.13	0.086	(0.181)		0.052	0.034
195	16.25	0.13	0.086	(0.180)		0.052	0.034
196	16.33	0.13	0.086	(0.179)		0.052	0.034
197	16.42	0.13	0.086	(0.178)		0.052	0.034

198	16.50	0.13	0.086	(0.177)	0.052	0.034
199	16.58	0.10	0.065	(0.176)	0.039	0.026
200	16.67	0.10	0.065	(0.175)	0.039	0.026
201	16.75	0.10	0.065	(0.174)	0.039	0.026
202	16.83	0.10	0.065	(0.174)	0.039	0.026
203	16.92	0.10	0.065	(0.173)	0.039	0.026
204	17.00	0.10	0.065	(0.172)	0.039	0.026
205	17.08	0.17	0.108	(0.171)	0.065	0.043
206	17.17	0.17	0.108	(0.170)	0.065	0.043
207	17.25	0.17	0.108	(0.169)	0.065	0.043
208	17.33	0.17	0.108	(0.168)	0.065	0.043
209	17.42	0.17	0.108	(0.167)	0.065	0.043
210	17.50	0.17	0.108	(0.167)	0.065	0.043
211	17.58	0.17	0.108	(0.166)	0.065	0.043
212	17.67	0.17	0.108	(0.165)	0.065	0.043
213	17.75	0.17	0.108	(0.164)	0.065	0.043
214	17.83	0.13	0.086	(0.163)	0.052	0.034
215	17.92	0.13	0.086	(0.163)	0.052	0.034
216	18.00	0.13	0.086	(0.162)	0.052	0.034
217	18.08	0.13	0.086	(0.161)	0.052	0.034
218	18.17	0.13	0.086	(0.160)	0.052	0.034
219	18.25	0.13	0.086	(0.159)	0.052	0.034
220	18.33	0.13	0.086	(0.159)	0.052	0.034
221	18.42	0.13	0.086	(0.158)	0.052	0.034
222	18.50	0.13	0.086	(0.157)	0.052	0.034
223	18.58	0.10	0.065	(0.156)	0.039	0.026
224	18.67	0.10	0.065	(0.156)	0.039	0.026
225	18.75	0.10	0.065	(0.155)	0.039	0.026
226	18.83	0.07	0.043	(0.154)	0.026	0.017
227	18.92	0.07	0.043	(0.153)	0.026	0.017
228	19.00	0.07	0.043	(0.153)	0.026	0.017
229	19.08	0.10	0.065	(0.152)	0.039	0.026
230	19.17	0.10	0.065	(0.151)	0.039	0.026
231	19.25	0.10	0.065	(0.150)	0.039	0.026
232	19.33	0.13	0.086	(0.150)	0.052	0.034
233	19.42	0.13	0.086	(0.149)	0.052	0.034
234	19.50	0.13	0.086	(0.148)	0.052	0.034
235	19.58	0.10	0.065	(0.148)	0.039	0.026
236	19.67	0.10	0.065	(0.147)	0.039	0.026
237	19.75	0.10	0.065	(0.146)	0.039	0.026
238	19.83	0.07	0.043	(0.146)	0.026	0.017
239	19.92	0.07	0.043	(0.145)	0.026	0.017
240	20.00	0.07	0.043	(0.144)	0.026	0.017
241	20.08	0.10	0.065	(0.144)	0.039	0.026
242	20.17	0.10	0.065	(0.143)	0.039	0.026
243	20.25	0.10	0.065	(0.142)	0.039	0.026
244	20.33	0.10	0.065	(0.142)	0.039	0.026
245	20.42	0.10	0.065	(0.141)	0.039	0.026
246	20.50	0.10	0.065	(0.141)	0.039	0.026
247	20.58	0.10	0.065	(0.140)	0.039	0.026

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248  20.67     0.10      0.065       (  0.139)       0.039        0.026
249  20.75     0.10      0.065       (  0.139)       0.039        0.026
250  20.83     0.07      0.043       (  0.138)       0.026        0.017
251  20.92     0.07      0.043       (  0.138)       0.026        0.017
252  21.00     0.07      0.043       (  0.137)       0.026        0.017
253  21.08     0.10      0.065       (  0.137)       0.039        0.026
254  21.17     0.10      0.065       (  0.136)       0.039        0.026
255  21.25     0.10      0.065       (  0.136)       0.039        0.026
256  21.33     0.07      0.043       (  0.135)       0.026        0.017
257  21.42     0.07      0.043       (  0.135)       0.026        0.017
258  21.50     0.07      0.043       (  0.134)       0.026        0.017
259  21.58     0.10      0.065       (  0.134)       0.039        0.026
260  21.67     0.10      0.065       (  0.133)       0.039        0.026
261  21.75     0.10      0.065       (  0.133)       0.039        0.026
262  21.83     0.07      0.043       (  0.132)       0.026        0.017
263  21.92     0.07      0.043       (  0.132)       0.026        0.017
264  22.00     0.07      0.043       (  0.131)       0.026        0.017
265  22.08     0.10      0.065       (  0.131)       0.039        0.026
266  22.17     0.10      0.065       (  0.130)       0.039        0.026
267  22.25     0.10      0.065       (  0.130)       0.039        0.026
268  22.33     0.07      0.043       (  0.130)       0.026        0.017
269  22.42     0.07      0.043       (  0.129)       0.026        0.017
270  22.50     0.07      0.043       (  0.129)       0.026        0.017
271  22.58     0.07      0.043       (  0.128)       0.026        0.017
272  22.67     0.07      0.043       (  0.128)       0.026        0.017
273  22.75     0.07      0.043       (  0.128)       0.026        0.017
274  22.83     0.07      0.043       (  0.127)       0.026        0.017
275  22.92     0.07      0.043       (  0.127)       0.026        0.017
276  23.00     0.07      0.043       (  0.127)       0.026        0.017
277  23.08     0.07      0.043       (  0.126)       0.026        0.017
278  23.17     0.07      0.043       (  0.126)       0.026        0.017
279  23.25     0.07      0.043       (  0.126)       0.026        0.017
280  23.33     0.07      0.043       (  0.126)       0.026        0.017
281  23.42     0.07      0.043       (  0.125)       0.026        0.017
282  23.50     0.07      0.043       (  0.125)       0.026        0.017
283  23.58     0.07      0.043       (  0.125)       0.026        0.017
284  23.67     0.07      0.043       (  0.125)       0.026        0.017
285  23.75     0.07      0.043       (  0.125)       0.026        0.017
286  23.83     0.07      0.043       (  0.125)       0.026        0.017
287  23.92     0.07      0.043       (  0.124)       0.026        0.017
288  24.00     0.07      0.043       (  0.124)       0.026        0.017
                (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    32.0
       Flood volume = Effective rainfall      2.67(In)
        times area       4.9(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
       Total soil loss =      2.73(In)
       Total soil loss =     1.116(Ac.Ft)
       Total rainfall =      5.40(In)
       Flood volume =       47452.6 Cubic Feet
       Total soil loss =       48596.3 Cubic Feet
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Peak flow rate of this hydrograph = 2.575(CFS)

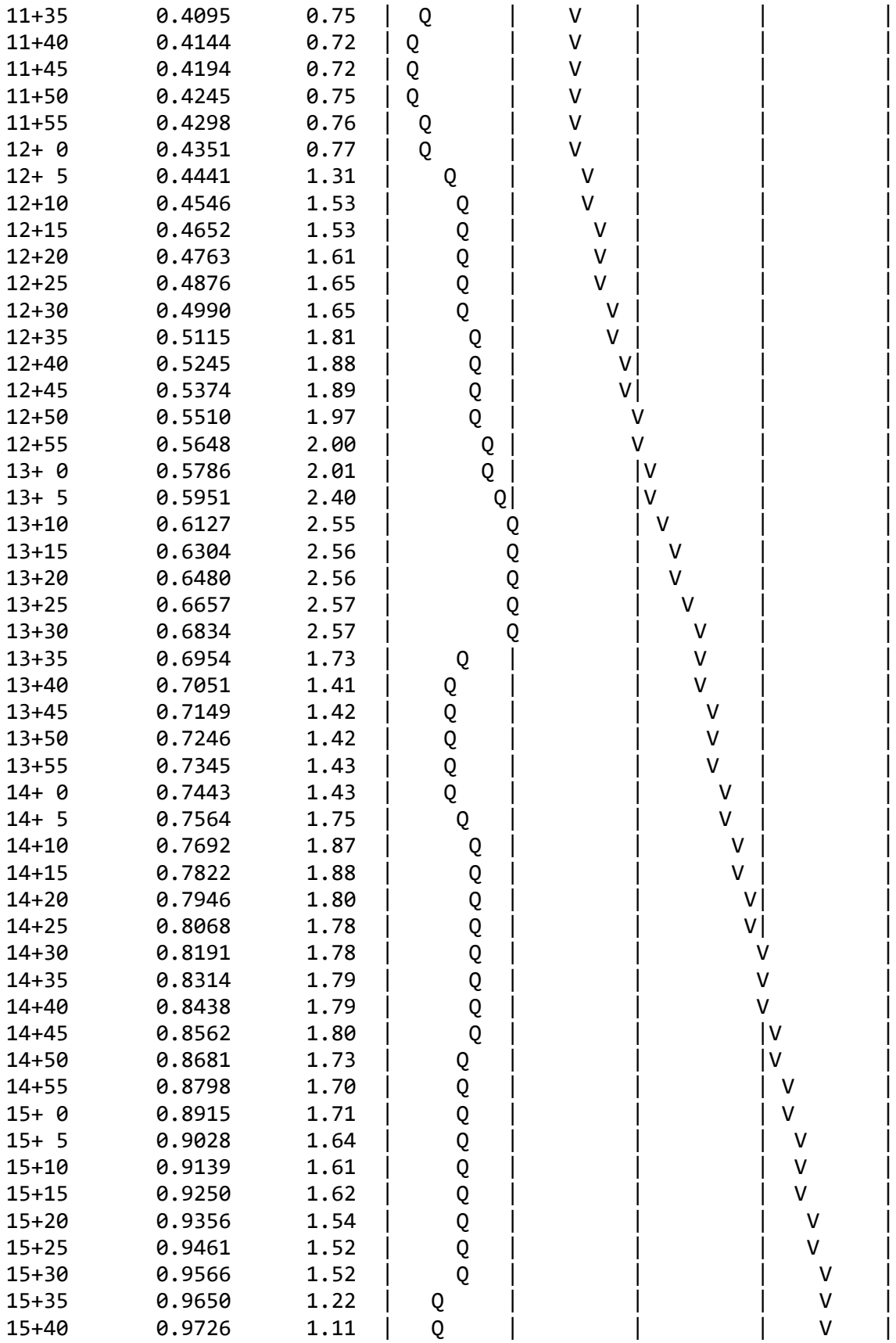
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0010	0.08	Q				
0+15	0.0016	0.08	Q				
0+20	0.0024	0.12	Q				
0+25	0.0032	0.13	Q				
0+30	0.0041	0.13	Q				
0+35	0.0050	0.13	Q				
0+40	0.0059	0.13	Q				
0+45	0.0067	0.13	Q				
0+50	0.0078	0.16	Q				
0+55	0.0090	0.17	Q				
1+ 0	0.0102	0.17	Q				
1+ 5	0.0111	0.14	Q				
1+10	0.0120	0.13	Q				
1+15	0.0129	0.13	Q				
1+20	0.0137	0.13	Q				
1+25	0.0146	0.13	Q				
1+30	0.0155	0.13	Q				
1+35	0.0163	0.13	Q				
1+40	0.0172	0.13	Q				
1+45	0.0181	0.13	Q				
1+50	0.0192	0.16	Q				
1+55	0.0203	0.17	Q				
2+ 0	0.0215	0.17	Q				
2+ 5	0.0227	0.17	Q				
2+10	0.0238	0.17	Q				
2+15	0.0250	0.17	Q				
2+20	0.0262	0.17	Q				
2+25	0.0273	0.17	QV				
2+30	0.0285	0.17	QV				
2+35	0.0299	0.20	QV				
2+40	0.0313	0.21	QV				
2+45	0.0328	0.21	QV				
2+50	0.0342	0.21	QV				
2+55	0.0357	0.21	QV				
3+ 0	0.0371	0.21	QV				
3+ 5	0.0386	0.21	QV				
3+10	0.0401	0.21	QV				

3+15	0.0415	0.21	QV	|	|	|	|
3+20	0.0430	0.21	QV	|	|	|	|
3+25	0.0444	0.21	QV	|	|	|	|
3+30	0.0459	0.21	QV	|	|	|	|
3+35	0.0473	0.21	QV	|	|	|	|
3+40	0.0488	0.21	QV	|	|	|	|
3+45	0.0502	0.21	QV	|	|	|	|
3+50	0.0519	0.24	QV	|	|	|	|
3+55	0.0537	0.25	|Q	|	|	|	|
4+ 0	0.0554	0.25	|QV	|	|	|	|
4+ 5	0.0571	0.25	|QV	|	|	|	|
4+10	0.0589	0.25	|QV	|	|	|	|
4+15	0.0606	0.25	|QV	|	|	|	|
4+20	0.0626	0.28	|QV	|	|	|	|
4+25	0.0646	0.30	|QV	|	|	|	|
4+30	0.0667	0.30	|QV	|	|	|	|
4+35	0.0687	0.30	|QV	|	|	|	|
4+40	0.0707	0.30	|QV	|	|	|	|
4+45	0.0728	0.30	|QV	|	|	|	|
4+50	0.0750	0.33	|QV	|	|	|	|
4+55	0.0774	0.34	|QV	|	|	|	|
5+ 0	0.0797	0.34	|QV	|	|	|	|
5+ 5	0.0816	0.28	|QV	|	|	|	|
5+10	0.0833	0.25	|Q V	|	|	|	|
5+15	0.0851	0.25	|Q V	|	|	|	|
5+20	0.0870	0.28	|Q V	|	|	|	|
5+25	0.0891	0.30	|Q V	|	|	|	|
5+30	0.0911	0.30	|Q V	|	|	|	|
5+35	0.0934	0.33	|Q V	|	|	|	|
5+40	0.0957	0.34	|Q V	|	|	|	|
5+45	0.0980	0.34	|Q V	|	|	|	|
5+50	0.1003	0.34	|Q V	|	|	|	|
5+55	0.1027	0.34	|Q V	|	|	|	|
6+ 0	0.1050	0.34	|Q V	|	|	|	|
6+ 5	0.1075	0.37	|Q V	|	|	|	|
6+10	0.1102	0.38	|Q V	|	|	|	|
6+15	0.1128	0.38	|Q V	|	|	|	|
6+20	0.1154	0.38	|Q V	|	|	|	|
6+25	0.1180	0.38	|Q V	|	|	|	|
6+30	0.1206	0.38	|Q V	|	|	|	|
6+35	0.1235	0.41	|Q V	|	|	|	|
6+40	0.1264	0.42	|Q V	|	|	|	|
6+45	0.1293	0.42	|Q V	|	|	|	|
6+50	0.1322	0.42	|Q V	|	|	|	|
6+55	0.1351	0.42	|Q V	|	|	|	|
7+ 0	0.1380	0.42	|Q V	|	|	|	|
7+ 5	0.1409	0.42	|Q V	|	|	|	|
7+10	0.1438	0.42	|Q V	|	|	|	|
7+15	0.1468	0.42	|Q V	|	|	|	|
7+20	0.1499	0.45	|Q V	|	|	|	|

7+25	0.1531	0.46	Q V			
7+30	0.1563	0.46	Q V			
7+35	0.1597	0.50	Q V			
7+40	0.1632	0.51	Q V			
7+45	0.1667	0.51	Q V			
7+50	0.1704	0.54	Q V			
7+55	0.1742	0.55	Q V			
8+ 0	0.1779	0.55	Q V			
8+ 5	0.1821	0.61	Q V			
8+10	0.1865	0.63	Q V			
8+15	0.1909	0.63	Q V			
8+20	0.1952	0.63	Q V			
8+25	0.1996	0.63	Q V			
8+30	0.2040	0.63	Q V			
8+35	0.2086	0.66	Q V			
8+40	0.2132	0.68	Q V			
8+45	0.2179	0.68	Q V			
8+50	0.2227	0.71	Q V			
8+55	0.2277	0.72	Q V			
9+ 0	0.2326	0.72	Q V			
9+ 5	0.2380	0.78	Q V			
9+10	0.2435	0.80	Q V			
9+15	0.2491	0.80	Q V			
9+20	0.2548	0.83	Q V			
9+25	0.2606	0.85	Q V			
9+30	0.2664	0.85	Q V			
9+35	0.2726	0.89	Q V			
9+40	0.2789	0.92	Q V			
9+45	0.2853	0.92	Q V			
9+50	0.2922	1.01	Q V			
9+55	0.2994	1.04	Q V			
10+ 0	0.3066	1.05	Q V			
10+ 5	0.3118	0.75	Q V			
10+10	0.3161	0.63	Q V			
10+15	0.3205	0.63	Q V			
10+20	0.3249	0.63	Q V			
10+25	0.3292	0.63	Q V			
10+30	0.3336	0.63	Q V			
10+35	0.3392	0.81	Q V			
10+40	0.3453	0.88	Q V			
10+45	0.3514	0.89	Q V			
10+50	0.3576	0.90	Q V			
10+55	0.3638	0.90	Q V			
11+ 0	0.3701	0.91	Q V			
11+ 5	0.3759	0.84	Q V			
11+10	0.3815	0.81	Q V			
11+15	0.3871	0.82	Q V			
11+20	0.3928	0.83	Q V			
11+25	0.3985	0.83	Q V			
11+30	0.4043	0.84	Q V			



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15+45       0.9802      1.11  |   Q     |         |         |    V    |
15+50       0.9879      1.11  |   Q     |         |         |     V   |
15+55       0.9956      1.12  |   Q     |         |         |     V   |
16+ 0       1.0034      1.12  |   Q     |         |         |     V   |
16+ 5       1.0064      0.44  |Q        |         |         |     V   |
16+10       1.0075      0.17  Q         |         |         |     V   |
16+15       1.0087      0.17  Q         |         |         |      V  |
16+20       1.0099      0.17  Q         |         |         |      V  |
16+25       1.0110      0.17  Q         |         |         |      V  |
16+30       1.0122      0.17  Q         |         |         |      V  |
16+35       1.0132      0.14  Q         |         |         |      V  |
16+40       1.0140      0.13  Q         |         |         |      V  |
16+45       1.0149      0.13  Q         |         |         |      V  |
16+50       1.0158      0.13  Q         |         |         |      V  |
16+55       1.0166      0.13  Q         |         |         |      V  |
17+ 0       1.0175      0.13  Q         |         |         |      V  |
17+ 5       1.0188      0.19  Q         |         |         |      V  |
17+10       1.0203      0.21  Q         |         |         |      V  |
17+15       1.0217      0.21  Q         |         |         |      V  |
17+20       1.0232      0.21  Q         |         |         |      V  |
17+25       1.0246      0.21  Q         |         |         |      V  |
17+30       1.0261      0.21  Q         |         |         |      V  |
17+35       1.0275      0.21  Q         |         |         |      V  |
17+40       1.0290      0.21  Q         |         |         |      V  |
17+45       1.0305      0.21  Q         |         |         |      V  |
17+50       1.0317      0.18  Q         |         |         |      V  |
17+55       1.0329      0.17  Q         |         |         |      V  |
18+ 0       1.0340      0.17  Q         |         |         |      V  |
18+ 5       1.0352      0.17  Q         |         |         |       V |
18+10       1.0364      0.17  Q         |         |         |       V |
18+15       1.0375      0.17  Q         |         |         |       V |
18+20       1.0387      0.17  Q         |         |         |       V |
18+25       1.0398      0.17  Q         |         |         |       V |
18+30       1.0410      0.17  Q         |         |         |       V |
18+35       1.0420      0.14  Q         |         |         |       V |
18+40       1.0428      0.13  Q         |         |         |       V |
18+45       1.0437      0.13  Q         |         |         |       V |
18+50       1.0444      0.10  Q         |         |         |       V |
18+55       1.0450      0.08  Q         |         |         |       V |
19+ 0       1.0455      0.08  Q         |         |         |       V |
19+ 5       1.0463      0.12  Q         |         |         |       V |
19+10       1.0472      0.13  Q         |         |         |       V |
19+15       1.0481      0.13  Q         |         |         |       V |
19+20       1.0492      0.16  Q         |         |         |       V |
19+25       1.0503      0.17  Q         |         |         |       V |
19+30       1.0515      0.17  Q         |         |         |       V |
19+35       1.0524      0.14  Q         |         |         |       V |
19+40       1.0533      0.13  Q         |         |         |       V |
19+45       1.0542      0.13  Q         |         |         |       V |
19+50       1.0549      0.10  Q         |         |         |       V |
```

19+55	1.0554	0.08	Q	|	|	|	V |
20+ 0	1.0560	0.08	Q	|	|	|	V |
20+ 5	1.0568	0.12	Q	|	|	|	V |
20+10	1.0577	0.13	Q	|	|	|	V |
20+15	1.0586	0.13	Q	|	|	|	V |
20+20	1.0594	0.13	Q	|	|	|	V |
20+25	1.0603	0.13	Q	|	|	|	V |
20+30	1.0612	0.13	Q	|	|	|	V |
20+35	1.0621	0.13	Q	|	|	|	V |
20+40	1.0629	0.13	Q	|	|	|	V|
20+45	1.0638	0.13	Q	|	|	|	V|
20+50	1.0645	0.10	Q	|	|	|	V|
20+55	1.0650	0.08	Q	|	|	|	V|
21+ 0	1.0656	0.08	Q	|	|	|	V|
21+ 5	1.0664	0.12	Q	|	|	|	V|
21+10	1.0673	0.13	Q	|	|	|	V|
21+15	1.0682	0.13	Q	|	|	|	V|
21+20	1.0688	0.10	Q	|	|	|	V|
21+25	1.0694	0.08	Q	|	|	|	V|
21+30	1.0700	0.08	Q	|	|	|	V|
21+35	1.0708	0.12	Q	|	|	|	V|
21+40	1.0717	0.13	Q	|	|	|	V|
21+45	1.0725	0.13	Q	|	|	|	V|
21+50	1.0732	0.10	Q	|	|	|	V|
21+55	1.0738	0.08	Q	|	|	|	V|
22+ 0	1.0744	0.08	Q	|	|	|	V|
22+ 5	1.0751	0.12	Q	|	|	|	V|
22+10	1.0760	0.13	Q	|	|	|	V|
22+15	1.0769	0.13	Q	|	|	|	V|
22+20	1.0776	0.10	Q	|	|	|	V|
22+25	1.0781	0.08	Q	|	|	|	V|
22+30	1.0787	0.08	Q	|	|	|	V|
22+35	1.0793	0.08	Q	|	|	|	V|
22+40	1.0799	0.08	Q	|	|	|	V|
22+45	1.0805	0.08	Q	|	|	|	V|
22+50	1.0810	0.08	Q	|	|	|	V|
22+55	1.0816	0.08	Q	|	|	|	V|
23+ 0	1.0822	0.08	Q	|	|	|	V|
23+ 5	1.0828	0.08	Q	|	|	|	V|
23+10	1.0834	0.08	Q	|	|	|	V|
23+15	1.0840	0.08	Q	|	|	|	V|
23+20	1.0845	0.08	Q	|	|	|	V|
23+25	1.0851	0.08	Q	|	|	|	V|
23+30	1.0857	0.08	Q	|	|	|	V|
23+35	1.0863	0.08	Q	|	|	|	V|
23+40	1.0869	0.08	Q	|	|	|	V|
23+45	1.0875	0.08	Q	|	|	|	V|
23+50	1.0880	0.08	Q	|	|	|	V|
23+55	1.0886	0.08	Q	|	|	|	V|
24+ 0	1.0892	0.08	Q	|	|	|	V|

```
   24+ 5       1.0894      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 03/04/24 File: ONSITEPOSTE1242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.170        0.486       1.000      0.486
                                                 Sum (F) =   0.486
Area averaged mean soil loss (F) (In/Hr) =  0.486
Minimum soil loss rate ((In/Hr)) =  0.243
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.016	(0.862)	0.012	0.004
2	0.17	0.07	0.016	(0.858)	0.012	0.004
3	0.25	0.07	0.016	(0.855)	0.012	0.004
4	0.33	0.10	0.024	(0.852)	0.018	0.006
5	0.42	0.10	0.024	(0.849)	0.018	0.006
6	0.50	0.10	0.024	(0.845)	0.018	0.006
7	0.58	0.10	0.024	(0.842)	0.018	0.006
8	0.67	0.10	0.024	(0.839)	0.018	0.006
9	0.75	0.10	0.024	(0.835)	0.018	0.006
10	0.83	0.13	0.032	(0.832)	0.024	0.008
11	0.92	0.13	0.032	(0.829)	0.024	0.008
12	1.00	0.13	0.032	(0.825)	0.024	0.008
13	1.08	0.10	0.024	(0.822)	0.018	0.006
14	1.17	0.10	0.024	(0.819)	0.018	0.006
15	1.25	0.10	0.024	(0.816)	0.018	0.006
16	1.33	0.10	0.024	(0.812)	0.018	0.006
17	1.42	0.10	0.024	(0.809)	0.018	0.006
18	1.50	0.10	0.024	(0.806)	0.018	0.006
19	1.58	0.10	0.024	(0.803)	0.018	0.006
20	1.67	0.10	0.024	(0.800)	0.018	0.006
21	1.75	0.10	0.024	(0.796)	0.018	0.006
22	1.83	0.13	0.032	(0.793)	0.024	0.008
23	1.92	0.13	0.032	(0.790)	0.024	0.008
24	2.00	0.13	0.032	(0.787)	0.024	0.008
25	2.08	0.13	0.032	(0.784)	0.024	0.008
26	2.17	0.13	0.032	(0.780)	0.024	0.008
27	2.25	0.13	0.032	(0.777)	0.024	0.008
28	2.33	0.13	0.032	(0.774)	0.024	0.008
29	2.42	0.13	0.032	(0.771)	0.024	0.008
30	2.50	0.13	0.032	(0.768)	0.024	0.008
31	2.58	0.17	0.040	(0.765)	0.031	0.009
32	2.67	0.17	0.040	(0.762)	0.031	0.009
33	2.75	0.17	0.040	(0.758)	0.031	0.009
34	2.83	0.17	0.040	(0.755)	0.031	0.009
35	2.92	0.17	0.040	(0.752)	0.031	0.009
36	3.00	0.17	0.040	(0.749)	0.031	0.009
37	3.08	0.17	0.040	(0.746)	0.031	0.009
38	3.17	0.17	0.040	(0.743)	0.031	0.009
39	3.25	0.17	0.040	(0.740)	0.031	0.009
40	3.33	0.17	0.040	(0.737)	0.031	0.009
41	3.42	0.17	0.040	(0.734)	0.031	0.009
42	3.50	0.17	0.040	(0.731)	0.031	0.009
43	3.58	0.17	0.040	(0.727)	0.031	0.009
44	3.67	0.17	0.040	(0.724)	0.031	0.009
45	3.75	0.17	0.040	(0.721)	0.031	0.009

46	3.83	0.20	0.048	(0.718)	0.037	0.011
47	3.92	0.20	0.048	(0.715)	0.037	0.011
48	4.00	0.20	0.048	(0.712)	0.037	0.011
49	4.08	0.20	0.048	(0.709)	0.037	0.011
50	4.17	0.20	0.048	(0.706)	0.037	0.011
51	4.25	0.20	0.048	(0.703)	0.037	0.011
52	4.33	0.23	0.056	(0.700)	0.043	0.013
53	4.42	0.23	0.056	(0.697)	0.043	0.013
54	4.50	0.23	0.056	(0.694)	0.043	0.013
55	4.58	0.23	0.056	(0.691)	0.043	0.013
56	4.67	0.23	0.056	(0.688)	0.043	0.013
57	4.75	0.23	0.056	(0.685)	0.043	0.013
58	4.83	0.27	0.064	(0.682)	0.049	0.015
59	4.92	0.27	0.064	(0.679)	0.049	0.015
60	5.00	0.27	0.064	(0.676)	0.049	0.015
61	5.08	0.20	0.048	(0.674)	0.037	0.011
62	5.17	0.20	0.048	(0.671)	0.037	0.011
63	5.25	0.20	0.048	(0.668)	0.037	0.011
64	5.33	0.23	0.056	(0.665)	0.043	0.013
65	5.42	0.23	0.056	(0.662)	0.043	0.013
66	5.50	0.23	0.056	(0.659)	0.043	0.013
67	5.58	0.27	0.064	(0.656)	0.049	0.015
68	5.67	0.27	0.064	(0.653)	0.049	0.015
69	5.75	0.27	0.064	(0.650)	0.049	0.015
70	5.83	0.27	0.064	(0.647)	0.049	0.015
71	5.92	0.27	0.064	(0.645)	0.049	0.015
72	6.00	0.27	0.064	(0.642)	0.049	0.015
73	6.08	0.30	0.072	(0.639)	0.055	0.017
74	6.17	0.30	0.072	(0.636)	0.055	0.017
75	6.25	0.30	0.072	(0.633)	0.055	0.017
76	6.33	0.30	0.072	(0.630)	0.055	0.017
77	6.42	0.30	0.072	(0.628)	0.055	0.017
78	6.50	0.30	0.072	(0.625)	0.055	0.017
79	6.58	0.33	0.080	(0.622)	0.061	0.019
80	6.67	0.33	0.080	(0.619)	0.061	0.019
81	6.75	0.33	0.080	(0.616)	0.061	0.019
82	6.83	0.33	0.080	(0.614)	0.061	0.019
83	6.92	0.33	0.080	(0.611)	0.061	0.019
84	7.00	0.33	0.080	(0.608)	0.061	0.019
85	7.08	0.33	0.080	(0.605)	0.061	0.019
86	7.17	0.33	0.080	(0.602)	0.061	0.019
87	7.25	0.33	0.080	(0.600)	0.061	0.019
88	7.33	0.37	0.088	(0.597)	0.067	0.021
89	7.42	0.37	0.088	(0.594)	0.067	0.021
90	7.50	0.37	0.088	(0.592)	0.067	0.021
91	7.58	0.40	0.096	(0.589)	0.073	0.023
92	7.67	0.40	0.096	(0.586)	0.073	0.023
93	7.75	0.40	0.096	(0.583)	0.073	0.023
94	7.83	0.43	0.104	(0.581)	0.079	0.025
95	7.92	0.43	0.104	(0.578)	0.079	0.025

96	8.00	0.43	0.104	(0.575)	0.079	0.025
97	8.08	0.50	0.120	(0.573)	0.092	0.028
98	8.17	0.50	0.120	(0.570)	0.092	0.028
99	8.25	0.50	0.120	(0.567)	0.092	0.028
100	8.33	0.50	0.120	(0.565)	0.092	0.028
101	8.42	0.50	0.120	(0.562)	0.092	0.028
102	8.50	0.50	0.120	(0.559)	0.092	0.028
103	8.58	0.53	0.128	(0.557)	0.098	0.030
104	8.67	0.53	0.128	(0.554)	0.098	0.030
105	8.75	0.53	0.128	(0.552)	0.098	0.030
106	8.83	0.57	0.136	(0.549)	0.104	0.032
107	8.92	0.57	0.136	(0.546)	0.104	0.032
108	9.00	0.57	0.136	(0.544)	0.104	0.032
109	9.08	0.63	0.152	(0.541)	0.116	0.036
110	9.17	0.63	0.152	(0.539)	0.116	0.036
111	9.25	0.63	0.152	(0.536)	0.116	0.036
112	9.33	0.67	0.160	(0.534)	0.122	0.038
113	9.42	0.67	0.160	(0.531)	0.122	0.038
114	9.50	0.67	0.160	(0.528)	0.122	0.038
115	9.58	0.70	0.168	(0.526)	0.128	0.040
116	9.67	0.70	0.168	(0.523)	0.128	0.040
117	9.75	0.70	0.168	(0.521)	0.128	0.040
118	9.83	0.73	0.176	(0.518)	0.134	0.042
119	9.92	0.73	0.176	(0.516)	0.134	0.042
120	10.00	0.73	0.176	(0.513)	0.134	0.042
121	10.08	0.50	0.120	(0.511)	0.092	0.028
122	10.17	0.50	0.120	(0.508)	0.092	0.028
123	10.25	0.50	0.120	(0.506)	0.092	0.028
124	10.33	0.50	0.120	(0.503)	0.092	0.028
125	10.42	0.50	0.120	(0.501)	0.092	0.028
126	10.50	0.50	0.120	(0.499)	0.092	0.028
127	10.58	0.67	0.160	(0.496)	0.122	0.038
128	10.67	0.67	0.160	(0.494)	0.122	0.038
129	10.75	0.67	0.160	(0.491)	0.122	0.038
130	10.83	0.67	0.160	(0.489)	0.122	0.038
131	10.92	0.67	0.160	(0.487)	0.122	0.038
132	11.00	0.67	0.160	(0.484)	0.122	0.038
133	11.08	0.63	0.152	(0.482)	0.116	0.036
134	11.17	0.63	0.152	(0.479)	0.116	0.036
135	11.25	0.63	0.152	(0.477)	0.116	0.036
136	11.33	0.63	0.152	(0.475)	0.116	0.036
137	11.42	0.63	0.152	(0.472)	0.116	0.036
138	11.50	0.63	0.152	(0.470)	0.116	0.036
139	11.58	0.57	0.136	(0.468)	0.104	0.032
140	11.67	0.57	0.136	(0.465)	0.104	0.032
141	11.75	0.57	0.136	(0.463)	0.104	0.032
142	11.83	0.60	0.144	(0.461)	0.110	0.034
143	11.92	0.60	0.144	(0.458)	0.110	0.034
144	12.00	0.60	0.144	(0.456)	0.110	0.034
145	12.08	0.83	0.200	(0.454)	0.153	0.047

146	12.17	0.83	0.200	(0.452)	0.153	0.047
147	12.25	0.83	0.200	(0.449)	0.153	0.047
148	12.33	0.87	0.208	(0.447)	0.159	0.049
149	12.42	0.87	0.208	(0.445)	0.159	0.049
150	12.50	0.87	0.208	(0.443)	0.159	0.049
151	12.58	0.93	0.224	(0.440)	0.171	0.053
152	12.67	0.93	0.224	(0.438)	0.171	0.053
153	12.75	0.93	0.224	(0.436)	0.171	0.053
154	12.83	0.97	0.232	(0.434)	0.177	0.055
155	12.92	0.97	0.232	(0.431)	0.177	0.055
156	13.00	0.97	0.232	(0.429)	0.177	0.055
157	13.08	1.13	0.272	(0.427)	0.208	0.064
158	13.17	1.13	0.272	(0.425)	0.208	0.064
159	13.25	1.13	0.272	(0.423)	0.208	0.064
160	13.33	1.13	0.272	(0.421)	0.208	0.064
161	13.42	1.13	0.272	(0.419)	0.208	0.064
162	13.50	1.13	0.272	(0.416)	0.208	0.064
163	13.58	0.77	0.184	(0.414)	0.141	0.043
164	13.67	0.77	0.184	(0.412)	0.141	0.043
165	13.75	0.77	0.184	(0.410)	0.141	0.043
166	13.83	0.77	0.184	(0.408)	0.141	0.043
167	13.92	0.77	0.184	(0.406)	0.141	0.043
168	14.00	0.77	0.184	(0.404)	0.141	0.043
169	14.08	0.90	0.216	(0.402)	0.165	0.051
170	14.17	0.90	0.216	(0.400)	0.165	0.051
171	14.25	0.90	0.216	(0.398)	0.165	0.051
172	14.33	0.87	0.208	(0.396)	0.159	0.049
173	14.42	0.87	0.208	(0.394)	0.159	0.049
174	14.50	0.87	0.208	(0.392)	0.159	0.049
175	14.58	0.87	0.208	(0.390)	0.159	0.049
176	14.67	0.87	0.208	(0.388)	0.159	0.049
177	14.75	0.87	0.208	(0.386)	0.159	0.049
178	14.83	0.83	0.200	(0.384)	0.153	0.047
179	14.92	0.83	0.200	(0.382)	0.153	0.047
180	15.00	0.83	0.200	(0.380)	0.153	0.047
181	15.08	0.80	0.192	(0.378)	0.147	0.045
182	15.17	0.80	0.192	(0.376)	0.147	0.045
183	15.25	0.80	0.192	(0.374)	0.147	0.045
184	15.33	0.77	0.184	(0.372)	0.141	0.043
185	15.42	0.77	0.184	(0.370)	0.141	0.043
186	15.50	0.77	0.184	(0.368)	0.141	0.043
187	15.58	0.63	0.152	(0.366)	0.116	0.036
188	15.67	0.63	0.152	(0.364)	0.116	0.036
189	15.75	0.63	0.152	(0.363)	0.116	0.036
190	15.83	0.63	0.152	(0.361)	0.116	0.036
191	15.92	0.63	0.152	(0.359)	0.116	0.036
192	16.00	0.63	0.152	(0.357)	0.116	0.036
193	16.08	0.13	0.032	(0.355)	0.024	0.008
194	16.17	0.13	0.032	(0.353)	0.024	0.008
195	16.25	0.13	0.032	(0.352)	0.024	0.008

196	16.33	0.13	0.032	(0.350)	0.024	0.008
197	16.42	0.13	0.032	(0.348)	0.024	0.008
198	16.50	0.13	0.032	(0.346)	0.024	0.008
199	16.58	0.10	0.024	(0.344)	0.018	0.006
200	16.67	0.10	0.024	(0.343)	0.018	0.006
201	16.75	0.10	0.024	(0.341)	0.018	0.006
202	16.83	0.10	0.024	(0.339)	0.018	0.006
203	16.92	0.10	0.024	(0.338)	0.018	0.006
204	17.00	0.10	0.024	(0.336)	0.018	0.006
205	17.08	0.17	0.040	(0.334)	0.031	0.009
206	17.17	0.17	0.040	(0.332)	0.031	0.009
207	17.25	0.17	0.040	(0.331)	0.031	0.009
208	17.33	0.17	0.040	(0.329)	0.031	0.009
209	17.42	0.17	0.040	(0.327)	0.031	0.009
210	17.50	0.17	0.040	(0.326)	0.031	0.009
211	17.58	0.17	0.040	(0.324)	0.031	0.009
212	17.67	0.17	0.040	(0.323)	0.031	0.009
213	17.75	0.17	0.040	(0.321)	0.031	0.009
214	17.83	0.13	0.032	(0.319)	0.024	0.008
215	17.92	0.13	0.032	(0.318)	0.024	0.008
216	18.00	0.13	0.032	(0.316)	0.024	0.008
217	18.08	0.13	0.032	(0.315)	0.024	0.008
218	18.17	0.13	0.032	(0.313)	0.024	0.008
219	18.25	0.13	0.032	(0.312)	0.024	0.008
220	18.33	0.13	0.032	(0.310)	0.024	0.008
221	18.42	0.13	0.032	(0.309)	0.024	0.008
222	18.50	0.13	0.032	(0.307)	0.024	0.008
223	18.58	0.10	0.024	(0.306)	0.018	0.006
224	18.67	0.10	0.024	(0.304)	0.018	0.006
225	18.75	0.10	0.024	(0.303)	0.018	0.006
226	18.83	0.07	0.016	(0.301)	0.012	0.004
227	18.92	0.07	0.016	(0.300)	0.012	0.004
228	19.00	0.07	0.016	(0.298)	0.012	0.004
229	19.08	0.10	0.024	(0.297)	0.018	0.006
230	19.17	0.10	0.024	(0.296)	0.018	0.006
231	19.25	0.10	0.024	(0.294)	0.018	0.006
232	19.33	0.13	0.032	(0.293)	0.024	0.008
233	19.42	0.13	0.032	(0.291)	0.024	0.008
234	19.50	0.13	0.032	(0.290)	0.024	0.008
235	19.58	0.10	0.024	(0.289)	0.018	0.006
236	19.67	0.10	0.024	(0.287)	0.018	0.006
237	19.75	0.10	0.024	(0.286)	0.018	0.006
238	19.83	0.07	0.016	(0.285)	0.012	0.004
239	19.92	0.07	0.016	(0.284)	0.012	0.004
240	20.00	0.07	0.016	(0.282)	0.012	0.004
241	20.08	0.10	0.024	(0.281)	0.018	0.006
242	20.17	0.10	0.024	(0.280)	0.018	0.006
243	20.25	0.10	0.024	(0.279)	0.018	0.006
244	20.33	0.10	0.024	(0.277)	0.018	0.006
245	20.42	0.10	0.024	(0.276)	0.018	0.006

246	20.50	0.10	0.024	(0.275)	0.018	0.006
247	20.58	0.10	0.024	(0.274)	0.018	0.006
248	20.67	0.10	0.024	(0.273)	0.018	0.006
249	20.75	0.10	0.024	(0.272)	0.018	0.006
250	20.83	0.07	0.016	(0.270)	0.012	0.004
251	20.92	0.07	0.016	(0.269)	0.012	0.004
252	21.00	0.07	0.016	(0.268)	0.012	0.004
253	21.08	0.10	0.024	(0.267)	0.018	0.006
254	21.17	0.10	0.024	(0.266)	0.018	0.006
255	21.25	0.10	0.024	(0.265)	0.018	0.006
256	21.33	0.07	0.016	(0.264)	0.012	0.004
257	21.42	0.07	0.016	(0.263)	0.012	0.004
258	21.50	0.07	0.016	(0.262)	0.012	0.004
259	21.58	0.10	0.024	(0.261)	0.018	0.006
260	21.67	0.10	0.024	(0.260)	0.018	0.006
261	21.75	0.10	0.024	(0.259)	0.018	0.006
262	21.83	0.07	0.016	(0.258)	0.012	0.004
263	21.92	0.07	0.016	(0.258)	0.012	0.004
264	22.00	0.07	0.016	(0.257)	0.012	0.004
265	22.08	0.10	0.024	(0.256)	0.018	0.006
266	22.17	0.10	0.024	(0.255)	0.018	0.006
267	22.25	0.10	0.024	(0.254)	0.018	0.006
268	22.33	0.07	0.016	(0.253)	0.012	0.004
269	22.42	0.07	0.016	(0.253)	0.012	0.004
270	22.50	0.07	0.016	(0.252)	0.012	0.004
271	22.58	0.07	0.016	(0.251)	0.012	0.004
272	22.67	0.07	0.016	(0.250)	0.012	0.004
273	22.75	0.07	0.016	(0.250)	0.012	0.004
274	22.83	0.07	0.016	(0.249)	0.012	0.004
275	22.92	0.07	0.016	(0.248)	0.012	0.004
276	23.00	0.07	0.016	(0.248)	0.012	0.004
277	23.08	0.07	0.016	(0.247)	0.012	0.004
278	23.17	0.07	0.016	(0.247)	0.012	0.004
279	23.25	0.07	0.016	(0.246)	0.012	0.004
280	23.33	0.07	0.016	(0.246)	0.012	0.004
281	23.42	0.07	0.016	(0.245)	0.012	0.004
282	23.50	0.07	0.016	(0.245)	0.012	0.004
283	23.58	0.07	0.016	(0.244)	0.012	0.004
284	23.67	0.07	0.016	(0.244)	0.012	0.004
285	23.75	0.07	0.016	(0.244)	0.012	0.004
286	23.83	0.07	0.016	(0.243)	0.012	0.004
287	23.92	0.07	0.016	(0.243)	0.012	0.004
288	24.00	0.07	0.016	(0.243)	0.012	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 5.7

Flood volume = Effective rainfall 0.47(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 1.53(In)
Total soil loss = 0.598(Ac.Ft)
Total rainfall = 2.00(In)

Flood volume = 8052.7 Cubic Feet
Total soil loss = 26069.0 Cubic Feet

Peak flow rate of this hydrograph = 0.304(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	0.0004	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	0.0016	0.03	Q				
0+55	0.0018	0.03	Q				
1+ 0	0.0021	0.04	Q				
1+ 5	0.0023	0.03	Q				
1+10	0.0025	0.03	Q				
1+15	0.0027	0.03	Q				
1+20	0.0028	0.03	Q				
1+25	0.0030	0.03	Q				
1+30	0.0032	0.03	Q				
1+35	0.0034	0.03	Q				
1+40	0.0036	0.03	Q				
1+45	0.0038	0.03	Q				
1+50	0.0040	0.03	Q				
1+55	0.0042	0.03	Q				
2+ 0	0.0045	0.04	Q				
2+ 5	0.0047	0.04	QV				
2+10	0.0050	0.04	QV				
2+15	0.0052	0.04	QV				
2+20	0.0054	0.04	QV				
2+25	0.0057	0.04	QV				
2+30	0.0059	0.04	QV				
2+35	0.0062	0.04	QV				
2+40	0.0065	0.04	QV				
2+45	0.0068	0.04	QV				
2+50	0.0071	0.04	QV				
2+55	0.0074	0.04	QV				
3+ 0	0.0077	0.04	QV				

3+ 5	0.0081	0.04	QV	|	|	|	|
3+10	0.0084	0.04	QV	|	|	|	|
3+15	0.0087	0.04	QV	|	|	|	|
3+20	0.0090	0.04	QV	|	|	|	|
3+25	0.0093	0.04	Q V	|	|	|	|
3+30	0.0096	0.04	Q V	|	|	|	|
3+35	0.0099	0.04	Q V	|	|	|	|
3+40	0.0102	0.04	Q V	|	|	|	|
3+45	0.0105	0.04	Q V	|	|	|	|
3+50	0.0109	0.05	Q V	|	|	|	|
3+55	0.0112	0.05	Q V	|	|	|	|
4+ 0	0.0116	0.05	Q V	|	|	|	|
4+ 5	0.0120	0.05	Q V	|	|	|	|
4+10	0.0123	0.05	Q V	|	|	|	|
4+15	0.0127	0.05	Q V	|	|	|	|
4+20	0.0131	0.06	Q V	|	|	|	|
4+25	0.0135	0.06	Q V	|	|	|	|
4+30	0.0140	0.06	Q V	|	|	|	|
4+35	0.0144	0.06	Q V	|	|	|	|
4+40	0.0148	0.06	Q V	|	|	|	|
4+45	0.0152	0.06	Q V	|	|	|	|
4+50	0.0157	0.07	Q V	|	|	|	|
4+55	0.0162	0.07	Q V	|	|	|	|
5+ 0	0.0167	0.07	Q V	|	|	|	|
5+ 5	0.0171	0.06	Q V	|	|	|	|
5+10	0.0175	0.06	Q V	|	|	|	|
5+15	0.0179	0.05	Q V	|	|	|	|
5+20	0.0183	0.06	Q V	|	|	|	|
5+25	0.0187	0.06	Q V	|	|	|	|
5+30	0.0191	0.06	Q V	|	|	|	|
5+35	0.0196	0.07	Q V	|	|	|	|
5+40	0.0201	0.07	Q V	|	|	|	|
5+45	0.0206	0.07	Q V	|	|	|	|
5+50	0.0211	0.07	Q V	|	|	|	|
5+55	0.0216	0.07	Q V	|	|	|	|
6+ 0	0.0220	0.07	Q V	|	|	|	|
6+ 5	0.0226	0.08	Q V	|	|	|	|
6+10	0.0231	0.08	Q V	|	|	|	|
6+15	0.0237	0.08	Q V	|	|	|	|
6+20	0.0242	0.08	Q V	|	|	|	|
6+25	0.0248	0.08	Q V	|	|	|	|
6+30	0.0253	0.08	Q V	|	|	|	|
6+35	0.0259	0.08	Q V	|	|	|	|
6+40	0.0265	0.09	Q V	|	|	|	|
6+45	0.0271	0.09	Q V	|	|	|	|
6+50	0.0278	0.09	Q V	|	|	|	|
6+55	0.0284	0.09	Q V	|	|	|	|
7+ 0	0.0290	0.09	Q V	|	|	|	|
7+ 5	0.0296	0.09	Q V	|	|	|	|
7+10	0.0302	0.09	Q V	|	|	|	|

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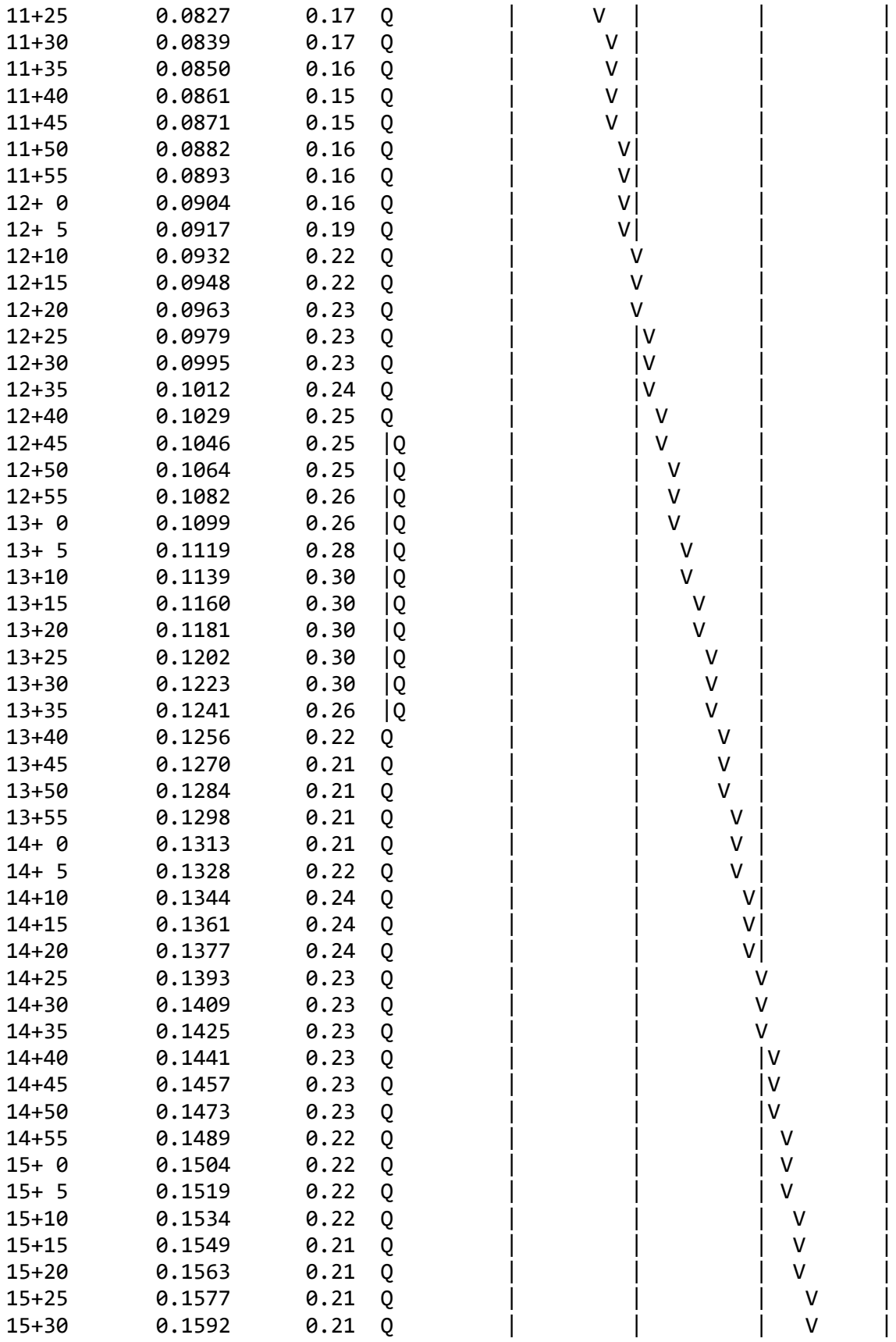
 7+15       0.0308      0.09  Q     V   |          |          |          |
 7+20       0.0315      0.09  Q     V   |          |          |          |
 7+25       0.0322      0.10  Q     V   |          |          |          |
 7+30       0.0328      0.10  Q      V  |          |          |          |
 7+35       0.0335      0.10  Q      V  |          |          |          |
 7+40       0.0343      0.11  Q      V  |          |          |          |
 7+45       0.0350      0.11  Q      V  |          |          |          |
 7+50       0.0358      0.11  Q      V  |          |          |          |
 7+55       0.0366      0.12  Q      V  |          |          |          |
 8+ 0       0.0374      0.12  Q       V |          |          |          |
 8+ 5       0.0382      0.12  Q       V |          |          |          |
 8+10       0.0391      0.13  Q       V |          |          |          |
 8+15       0.0401      0.13  Q       V |          |          |          |
 8+20       0.0410      0.13  Q       V |          |          |          |
 8+25       0.0419      0.13  Q        V|          |          |          |
 8+30       0.0428      0.13  Q        V|          |          |          |
 8+35       0.0438      0.14  Q        V|          |          |          |
 8+40       0.0448      0.14  Q        V|          |          |          |
 8+45       0.0458      0.14  Q        V|          |          |          |
 8+50       0.0468      0.15  Q         V          |          |          |
 8+55       0.0478      0.15  Q         V          |          |          |
 9+ 0       0.0489      0.15  Q         V          |          |          |
 9+ 5       0.0500      0.16  Q         V          |          |          |
 9+10       0.0511      0.17  Q         |V         |          |          |
 9+15       0.0523      0.17  Q         |V         |          |          |
 9+20       0.0535      0.17  Q         |V         |          |          |
 9+25       0.0547      0.18  Q         |V         |          |          |
 9+30       0.0559      0.18  Q         | V        |          |          |
 9+35       0.0572      0.18  Q         | V        |          |          |
 9+40       0.0585      0.19  Q         | V        |          |          |
 9+45       0.0598      0.19  Q         | V        |          |          |
 9+50       0.0611      0.19  Q         |  V       |          |          |
 9+55       0.0625      0.20  Q         |  V       |          |          |
10+ 0       0.0638      0.20  Q         |  V       |          |          |
10+ 5       0.0650      0.17  Q         |   V      |          |          |
10+10       0.0659      0.14  Q         |   V      |          |          |
10+15       0.0669      0.14  Q         |   V      |          |          |
10+20       0.0678      0.13  Q         |   V      |          |          |
10+25       0.0687      0.13  Q         |   V      |          |          |
10+30       0.0696      0.13  Q         |    V     |          |          |
10+35       0.0707      0.16  Q         |    V     |          |          |
10+40       0.0719      0.17  Q         |    V     |          |          |
10+45       0.0731      0.18  Q         |    V     |          |          |
10+50       0.0744      0.18  Q         |     V    |          |          |
10+55       0.0756      0.18  Q         |     V    |          |          |
11+ 0       0.0768      0.18  Q         |     V    |          |          |
11+ 5       0.0780      0.17  Q         |     V    |          |          |
11+10       0.0792      0.17  Q         |      V   |          |          |
11+15       0.0804      0.17  Q         |      V   |          |          |
11+20       0.0816      0.17  Q         |      V   |          |          |
```


11+25 0.0827 0.17 Q
11+30 0.0839 0.17 Q
11+35 0.0850 0.16 Q
11+40 0.0861 0.15 Q
11+45 0.0871 0.15 Q
11+50 0.0882 0.16 Q
11+55 0.0893 0.16 Q
12+ 0 0.0904 0.16 Q
12+ 5 0.0917 0.19 Q
12+10 0.0932 0.22 Q
12+15 0.0948 0.22 Q
12+20 0.0963 0.23 Q
12+25 0.0979 0.23 Q
12+30 0.0995 0.23 Q
12+35 0.1012 0.24 Q
12+40 0.1029 0.25 Q
12+45 0.1046 0.25 |Q
12+50 0.1064 0.25 |Q
12+55 0.1082 0.26 |Q
13+ 0 0.1099 0.26 |Q
13+ 5 0.1119 0.28 |Q
13+10 0.1139 0.30 |Q
13+15 0.1160 0.30 |Q
13+20 0.1181 0.30 |Q
13+25 0.1202 0.30 |Q
13+30 0.1223 0.30 |Q
13+35 0.1241 0.26 |Q
13+40 0.1256 0.22 Q
13+45 0.1270 0.21 Q
13+50 0.1284 0.21 Q
13+55 0.1298 0.21 Q
14+ 0 0.1313 0.21 Q
14+ 5 0.1328 0.22 Q
14+10 0.1344 0.24 Q
14+15 0.1361 0.24 Q
14+20 0.1377 0.24 Q
14+25 0.1393 0.23 Q
14+30 0.1409 0.23 Q
14+35 0.1425 0.23 Q
14+40 0.1441 0.23 Q
14+45 0.1457 0.23 Q
14+50 0.1473 0.23 Q
14+55 0.1489 0.22 Q
15+ 0 0.1504 0.22 Q
15+ 5 0.1519 0.22 Q
15+10 0.1534 0.22 Q
15+15 0.1549 0.21 Q
15+20 0.1563 0.21 Q
15+25 0.1577 0.21 Q
15+30 0.1592 0.21 Q

15+35	0.1605	0.19	Q	|	|	| V	|
15+40	0.1617	0.17	Q	|	|	| V	|
15+45	0.1628	0.17	Q	|	|	| V	|
15+50	0.1640	0.17	Q	|	|	| V	|
15+55	0.1652	0.17	Q	|	|	| V	|
16+ 0	0.1664	0.17	Q	|	|	| V	|
16+ 5	0.1671	0.11	Q	|	|	| V	|
16+10	0.1674	0.05	Q	|	|	| V	|
16+15	0.1677	0.04	Q	|	|	| V	|
16+20	0.1679	0.04	Q	|	|	| V	|
16+25	0.1682	0.04	Q	|	|	| V	|
16+30	0.1684	0.04	Q	|	|	| V	|
16+35	0.1687	0.03	Q	|	|	| V	|
16+40	0.1688	0.03	Q	|	|	| V	|
16+45	0.1690	0.03	Q	|	|	| V	|
16+50	0.1692	0.03	Q	|	|	| V	|
16+55	0.1694	0.03	Q	|	|	| V	|
17+ 0	0.1696	0.03	Q	|	|	| V	|
17+ 5	0.1698	0.04	Q	|	|	| V	|
17+10	0.1701	0.04	Q	|	|	| V	|
17+15	0.1704	0.04	Q	|	|	| V	|
17+20	0.1707	0.04	Q	|	|	| V	|
17+25	0.1710	0.04	Q	|	|	| V	|
17+30	0.1714	0.04	Q	|	|	| V	|
17+35	0.1717	0.04	Q	|	|	| V	|
17+40	0.1720	0.04	Q	|	|	| V	|
17+45	0.1723	0.04	Q	|	|	| V	|
17+50	0.1726	0.04	Q	|	|	| V	|
17+55	0.1728	0.04	Q	|	|	| V	|
18+ 0	0.1731	0.04	Q	|	|	| V	|
18+ 5	0.1733	0.04	Q	|	|	| V	|
18+10	0.1736	0.04	Q	|	|	| V	|
18+15	0.1738	0.04	Q	|	|	| V	|
18+20	0.1740	0.04	Q	|	|	| V	|
18+25	0.1743	0.04	Q	|	|	| V	|
18+30	0.1745	0.04	Q	|	|	| V	|
18+35	0.1748	0.03	Q	|	|	| V	|
18+40	0.1749	0.03	Q	|	|	| V	|
18+45	0.1751	0.03	Q	|	|	| V	|
18+50	0.1753	0.02	Q	|	|	| V	|
18+55	0.1754	0.02	Q	|	|	| V	|
19+ 0	0.1755	0.02	Q	|	|	| V	|
19+ 5	0.1757	0.02	Q	|	|	| V	|
19+10	0.1759	0.03	Q	|	|	| V	|
19+15	0.1761	0.03	Q	|	|	| V	|
19+20	0.1763	0.03	Q	|	|	| V	|
19+25	0.1765	0.03	Q	|	|	| V	|
19+30	0.1768	0.04	Q	|	|	| V	|
19+35	0.1770	0.03	Q	|	|	| V	|
19+40	0.1772	0.03	Q	|	|	| V	|

19+45	0.1773	0.03	Q	|	|	|	V |
19+50	0.1775	0.02	Q	|	|	|	V |
19+55	0.1776	0.02	Q	|	|	|	V |
20+ 0	0.1778	0.02	Q	|	|	|	V |
20+ 5	0.1779	0.02	Q	|	|	|	V |
20+10	0.1781	0.03	Q	|	|	|	V |
20+15	0.1783	0.03	Q	|	|	|	V |
20+20	0.1785	0.03	Q	|	|	|	V |
20+25	0.1786	0.03	Q	|	|	|	V |
20+30	0.1788	0.03	Q	|	|	|	V |
20+35	0.1790	0.03	Q	|	|	|	V |
20+40	0.1792	0.03	Q	|	|	|	V |
20+45	0.1794	0.03	Q	|	|	|	V |
20+50	0.1795	0.02	Q	|	|	|	V |
20+55	0.1797	0.02	Q	|	|	|	V |
21+ 0	0.1798	0.02	Q	|	|	|	V |
21+ 5	0.1799	0.02	Q	|	|	|	V |
21+10	0.1801	0.03	Q	|	|	|	V |
21+15	0.1803	0.03	Q	|	|	|	V|
21+20	0.1805	0.02	Q	|	|	|	V|
21+25	0.1806	0.02	Q	|	|	|	V|
21+30	0.1807	0.02	Q	|	|	|	V|
21+35	0.1809	0.02	Q	|	|	|	V|
21+40	0.1810	0.03	Q	|	|	|	V|
21+45	0.1812	0.03	Q	|	|	|	V|
21+50	0.1814	0.02	Q	|	|	|	V|
21+55	0.1815	0.02	Q	|	|	|	V|
22+ 0	0.1816	0.02	Q	|	|	|	V|
22+ 5	0.1818	0.02	Q	|	|	|	V|
22+10	0.1820	0.03	Q	|	|	|	V|
22+15	0.1822	0.03	Q	|	|	|	V|
22+20	0.1823	0.02	Q	|	|	|	V|
22+25	0.1824	0.02	Q	|	|	|	V|
22+30	0.1826	0.02	Q	|	|	|	V|
22+35	0.1827	0.02	Q	|	|	|	V|
22+40	0.1828	0.02	Q	|	|	|	V|
22+45	0.1829	0.02	Q	|	|	|	V|
22+50	0.1831	0.02	Q	|	|	|	V|
22+55	0.1832	0.02	Q	|	|	|	V|
23+ 0	0.1833	0.02	Q	|	|	|	V|
23+ 5	0.1834	0.02	Q	|	|	|	V|
23+10	0.1836	0.02	Q	|	|	|	V|
23+15	0.1837	0.02	Q	|	|	|	V|
23+20	0.1838	0.02	Q	|	|	|	V|
23+25	0.1839	0.02	Q	|	|	|	V|
23+30	0.1840	0.02	Q	|	|	|	V|
23+35	0.1842	0.02	Q	|	|	|	V|
23+40	0.1843	0.02	Q	|	|	|	V|
23+45	0.1844	0.02	Q	|	|	|	V|
23+50	0.1845	0.02	Q	|	|	|	V|

```
   23+55       0.1847      0.02  Q         |         |         |        V|
   24+ 0       0.1848      0.02  Q         |         |         |        V|
   24+ 5       0.1848      0.01  Q         |         |         |        V|
   24+10       0.1849      0.00  Q         |         |         |        V|
   24+15       0.1849      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 08/16/23 File: ONSITEPOSTE1110.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 10-YEAR 1-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            0.50                  2.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            1.30                  6.11

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                              Sum = 100.000   Sum=       4.737
-----------------------------------------------------------------
```

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	3.30	0.328	(0.316)	0.251	0.077
2	0.17	4.20	0.418	0.316	(0.319)	0.102
3	0.25	4.40	0.438	0.316	(0.334)	0.122
4	0.33	4.80	0.478	0.316	(0.365)	0.162
5	0.42	5.20	0.517	0.316	(0.395)	0.202
6	0.50	6.20	0.617	0.316	(0.471)	0.301
7	0.58	6.80	0.677	0.316	(0.517)	0.361
8	0.67	8.80	0.876	0.316	(0.669)	0.560
9	0.75	13.90	1.383	0.316	(1.057)	1.067
10	0.83	31.40	3.124	0.316	(2.387)	2.808
11	0.92	7.20	0.716	0.316	(0.547)	0.401
12	1.00	3.80	0.378	(0.316)	0.289	0.089
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	6.3

Flood volume = Effective rainfall 0.52(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.31(In)
Total soil loss = 0.121(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 8888.5 Cubic Feet
Total soil loss = 5256.6 Cubic Feet

Peak flow rate of this hydrograph = 8.741(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	0.0012	0.18	Q	|	|	|	|
0+10	0.0039	0.38	VQ	|	|	|	|
0+15	0.0073	0.51	|VQ	|	|	|	|
0+20	0.0119	0.66	| Q	|	|	|	|
0+25	0.0176	0.83	| Q	|	|	|	|
0+30	0.0256	1.16	| QV	|	|	|	|
0+35	0.0360	1.51	| QV	|	|	|	|
0+40	0.0506	2.12	| QV|	|	|	|	|
0+45	0.0760	3.70	| | Q	|	|	|	|
0+50	0.1362	8.74	| |	|	| V	| Q	|

```
    0+55       0.1837      6.88  |         |         |      Q  |     V   |
    1+ 0       0.1985      2.16  |       Q |         |         |       V |
    1+ 5       0.2034      0.70  | Q       |         |         |        V|
    1+10       0.2040      0.09  Q         |         |         |        V|
    1+15       0.2041      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 08/16/23 File: ONSITEPOSTE1310.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 10-YEAR 3-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            0.80                    3.76

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.00                    9.40

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.202	(0.316)	0.154	0.048
2	0.17	1.30	0.202	(0.316)	0.154	0.048
3	0.25	1.10	0.171	(0.316)	0.130	0.040
4	0.33	1.50	0.233	(0.316)	0.178	0.055
5	0.42	1.50	0.233	(0.316)	0.178	0.055
6	0.50	1.80	0.279	(0.316)	0.213	0.066
7	0.58	1.50	0.233	(0.316)	0.178	0.055
8	0.67	1.80	0.279	(0.316)	0.213	0.066
9	0.75	1.80	0.279	(0.316)	0.213	0.066
10	0.83	1.50	0.233	(0.316)	0.178	0.055
11	0.92	1.60	0.248	(0.316)	0.190	0.059
12	1.00	1.80	0.279	(0.316)	0.213	0.066
13	1.08	2.20	0.342	(0.316)	0.261	0.081
14	1.17	2.20	0.342	(0.316)	0.261	0.081
15	1.25	2.20	0.342	(0.316)	0.261	0.081
16	1.33	2.00	0.310	(0.316)	0.237	0.073
17	1.42	2.60	0.404	(0.316)	0.308	0.095
18	1.50	2.70	0.419	0.316	(0.320)	0.103
19	1.58	2.40	0.373	(0.316)	0.285	0.088
20	1.67	2.70	0.419	0.316	(0.320)	0.103
21	1.75	3.30	0.512	0.316	(0.391)	0.197
22	1.83	3.10	0.481	0.316	(0.368)	0.165
23	1.92	2.90	0.450	0.316	(0.344)	0.134
24	2.00	3.00	0.466	0.316	(0.356)	0.150
25	2.08	3.10	0.481	0.316	(0.368)	0.165
26	2.17	4.20	0.652	0.316	(0.498)	0.336
27	2.25	5.00	0.776	0.316	(0.593)	0.460
28	2.33	3.50	0.543	0.316	(0.415)	0.228
29	2.42	6.80	1.056	0.316	(0.807)	0.740
30	2.50	7.30	1.133	0.316	(0.866)	0.817
31	2.58	8.20	1.273	0.316	(0.973)	0.957
32	2.67	5.90	0.916	0.316	(0.700)	0.600
33	2.75	2.00	0.310	(0.316)	0.237	0.073
34	2.83	1.80	0.279	(0.316)	0.213	0.066
35	2.92	1.80	0.279	(0.316)	0.213	0.066
36	3.00	0.60	0.093	(0.316)	0.071	0.022
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	6.6

Flood volume = Effective rainfall 0.55(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.75(In)
Total soil loss = 0.293(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 9327.8 Cubic Feet
Total soil loss = 12743.4 Cubic Feet

Peak flow rate of this hydrograph = 4.084(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	0.0007	0.11	Q				
0+10	0.0021	0.20	Q				
0+15	0.0035	0.20	Q				
0+20	0.0051	0.23	Q				
0+25	0.0069	0.25	Q				
0+30	0.0088	0.28	Q				
0+35	0.0107	0.28	QV				
0+40	0.0127	0.29	QV				
0+45	0.0149	0.31	QV				
0+50	0.0168	0.29	Q V				
0+55	0.0187	0.27	Q V				
1+ 0	0.0208	0.29	Q V				
1+ 5	0.0231	0.34	Q V				
1+10	0.0257	0.37	Q V				
1+15	0.0283	0.38	Q V				
1+20	0.0308	0.37	Q V				
1+25	0.0336	0.40	Q V				
1+30	0.0367	0.46	Q V				
1+35	0.0398	0.45	Q V				
1+40	0.0430	0.46	Q V				
1+45	0.0478	0.70	Q V				
1+50	0.0534	0.81	Q V				
1+55	0.0583	0.72	Q V				
2+ 0	0.0631	0.69	Q V				
2+ 5	0.0682	0.74	Q V				
2+10	0.0762	1.16	Q V				
2+15	0.0885	1.79	Q V				
2+20	0.0993	1.57	Q V				
2+25	0.1155	2.34	Q V				
2+30	0.1393	3.46	Q V				
2+35	0.1674	4.08	Q V				
2+40	0.1925	3.64	Q V				
2+45	0.2049	1.80	Q V				
2+50	0.2093	0.64	Q V				
2+55	0.2120	0.39	Q V				
3+ 0	0.2135	0.21	Q V				
3+ 5	0.2140	0.08	Q V				
3+10	0.2141	0.02	Q V				

```
    3+15       0.2141      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 08/16/23 File: ONSITEPOSTE1610.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 10-YEAR 6-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            1.20                  5.64

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.80                 13.16

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

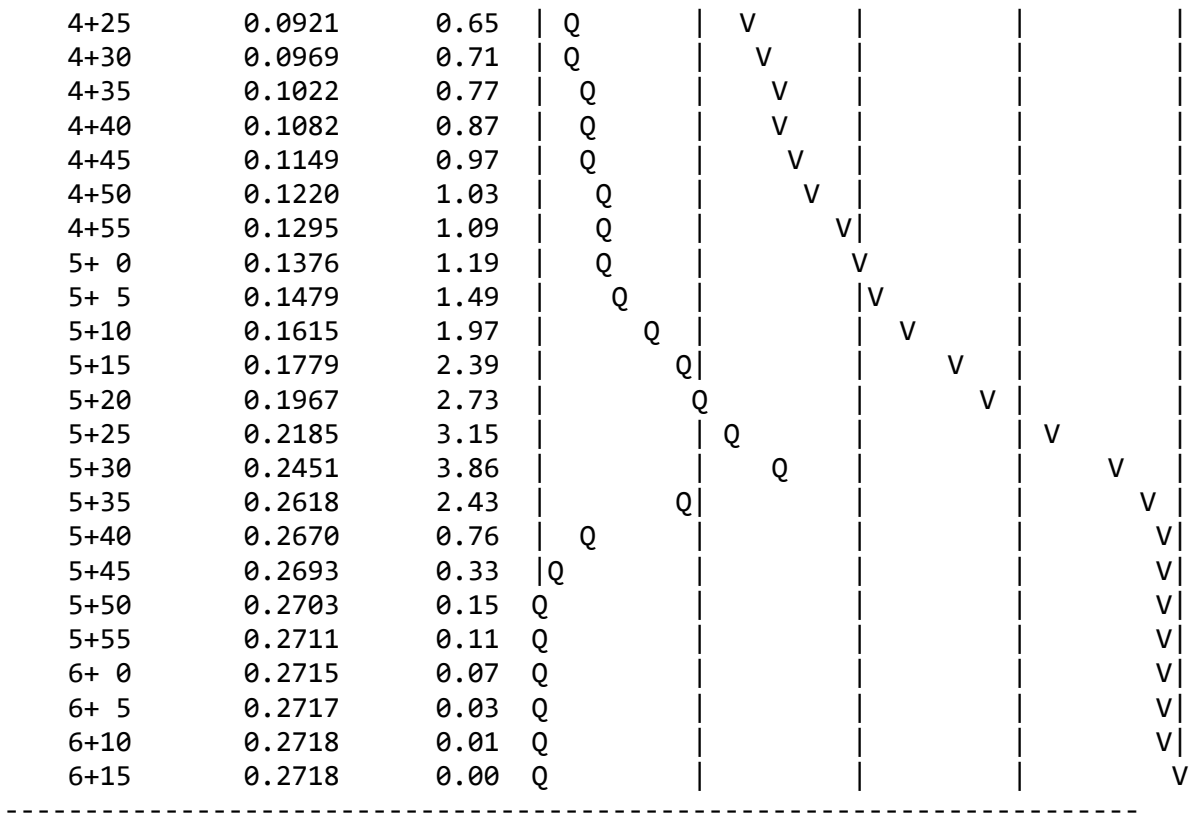
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.316)	0.085	0.026
2	0.17	0.60	0.134	(0.316)	0.102	0.032
3	0.25	0.60	0.134	(0.316)	0.102	0.032
4	0.33	0.60	0.134	(0.316)	0.102	0.032
5	0.42	0.60	0.134	(0.316)	0.102	0.032
6	0.50	0.70	0.156	(0.316)	0.119	0.037
7	0.58	0.70	0.156	(0.316)	0.119	0.037
8	0.67	0.70	0.156	(0.316)	0.119	0.037
9	0.75	0.70	0.156	(0.316)	0.119	0.037
10	0.83	0.70	0.156	(0.316)	0.119	0.037
11	0.92	0.70	0.156	(0.316)	0.119	0.037
12	1.00	0.80	0.178	(0.316)	0.136	0.042
13	1.08	0.80	0.178	(0.316)	0.136	0.042
14	1.17	0.80	0.178	(0.316)	0.136	0.042
15	1.25	0.80	0.178	(0.316)	0.136	0.042
16	1.33	0.80	0.178	(0.316)	0.136	0.042
17	1.42	0.80	0.178	(0.316)	0.136	0.042
18	1.50	0.80	0.178	(0.316)	0.136	0.042
19	1.58	0.80	0.178	(0.316)	0.136	0.042
20	1.67	0.80	0.178	(0.316)	0.136	0.042
21	1.75	0.80	0.178	(0.316)	0.136	0.042
22	1.83	0.80	0.178	(0.316)	0.136	0.042
23	1.92	0.80	0.178	(0.316)	0.136	0.042
24	2.00	0.90	0.201	(0.316)	0.153	0.047
25	2.08	0.80	0.178	(0.316)	0.136	0.042
26	2.17	0.90	0.201	(0.316)	0.153	0.047
27	2.25	0.90	0.201	(0.316)	0.153	0.047
28	2.33	0.90	0.201	(0.316)	0.153	0.047
29	2.42	0.90	0.201	(0.316)	0.153	0.047
30	2.50	0.90	0.201	(0.316)	0.153	0.047
31	2.58	0.90	0.201	(0.316)	0.153	0.047
32	2.67	0.90	0.201	(0.316)	0.153	0.047
33	2.75	1.00	0.223	(0.316)	0.170	0.053
34	2.83	1.00	0.223	(0.316)	0.170	0.053
35	2.92	1.00	0.223	(0.316)	0.170	0.053
36	3.00	1.00	0.223	(0.316)	0.170	0.053
37	3.08	1.00	0.223	(0.316)	0.170	0.053
38	3.17	1.10	0.245	(0.316)	0.187	0.058
39	3.25	1.10	0.245	(0.316)	0.187	0.058
40	3.33	1.10	0.245	(0.316)	0.187	0.058
41	3.42	1.20	0.268	(0.316)	0.204	0.063
42	3.50	1.30	0.290	(0.316)	0.221	0.068
43	3.58	1.40	0.312	(0.316)	0.239	0.074
44	3.67	1.40	0.312	(0.316)	0.239	0.074
45	3.75	1.50	0.334	(0.316)	0.256	0.079

```
46   3.83     1.50      0.334       (  0.316)       0.256        0.079
47   3.92     1.60      0.357       (  0.316)       0.273        0.084
48   4.00     1.60      0.357       (  0.316)       0.273        0.084
49   4.08     1.70      0.379       (  0.316)       0.290        0.089
50   4.17     1.80      0.401       (  0.316)       0.307        0.095
51   4.25     1.90      0.424          0.316    (  0.324)        0.108
52   4.33     2.00      0.446          0.316    (  0.341)        0.130
53   4.42     2.10      0.468          0.316    (  0.358)        0.153
54   4.50     2.10      0.468          0.316    (  0.358)        0.153
55   4.58     2.20      0.491          0.316    (  0.375)        0.175
56   4.67     2.30      0.513          0.316    (  0.392)        0.197
57   4.75     2.40      0.535          0.316    (  0.409)        0.219
58   4.83     2.40      0.535          0.316    (  0.409)        0.219
59   4.92     2.50      0.557          0.316    (  0.426)        0.242
60   5.00     2.60      0.580          0.316    (  0.443)        0.264
61   5.08     3.10      0.691          0.316    (  0.528)        0.375
62   5.17     3.60      0.803          0.316    (  0.613)        0.487
63   5.25     3.90      0.870          0.316    (  0.664)        0.554
64   5.33     4.20      0.937          0.316    (  0.716)        0.621
65   5.42     4.70      1.048          0.316    (  0.801)        0.732
66   5.50     5.60      1.249          0.316    (  0.954)        0.933
67   5.58     1.90      0.424          0.316    (  0.324)        0.108
68   5.67     0.90      0.201       (  0.316)       0.153        0.047
69   5.75     0.60      0.134       (  0.316)       0.102        0.032
70   5.83     0.50      0.111       (  0.316)       0.085        0.026
71   5.92     0.30      0.067       (  0.316)       0.051        0.016
72   6.00     0.20      0.045       (  0.316)       0.034        0.011
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     8.3
      Flood volume = Effective rainfall      0.69(In)
       times area       4.7(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
      Total soil loss =      1.16(In)
      Total soil loss =     0.456(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =       11839.6 Cubic Feet
      Total soil loss =       19863.6 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.862(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       0.0004      0.06  Q         |         |         |         |
  0+10       0.0013      0.12  Q         |         |         |         |
```

```
0+15       0.0023      0.14  Q         |         |         |         |
0+20       0.0033      0.15  Q         |         |         |         |
0+25       0.0043      0.15  Q         |         |         |         |
0+30       0.0054      0.16  Q         |         |         |         |
0+35       0.0066      0.17  Q         |         |         |         |
0+40       0.0078      0.17  QV        |         |         |         |
0+45       0.0090      0.17  QV        |         |         |         |
0+50       0.0102      0.17  QV        |         |         |         |
0+55       0.0114      0.17  QV        |         |         |         |
1+ 0       0.0127      0.19  QV        |         |         |         |
1+ 5       0.0140      0.20  Q V       |         |         |         |
1+10       0.0154      0.20  Q V       |         |         |         |
1+15       0.0168      0.20  Q V       |         |         |         |
1+20       0.0182      0.20  Q V       |         |         |         |
1+25       0.0195      0.20  Q V       |         |         |         |
1+30       0.0209      0.20  Q  V      |         |         |         |
1+35       0.0223      0.20  Q  V      |         |         |         |
1+40       0.0237      0.20  Q  V      |         |         |         |
1+45       0.0250      0.20  Q  V      |         |         |         |
1+50       0.0264      0.20  Q  V      |         |         |         |
1+55       0.0278      0.20  Q   V     |         |         |         |
2+ 0       0.0292      0.21  Q   V     |         |         |         |
2+ 5       0.0307      0.21  Q   V     |         |         |         |
2+10       0.0322      0.21  Q   V     |         |         |         |
2+15       0.0337      0.22  Q   V     |         |         |         |
2+20       0.0352      0.22  Q    V    |         |         |         |
2+25       0.0368      0.22  Q    V    |         |         |         |
2+30       0.0383      0.22  Q    V    |         |         |         |
2+35       0.0399      0.22  Q    V    |         |         |         |
2+40       0.0414      0.22  Q     V   |         |         |         |
2+45       0.0430      0.24  Q     V   |         |         |         |
2+50       0.0447      0.25  Q     V   |         |         |         |
2+55       0.0465      0.25  Q     V   |         |         |         |
3+ 0       0.0482      0.25  Q      V  |         |         |         |
3+ 5       0.0499      0.25  Q      V  |         |         |         |
3+10       0.0517      0.26  |Q     V  |         |         |         |
3+15       0.0536      0.27  |Q     V  |         |         |         |
3+20       0.0554      0.27  |Q      V |         |         |         |
3+25       0.0574      0.29  |Q      V |         |         |         |
3+30       0.0595      0.31  |Q      V |         |         |         |
3+35       0.0618      0.33  |Q       V|         |         |         |
3+40       0.0642      0.35  |Q       V|         |         |         |
3+45       0.0667      0.36  |Q       V|         |         |         |
3+50       0.0693      0.37  |Q        V         |         |         |
3+55       0.0719      0.39  |Q        V         |         |         |
4+ 0       0.0746      0.40  |Q        V         |         |         |
4+ 5       0.0775      0.41  |Q        |V        |         |         |
4+10       0.0805      0.43  |Q        |V        |         |         |
4+15       0.0837      0.48  |Q        | V       |         |         |
4+20       0.0875      0.55  | Q       | V       |         |         |
```


4+25 0.0921 0.65
4+30 0.0969 0.71
4+35 0.1022 0.77
4+40 0.1082 0.87
4+45 0.1149 0.97
4+50 0.1220 1.03
4+55 0.1295 1.09
5+ 0 0.1376 1.19
5+ 5 0.1479 1.49
5+10 0.1615 1.97
5+15 0.1779 2.39
5+20 0.1967 2.73
5+25 0.2185 3.15
5+30 0.2451 3.86
5+35 0.2618 2.43
5+40 0.2670 0.76
5+45 0.2693 0.33
5+50 0.2703 0.15
5+55 0.2711 0.11
6+ 0 0.2715 0.07
6+ 5 0.2717 0.03
6+10 0.2718 0.01
6+15 0.2718 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 08/16/23 File: ONSITEPOSTE12410.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	(0.560)	0.021	0.006
2	0.17	0.07	0.027	(0.558)	0.021	0.006
3	0.25	0.07	0.027	(0.555)	0.021	0.006
4	0.33	0.10	0.041	(0.553)	0.031	0.010
5	0.42	0.10	0.041	(0.551)	0.031	0.010
6	0.50	0.10	0.041	(0.549)	0.031	0.010
7	0.58	0.10	0.041	(0.547)	0.031	0.010
8	0.67	0.10	0.041	(0.545)	0.031	0.010
9	0.75	0.10	0.041	(0.543)	0.031	0.010
10	0.83	0.13	0.054	(0.540)	0.042	0.013
11	0.92	0.13	0.054	(0.538)	0.042	0.013
12	1.00	0.13	0.054	(0.536)	0.042	0.013
13	1.08	0.10	0.041	(0.534)	0.031	0.010
14	1.17	0.10	0.041	(0.532)	0.031	0.010
15	1.25	0.10	0.041	(0.530)	0.031	0.010
16	1.33	0.10	0.041	(0.528)	0.031	0.010
17	1.42	0.10	0.041	(0.526)	0.031	0.010
18	1.50	0.10	0.041	(0.524)	0.031	0.010
19	1.58	0.10	0.041	(0.521)	0.031	0.010
20	1.67	0.10	0.041	(0.519)	0.031	0.010
21	1.75	0.10	0.041	(0.517)	0.031	0.010
22	1.83	0.13	0.054	(0.515)	0.042	0.013
23	1.92	0.13	0.054	(0.513)	0.042	0.013
24	2.00	0.13	0.054	(0.511)	0.042	0.013
25	2.08	0.13	0.054	(0.509)	0.042	0.013
26	2.17	0.13	0.054	(0.507)	0.042	0.013
27	2.25	0.13	0.054	(0.505)	0.042	0.013
28	2.33	0.13	0.054	(0.503)	0.042	0.013
29	2.42	0.13	0.054	(0.501)	0.042	0.013
30	2.50	0.13	0.054	(0.499)	0.042	0.013
31	2.58	0.17	0.068	(0.497)	0.052	0.016
32	2.67	0.17	0.068	(0.495)	0.052	0.016
33	2.75	0.17	0.068	(0.493)	0.052	0.016
34	2.83	0.17	0.068	(0.491)	0.052	0.016
35	2.92	0.17	0.068	(0.489)	0.052	0.016
36	3.00	0.17	0.068	(0.487)	0.052	0.016
37	3.08	0.17	0.068	(0.484)	0.052	0.016
38	3.17	0.17	0.068	(0.482)	0.052	0.016
39	3.25	0.17	0.068	(0.480)	0.052	0.016
40	3.33	0.17	0.068	(0.478)	0.052	0.016
41	3.42	0.17	0.068	(0.476)	0.052	0.016
42	3.50	0.17	0.068	(0.474)	0.052	0.016
43	3.58	0.17	0.068	(0.472)	0.052	0.016
44	3.67	0.17	0.068	(0.471)	0.052	0.016
45	3.75	0.17	0.068	(0.469)	0.052	0.016

46	3.83	0.20	0.082	(0.467)	0.062	0.019
47	3.92	0.20	0.082	(0.465)	0.062	0.019
48	4.00	0.20	0.082	(0.463)	0.062	0.019
49	4.08	0.20	0.082	(0.461)	0.062	0.019
50	4.17	0.20	0.082	(0.459)	0.062	0.019
51	4.25	0.20	0.082	(0.457)	0.062	0.019
52	4.33	0.23	0.095	(0.455)	0.073	0.022
53	4.42	0.23	0.095	(0.453)	0.073	0.022
54	4.50	0.23	0.095	(0.451)	0.073	0.022
55	4.58	0.23	0.095	(0.449)	0.073	0.022
56	4.67	0.23	0.095	(0.447)	0.073	0.022
57	4.75	0.23	0.095	(0.445)	0.073	0.022
58	4.83	0.27	0.109	(0.443)	0.083	0.026
59	4.92	0.27	0.109	(0.441)	0.083	0.026
60	5.00	0.27	0.109	(0.439)	0.083	0.026
61	5.08	0.20	0.082	(0.437)	0.062	0.019
62	5.17	0.20	0.082	(0.436)	0.062	0.019
63	5.25	0.20	0.082	(0.434)	0.062	0.019
64	5.33	0.23	0.095	(0.432)	0.073	0.022
65	5.42	0.23	0.095	(0.430)	0.073	0.022
66	5.50	0.23	0.095	(0.428)	0.073	0.022
67	5.58	0.27	0.109	(0.426)	0.083	0.026
68	5.67	0.27	0.109	(0.424)	0.083	0.026
69	5.75	0.27	0.109	(0.422)	0.083	0.026
70	5.83	0.27	0.109	(0.421)	0.083	0.026
71	5.92	0.27	0.109	(0.419)	0.083	0.026
72	6.00	0.27	0.109	(0.417)	0.083	0.026
73	6.08	0.30	0.122	(0.415)	0.093	0.029
74	6.17	0.30	0.122	(0.413)	0.093	0.029
75	6.25	0.30	0.122	(0.411)	0.093	0.029
76	6.33	0.30	0.122	(0.409)	0.093	0.029
77	6.42	0.30	0.122	(0.408)	0.093	0.029
78	6.50	0.30	0.122	(0.406)	0.093	0.029
79	6.58	0.33	0.136	(0.404)	0.104	0.032
80	6.67	0.33	0.136	(0.402)	0.104	0.032
81	6.75	0.33	0.136	(0.400)	0.104	0.032
82	6.83	0.33	0.136	(0.399)	0.104	0.032
83	6.92	0.33	0.136	(0.397)	0.104	0.032
84	7.00	0.33	0.136	(0.395)	0.104	0.032
85	7.08	0.33	0.136	(0.393)	0.104	0.032
86	7.17	0.33	0.136	(0.391)	0.104	0.032
87	7.25	0.33	0.136	(0.390)	0.104	0.032
88	7.33	0.37	0.150	(0.388)	0.114	0.035
89	7.42	0.37	0.150	(0.386)	0.114	0.035
90	7.50	0.37	0.150	(0.384)	0.114	0.035
91	7.58	0.40	0.163	(0.382)	0.125	0.039
92	7.67	0.40	0.163	(0.381)	0.125	0.039
93	7.75	0.40	0.163	(0.379)	0.125	0.039
94	7.83	0.43	0.177	(0.377)	0.135	0.042
95	7.92	0.43	0.177	(0.375)	0.135	0.042

96	8.00	0.43	0.177	(0.374)	0.135	0.042
97	8.08	0.50	0.204	(0.372)	0.156	0.048
98	8.17	0.50	0.204	(0.370)	0.156	0.048
99	8.25	0.50	0.204	(0.369)	0.156	0.048
100	8.33	0.50	0.204	(0.367)	0.156	0.048
101	8.42	0.50	0.204	(0.365)	0.156	0.048
102	8.50	0.50	0.204	(0.363)	0.156	0.048
103	8.58	0.53	0.218	(0.362)	0.166	0.051
104	8.67	0.53	0.218	(0.360)	0.166	0.051
105	8.75	0.53	0.218	(0.358)	0.166	0.051
106	8.83	0.57	0.231	(0.357)	0.177	0.055
107	8.92	0.57	0.231	(0.355)	0.177	0.055
108	9.00	0.57	0.231	(0.353)	0.177	0.055
109	9.08	0.63	0.258	(0.352)	0.197	0.061
110	9.17	0.63	0.258	(0.350)	0.197	0.061
111	9.25	0.63	0.258	(0.348)	0.197	0.061
112	9.33	0.67	0.272	(0.347)	0.208	0.064
113	9.42	0.67	0.272	(0.345)	0.208	0.064
114	9.50	0.67	0.272	(0.343)	0.208	0.064
115	9.58	0.70	0.285	(0.342)	0.218	0.067
116	9.67	0.70	0.285	(0.340)	0.218	0.067
117	9.75	0.70	0.285	(0.338)	0.218	0.067
118	9.83	0.73	0.299	(0.337)	0.229	0.071
119	9.92	0.73	0.299	(0.335)	0.229	0.071
120	10.00	0.73	0.299	(0.333)	0.229	0.071
121	10.08	0.50	0.204	(0.332)	0.156	0.048
122	10.17	0.50	0.204	(0.330)	0.156	0.048
123	10.25	0.50	0.204	(0.329)	0.156	0.048
124	10.33	0.50	0.204	(0.327)	0.156	0.048
125	10.42	0.50	0.204	(0.325)	0.156	0.048
126	10.50	0.50	0.204	(0.324)	0.156	0.048
127	10.58	0.67	0.272	(0.322)	0.208	0.064
128	10.67	0.67	0.272	(0.321)	0.208	0.064
129	10.75	0.67	0.272	(0.319)	0.208	0.064
130	10.83	0.67	0.272	(0.318)	0.208	0.064
131	10.92	0.67	0.272	(0.316)	0.208	0.064
132	11.00	0.67	0.272	(0.314)	0.208	0.064
133	11.08	0.63	0.258	(0.313)	0.197	0.061
134	11.17	0.63	0.258	(0.311)	0.197	0.061
135	11.25	0.63	0.258	(0.310)	0.197	0.061
136	11.33	0.63	0.258	(0.308)	0.197	0.061
137	11.42	0.63	0.258	(0.307)	0.197	0.061
138	11.50	0.63	0.258	(0.305)	0.197	0.061
139	11.58	0.57	0.231	(0.304)	0.177	0.055
140	11.67	0.57	0.231	(0.302)	0.177	0.055
141	11.75	0.57	0.231	(0.301)	0.177	0.055
142	11.83	0.60	0.245	(0.299)	0.187	0.058
143	11.92	0.60	0.245	(0.298)	0.187	0.058
144	12.00	0.60	0.245	(0.296)	0.187	0.058
145	12.08	0.83	0.340	(0.295)	0.260	0.080

146	12.17	0.83	0.340	(	0.293)	0.260		0.080
147	12.25	0.83	0.340	(	0.292)	0.260		0.080
148	12.33	0.87	0.353	(	0.290)	0.270		0.083
149	12.42	0.87	0.353	(	0.289)	0.270		0.083
150	12.50	0.87	0.353	(	0.287)	0.270		0.083
151	12.58	0.93	0.381		0.286	(	0.291)	0.095
152	12.67	0.93	0.381		0.285	(	0.291)	0.096
153	12.75	0.93	0.381		0.283	(	0.291)	0.098
154	12.83	0.97	0.394		0.282	(	0.301)	0.113
155	12.92	0.97	0.394		0.280	(	0.301)	0.114
156	13.00	0.97	0.394		0.279	(	0.301)	0.115
157	13.08	1.13	0.462		0.277	(	0.353)	0.185
158	13.17	1.13	0.462		0.276	(	0.353)	0.186
159	13.25	1.13	0.462		0.275	(	0.353)	0.188
160	13.33	1.13	0.462		0.273	(	0.353)	0.189
161	13.42	1.13	0.462		0.272	(	0.353)	0.190
162	13.50	1.13	0.462		0.270	(	0.353)	0.192
163	13.58	0.77	0.313	(	0.269)	0.239		0.074
164	13.67	0.77	0.313	(	0.268)	0.239		0.074
165	13.75	0.77	0.313	(	0.266)	0.239		0.074
166	13.83	0.77	0.313	(	0.265)	0.239		0.074
167	13.92	0.77	0.313	(	0.264)	0.239		0.074
168	14.00	0.77	0.313	(	0.262)	0.239		0.074
169	14.08	0.90	0.367		0.261	(	0.280)	0.106
170	14.17	0.90	0.367		0.260	(	0.280)	0.107
171	14.25	0.90	0.367		0.258	(	0.280)	0.109
172	14.33	0.87	0.353		0.257	(	0.270)	0.097
173	14.42	0.87	0.353		0.256	(	0.270)	0.098
174	14.50	0.87	0.353		0.254	(	0.270)	0.099
175	14.58	0.87	0.353		0.253	(	0.270)	0.100
176	14.67	0.87	0.353		0.252	(	0.270)	0.102
177	14.75	0.87	0.353		0.250	(	0.270)	0.103
178	14.83	0.83	0.340		0.249	(	0.260)	0.091
179	14.92	0.83	0.340		0.248	(	0.260)	0.092
180	15.00	0.83	0.340		0.247	(	0.260)	0.093
181	15.08	0.80	0.326		0.245	(	0.249)	0.081
182	15.17	0.80	0.326		0.244	(	0.249)	0.082
183	15.25	0.80	0.326		0.243	(	0.249)	0.083
184	15.33	0.77	0.313	(	0.242)	0.239		0.074
185	15.42	0.77	0.313	(	0.240)	0.239		0.074
186	15.50	0.77	0.313	(	0.239)	0.239		0.074
187	15.58	0.63	0.258	(	0.238)	0.197		0.061
188	15.67	0.63	0.258	(	0.237)	0.197		0.061
189	15.75	0.63	0.258	(	0.235)	0.197		0.061
190	15.83	0.63	0.258	(	0.234)	0.197		0.061
191	15.92	0.63	0.258	(	0.233)	0.197		0.061
192	16.00	0.63	0.258	(	0.232)	0.197		0.061
193	16.08	0.13	0.054	(	0.231)	0.042		0.013
194	16.17	0.13	0.054	(	0.230)	0.042		0.013
195	16.25	0.13	0.054	(	0.228)	0.042		0.013

196	16.33	0.13	0.054	(0.227)	0.042	0.013
197	16.42	0.13	0.054	(0.226)	0.042	0.013
198	16.50	0.13	0.054	(0.225)	0.042	0.013
199	16.58	0.10	0.041	(0.224)	0.031	0.010
200	16.67	0.10	0.041	(0.223)	0.031	0.010
201	16.75	0.10	0.041	(0.221)	0.031	0.010
202	16.83	0.10	0.041	(0.220)	0.031	0.010
203	16.92	0.10	0.041	(0.219)	0.031	0.010
204	17.00	0.10	0.041	(0.218)	0.031	0.010
205	17.08	0.17	0.068	(0.217)	0.052	0.016
206	17.17	0.17	0.068	(0.216)	0.052	0.016
207	17.25	0.17	0.068	(0.215)	0.052	0.016
208	17.33	0.17	0.068	(0.214)	0.052	0.016
209	17.42	0.17	0.068	(0.213)	0.052	0.016
210	17.50	0.17	0.068	(0.212)	0.052	0.016
211	17.58	0.17	0.068	(0.211)	0.052	0.016
212	17.67	0.17	0.068	(0.210)	0.052	0.016
213	17.75	0.17	0.068	(0.208)	0.052	0.016
214	17.83	0.13	0.054	(0.207)	0.042	0.013
215	17.92	0.13	0.054	(0.206)	0.042	0.013
216	18.00	0.13	0.054	(0.205)	0.042	0.013
217	18.08	0.13	0.054	(0.204)	0.042	0.013
218	18.17	0.13	0.054	(0.203)	0.042	0.013
219	18.25	0.13	0.054	(0.202)	0.042	0.013
220	18.33	0.13	0.054	(0.201)	0.042	0.013
221	18.42	0.13	0.054	(0.200)	0.042	0.013
222	18.50	0.13	0.054	(0.199)	0.042	0.013
223	18.58	0.10	0.041	(0.198)	0.031	0.010
224	18.67	0.10	0.041	(0.198)	0.031	0.010
225	18.75	0.10	0.041	(0.197)	0.031	0.010
226	18.83	0.07	0.027	(0.196)	0.021	0.006
227	18.92	0.07	0.027	(0.195)	0.021	0.006
228	19.00	0.07	0.027	(0.194)	0.021	0.006
229	19.08	0.10	0.041	(0.193)	0.031	0.010
230	19.17	0.10	0.041	(0.192)	0.031	0.010
231	19.25	0.10	0.041	(0.191)	0.031	0.010
232	19.33	0.13	0.054	(0.190)	0.042	0.013
233	19.42	0.13	0.054	(0.189)	0.042	0.013
234	19.50	0.13	0.054	(0.188)	0.042	0.013
235	19.58	0.10	0.041	(0.188)	0.031	0.010
236	19.67	0.10	0.041	(0.187)	0.031	0.010
237	19.75	0.10	0.041	(0.186)	0.031	0.010
238	19.83	0.07	0.027	(0.185)	0.021	0.006
239	19.92	0.07	0.027	(0.184)	0.021	0.006
240	20.00	0.07	0.027	(0.183)	0.021	0.006
241	20.08	0.10	0.041	(0.183)	0.031	0.010
242	20.17	0.10	0.041	(0.182)	0.031	0.010
243	20.25	0.10	0.041	(0.181)	0.031	0.010
244	20.33	0.10	0.041	(0.180)	0.031	0.010
245	20.42	0.10	0.041	(0.179)	0.031	0.010

246	20.50	0.10	0.041	(0.179)	0.031	0.010
247	20.58	0.10	0.041	(0.178)	0.031	0.010
248	20.67	0.10	0.041	(0.177)	0.031	0.010
249	20.75	0.10	0.041	(0.176)	0.031	0.010
250	20.83	0.07	0.027	(0.176)	0.021	0.006
251	20.92	0.07	0.027	(0.175)	0.021	0.006
252	21.00	0.07	0.027	(0.174)	0.021	0.006
253	21.08	0.10	0.041	(0.174)	0.031	0.010
254	21.17	0.10	0.041	(0.173)	0.031	0.010
255	21.25	0.10	0.041	(0.172)	0.031	0.010
256	21.33	0.07	0.027	(0.172)	0.021	0.006
257	21.42	0.07	0.027	(0.171)	0.021	0.006
258	21.50	0.07	0.027	(0.170)	0.021	0.006
259	21.58	0.10	0.041	(0.170)	0.031	0.010
260	21.67	0.10	0.041	(0.169)	0.031	0.010
261	21.75	0.10	0.041	(0.168)	0.031	0.010
262	21.83	0.07	0.027	(0.168)	0.021	0.006
263	21.92	0.07	0.027	(0.167)	0.021	0.006
264	22.00	0.07	0.027	(0.167)	0.021	0.006
265	22.08	0.10	0.041	(0.166)	0.031	0.010
266	22.17	0.10	0.041	(0.166)	0.031	0.010
267	22.25	0.10	0.041	(0.165)	0.031	0.010
268	22.33	0.07	0.027	(0.165)	0.021	0.006
269	22.42	0.07	0.027	(0.164)	0.021	0.006
270	22.50	0.07	0.027	(0.164)	0.021	0.006
271	22.58	0.07	0.027	(0.163)	0.021	0.006
272	22.67	0.07	0.027	(0.163)	0.021	0.006
273	22.75	0.07	0.027	(0.162)	0.021	0.006
274	22.83	0.07	0.027	(0.162)	0.021	0.006
275	22.92	0.07	0.027	(0.161)	0.021	0.006
276	23.00	0.07	0.027	(0.161)	0.021	0.006
277	23.08	0.07	0.027	(0.161)	0.021	0.006
278	23.17	0.07	0.027	(0.160)	0.021	0.006
279	23.25	0.07	0.027	(0.160)	0.021	0.006
280	23.33	0.07	0.027	(0.160)	0.021	0.006
281	23.42	0.07	0.027	(0.159)	0.021	0.006
282	23.50	0.07	0.027	(0.159)	0.021	0.006
283	23.58	0.07	0.027	(0.159)	0.021	0.006
284	23.67	0.07	0.027	(0.159)	0.021	0.006
285	23.75	0.07	0.027	(0.158)	0.021	0.006
286	23.83	0.07	0.027	(0.158)	0.021	0.006
287	23.92	0.07	0.027	(0.158)	0.021	0.006
288	24.00	0.07	0.027	(0.158)	0.021	0.006

(Loss Rate Not Used)

Sum = 100.0 Sum = 10.4

Flood volume = Effective rainfall 0.87(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 2.53(In)
Total soil loss = 0.992(Ac.Ft)
Total rainfall = 3.40(In)

Flood volume = 14777.2 Cubic Feet
Total soil loss = 43209.0 Cubic Feet

Peak flow rate of this hydrograph = 0.905(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	0.03	Q				
0+20	0.0008	0.04	Q				
0+25	0.0011	0.04	Q				
0+30	0.0014	0.05	Q				
0+35	0.0017	0.05	Q				
0+40	0.0020	0.05	Q				
0+45	0.0023	0.05	Q				
0+50	0.0027	0.05	Q				
0+55	0.0031	0.06	Q				
1+ 0	0.0035	0.06	Q				
1+ 5	0.0039	0.05	Q				
1+10	0.0042	0.05	Q				
1+15	0.0045	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	0.0058	0.05	Q				
1+40	0.0061	0.05	Q				
1+45	0.0064	0.05	Q				
1+50	0.0068	0.05	Q				
1+55	0.0072	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	QV				
2+20	0.0093	0.06	QV				
2+25	0.0097	0.06	QV				
2+30	0.0101	0.06	QV				
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	0.0126	0.08	QV				
3+ 0	0.0132	0.08	QV				

3+ 5	0.0137	0.08	QV	|	|	|	|
3+10	0.0142	0.08	QV	|	|	|	|
3+15	0.0147	0.08	QV	|	|	|	|
3+20	0.0153	0.08	QV	|	|	|	|
3+25	0.0158	0.08	QV	|	|	|	|
3+30	0.0163	0.08	QV	|	|	|	|
3+35	0.0168	0.08	QV	|	|	|	|
3+40	0.0174	0.08	Q V	|	|	|	|
3+45	0.0179	0.08	Q V	|	|	|	|
3+50	0.0185	0.08	Q V	|	|	|	|
3+55	0.0191	0.09	Q V	|	|	|	|
4+ 0	0.0197	0.09	Q V	|	|	|	|
4+ 5	0.0203	0.09	Q V	|	|	|	|
4+10	0.0210	0.09	Q V	|	|	|	|
4+15	0.0216	0.09	Q V	|	|	|	|
4+20	0.0223	0.10	Q V	|	|	|	|
4+25	0.0230	0.10	Q V	|	|	|	|
4+30	0.0237	0.11	Q V	|	|	|	|
4+35	0.0244	0.11	Q V	|	|	|	|
4+40	0.0252	0.11	Q V	|	|	|	|
4+45	0.0259	0.11	Q V	|	|	|	|
4+50	0.0267	0.11	Q V	|	|	|	|
4+55	0.0275	0.12	Q V	|	|	|	|
5+ 0	0.0284	0.12	Q V	|	|	|	|
5+ 5	0.0291	0.11	Q V	|	|	|	|
5+10	0.0297	0.09	Q V	|	|	|	|
5+15	0.0304	0.09	Q V	|	|	|	|
5+20	0.0311	0.10	Q V	|	|	|	|
5+25	0.0318	0.10	Q V	|	|	|	|
5+30	0.0325	0.11	Q V	|	|	|	|
5+35	0.0333	0.11	Q V	|	|	|	|
5+40	0.0341	0.12	Q V	|	|	|	|
5+45	0.0350	0.12	Q V	|	|	|	|
5+50	0.0358	0.12	Q V	|	|	|	|
5+55	0.0366	0.12	Q V	|	|	|	|
6+ 0	0.0375	0.12	Q V	|	|	|	|
6+ 5	0.0384	0.13	Q V	|	|	|	|
6+10	0.0393	0.14	Q V	|	|	|	|
6+15	0.0402	0.14	Q V	|	|	|	|
6+20	0.0412	0.14	Q V	|	|	|	|
6+25	0.0421	0.14	Q V	|	|	|	|
6+30	0.0431	0.14	Q V	|	|	|	|
6+35	0.0440	0.14	Q V	|	|	|	|
6+40	0.0451	0.15	Q V	|	|	|	|
6+45	0.0461	0.15	Q V	|	|	|	|
6+50	0.0472	0.15	Q V	|	|	|	|
6+55	0.0482	0.15	Q V	|	|	|	|
7+ 0	0.0493	0.15	Q V	|	|	|	|
7+ 5	0.0503	0.15	Q V	|	|	|	|
7+10	0.0514	0.15	Q V	|	|	|	|

```
 7+15       0.0524      0.15  Q     V   |          |          |          |
 7+20       0.0535      0.16  Q     V   |          |          |          |
 7+25       0.0546      0.17  Q     V   |          |          |          |
 7+30       0.0558      0.17  Q     V   |          |          |          |
 7+35       0.0570      0.17  Q     V   |          |          |          |
 7+40       0.0582      0.18  Q     V   |          |          |          |
 7+45       0.0595      0.18  Q      V  |          |          |          |
 7+50       0.0608      0.19  Q      V  |          |          |          |
 7+55       0.0622      0.20  Q      V  |          |          |          |
 8+ 0       0.0635      0.20  Q      V  |          |          |          |
 8+ 5       0.0650      0.21  Q      V  |          |          |          |
 8+10       0.0665      0.22  Q      V  |          |          |          |
 8+15       0.0681      0.23  Q       V |          |          |          |
 8+20       0.0697      0.23  Q       V |          |          |          |
 8+25       0.0712      0.23  Q       V |          |          |          |
 8+30       0.0728      0.23  Q       V |          |          |          |
 8+35       0.0744      0.24  Q       V |          |          |          |
 8+40       0.0761      0.24  Q       V |          |          |          |
 8+45       0.0778      0.24  Q        V|          |          |          |
 8+50       0.0795      0.25  |Q       V|          |          |          |
 8+55       0.0813      0.26  |Q       V|          |          |          |
 9+ 0       0.0830      0.26  |Q       V|          |          |          |
 9+ 5       0.0849      0.27  |Q        V          |          |          |
 9+10       0.0869      0.29  |Q        V          |          |          |
 9+15       0.0889      0.29  |Q        V          |          |          |
 9+20       0.0909      0.30  |Q        V          |          |          |
 9+25       0.0930      0.30  |Q        V          |          |          |
 9+30       0.0951      0.30  |Q        |V         |          |          |
 9+35       0.0972      0.31  |Q        |V         |          |          |
 9+40       0.0994      0.32  |Q        |V         |          |          |
 9+45       0.1016      0.32  |Q        |V         |          |          |
 9+50       0.1039      0.33  |Q        | V        |          |          |
 9+55       0.1061      0.33  |Q        | V        |          |          |
10+ 0       0.1084      0.33  |Q        | V        |          |          |
10+ 5       0.1104      0.28  |Q        |  V       |          |          |
10+10       0.1120      0.24  Q         |  V       |          |          |
10+15       0.1136      0.23  Q         |  V       |          |          |
10+20       0.1152      0.23  Q         |  V       |          |          |
10+25       0.1168      0.23  Q         |  V       |          |          |
10+30       0.1184      0.23  Q         |  V       |          |          |
10+35       0.1202      0.26  |Q        |   V      |          |          |
10+40       0.1222      0.30  |Q        |   V      |          |          |
10+45       0.1243      0.30  |Q        |   V      |          |          |
10+50       0.1264      0.30  |Q        |   V      |          |          |
10+55       0.1285      0.30  |Q        |    V     |          |          |
11+ 0       0.1306      0.30  |Q        |    V     |          |          |
11+ 5       0.1326      0.30  |Q        |    V     |          |          |
11+10       0.1346      0.29  |Q        |    V     |          |          |
11+15       0.1366      0.29  |Q        |     V    |          |          |
11+20       0.1386      0.29  |Q        |     V    |          |          |
```

```
11+25       0.1406      0.29  |Q        |     V   |         |         |
11+30       0.1426      0.29  |Q        |     V   |         |         |
11+35       0.1445      0.27  |Q        |      V  |         |         |
11+40       0.1463      0.26  |Q        |      V  |         |         |
11+45       0.1481      0.26  |Q        |      V  |         |         |
11+50       0.1499      0.27  |Q        |      V  |         |         |
11+55       0.1518      0.27  |Q        |      V  |         |         |
12+ 0       0.1536      0.27  |Q        |       V |         |         |
12+ 5       0.1559      0.32  |Q        |       V |         |         |
12+10       0.1584      0.37  |Q        |       V |         |         |
12+15       0.1610      0.38  |Q        |       V |         |         |
12+20       0.1637      0.39  |Q        |        V|         |         |
12+25       0.1664      0.39  |Q        |        V|         |         |
12+30       0.1691      0.39  |Q        |        V|         |         |
12+35       0.1720      0.42  |Q        |         V         |         |
12+40       0.1751      0.45  |Q        |         V         |         |
12+45       0.1782      0.46  |Q        |          |V        |         |
12+50       0.1817      0.50  |Q        |          |V        |         |
12+55       0.1853      0.53  | Q       |          |V        |         |
13+ 0       0.1890      0.54  | Q       |          | V       |         |
13+ 5       0.1939      0.70  | Q       |          | V       |         |
13+10       0.1997      0.84  |  Q      |          |  V      |         |
13+15       0.2057      0.88  |  Q      |          |   V     |         |
13+20       0.2119      0.89  |  Q      |          |   V     |         |
13+25       0.2180      0.90  |  Q      |          |    V    |         |
13+30       0.2243      0.90  |  Q      |          |     V   |         |
13+35       0.2287      0.64  | Q       |          |     V   |         |
13+40       0.2315      0.41  |Q        |          |      V  |         |
13+45       0.2340      0.37  |Q        |          |      V  |         |
13+50       0.2364      0.35  |Q        |          |      V  |         |
13+55       0.2388      0.35  |Q        |          |       V |         |
14+ 0       0.2412      0.35  |Q        |          |       V |         |
14+ 5       0.2441      0.42  |Q        |          |       V |         |
14+10       0.2475      0.49  |Q        |          |        V|         |
14+15       0.2510      0.51  | Q       |          |        V|         |
14+20       0.2544      0.49  |Q        |          |        V|         |
14+25       0.2576      0.47  |Q        |          |         V         |
14+30       0.2608      0.47  |Q        |          |         V         |
14+35       0.2640      0.47  |Q        |          |          |V       |
14+40       0.2673      0.48  |Q        |          |          |V       |
14+45       0.2707      0.48  |Q        |          |          |V       |
14+50       0.2738      0.46  |Q        |          |          | V      |
14+55       0.2769      0.44  |Q        |          |          | V      |
15+ 0       0.2799      0.44  |Q        |          |          |  V     |
15+ 5       0.2827      0.41  |Q        |          |          |  V     |
15+10       0.2854      0.39  |Q        |          |          |  V     |
15+15       0.2881      0.39  |Q        |          |          |  V     |
15+20       0.2907      0.37  |Q        |          |          |   V    |
15+25       0.2931      0.35  |Q        |          |          |   V    |
15+30       0.2956      0.35  |Q        |          |          |   V    |
```

15+35	0.2978	0.32	Q				V
15+40	0.2998	0.30	Q				V
15+45	0.3018	0.29	Q				V
15+50	0.3038	0.29	Q				V
15+55	0.3058	0.29	Q				V
16+ 0	0.3078	0.29	Q				V
16+ 5	0.3090	0.18	Q				V
16+10	0.3096	0.08	Q				V
16+15	0.3101	0.07	Q				V
16+20	0.3105	0.06	Q				V
16+25	0.3109	0.06	Q				V
16+30	0.3113	0.06	Q				V
16+35	0.3117	0.05	Q				V
16+40	0.3120	0.05	Q				V
16+45	0.3123	0.05	Q				V
16+50	0.3126	0.05	Q				V
16+55	0.3130	0.05	Q				V
17+ 0	0.3133	0.05	Q				V
17+ 5	0.3137	0.06	Q				V
17+10	0.3142	0.07	Q				V
17+15	0.3147	0.08	Q				V
17+20	0.3152	0.08	Q				V
17+25	0.3158	0.08	Q				V
17+30	0.3163	0.08	Q				V
17+35	0.3168	0.08	Q				V
17+40	0.3173	0.08	Q				V
17+45	0.3178	0.08	Q				V
17+50	0.3183	0.07	Q				V
17+55	0.3187	0.06	Q				V
18+ 0	0.3192	0.06	Q				V
18+ 5	0.3196	0.06	Q				V
18+10	0.3200	0.06	Q				V
18+15	0.3204	0.06	Q				V
18+20	0.3208	0.06	Q				V
18+25	0.3213	0.06	Q				V
18+30	0.3217	0.06	Q				V
18+35	0.3221	0.05	Q				V
18+40	0.3224	0.05	Q				V
18+45	0.3227	0.05	Q				V
18+50	0.3230	0.04	Q				V
18+55	0.3232	0.03	Q				V
19+ 0	0.3234	0.03	Q				V
19+ 5	0.3237	0.04	Q				V
19+10	0.3240	0.04	Q				V
19+15	0.3243	0.05	Q				V
19+20	0.3246	0.05	Q				V
19+25	0.3250	0.06	Q				V
19+30	0.3255	0.06	Q				V
19+35	0.3258	0.05	Q				V
19+40	0.3261	0.05	Q				V

19+45	0.3265	0.05	Q	|	|	|	V |
19+50	0.3267	0.04	Q	|	|	|	V |
19+55	0.3269	0.03	Q	|	|	|	V |
20+ 0	0.3272	0.03	Q	|	|	|	V |
20+ 5	0.3274	0.04	Q	|	|	|	V |
20+10	0.3277	0.04	Q	|	|	|	V |
20+15	0.3280	0.05	Q	|	|	|	V |
20+20	0.3284	0.05	Q	|	|	|	V |
20+25	0.3287	0.05	Q	|	|	|	V |
20+30	0.3290	0.05	Q	|	|	|	V |
20+35	0.3293	0.05	Q	|	|	|	V |
20+40	0.3296	0.05	Q	|	|	|	V |
20+45	0.3299	0.05	Q	|	|	|	V |
20+50	0.3302	0.04	Q	|	|	|	V |
20+55	0.3304	0.03	Q	|	|	|	V |
21+ 0	0.3306	0.03	Q	|	|	|	V |
21+ 5	0.3309	0.04	Q	|	|	|	V|
21+10	0.3312	0.04	Q	|	|	|	V|
21+15	0.3315	0.05	Q	|	|	|	V|
21+20	0.3318	0.04	Q	|	|	|	V|
21+25	0.3320	0.03	Q	|	|	|	V|
21+30	0.3322	0.03	Q	|	|	|	V|
21+35	0.3324	0.04	Q	|	|	|	V|
21+40	0.3328	0.04	Q	|	|	|	V|
21+45	0.3331	0.05	Q	|	|	|	V|
21+50	0.3333	0.04	Q	|	|	|	V|
21+55	0.3335	0.03	Q	|	|	|	V|
22+ 0	0.3338	0.03	Q	|	|	|	V|
22+ 5	0.3340	0.04	Q	|	|	|	V|
22+10	0.3343	0.04	Q	|	|	|	V|
22+15	0.3346	0.05	Q	|	|	|	V|
22+20	0.3349	0.04	Q	|	|	|	V|
22+25	0.3351	0.03	Q	|	|	|	V|
22+30	0.3353	0.03	Q	|	|	|	V|
22+35	0.3355	0.03	Q	|	|	|	V|
22+40	0.3357	0.03	Q	|	|	|	V|
22+45	0.3360	0.03	Q	|	|	|	V|
22+50	0.3362	0.03	Q	|	|	|	V|
22+55	0.3364	0.03	Q	|	|	|	V|
23+ 0	0.3366	0.03	Q	|	|	|	V|
23+ 5	0.3368	0.03	Q	|	|	|	V|
23+10	0.3370	0.03	Q	|	|	|	V|
23+15	0.3372	0.03	Q	|	|	|	V|
23+20	0.3374	0.03	Q	|	|	|	V|
23+25	0.3376	0.03	Q	|	|	|	V|
23+30	0.3378	0.03	Q	|	|	|	V|
23+35	0.3381	0.03	Q	|	|	|	V|
23+40	0.3383	0.03	Q	|	|	|	V|
23+45	0.3385	0.03	Q	|	|	|	V|
23+50	0.3387	0.03	Q	|	|	|	V|

```
   23+55       0.3389      0.03  Q        |         |         |        V|
   24+ 0       0.3391      0.03  Q        |         |         |        V|
   24+ 5       0.3392      0.02  Q        |         |         |        V|
   24+10       0.3392      0.00  Q        |         |         |        V|
   24+15       0.3392      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 08/16/23 File: ONSITEPOSTE11100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 100-YEAR 1-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            0.50                  2.35

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            1.30                  6.11

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                              Sum = 100.000   Sum=       4.737
-----------------------------------------------------------------
```

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	3.30	0.515	0.316	(0.393)	0.199
2	0.17	4.20	0.655	0.316	(0.501)	0.339
3	0.25	4.40	0.686	0.316	(0.524)	0.371
4	0.33	4.80	0.749	0.316	(0.572)	0.433
5	0.42	5.20	0.811	0.316	(0.620)	0.495
6	0.50	6.20	0.967	0.316	(0.739)	0.651
7	0.58	6.80	1.061	0.316	(0.810)	0.745
8	0.67	8.80	1.373	0.316	(1.049)	1.057
9	0.75	13.90	2.168	0.316	(1.657)	1.853
10	0.83	31.40	4.898	0.316	(3.742)	4.582
11	0.92	7.20	1.123	0.316	(0.858)	0.807
12	1.00	3.80	0.593	0.316	(0.453)	0.277
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	11.8

Flood volume = Effective rainfall 0.98(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.32(In)
Total soil loss = 0.124(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 16791.1 Cubic Feet
Total soil loss = 5387.2 Cubic Feet

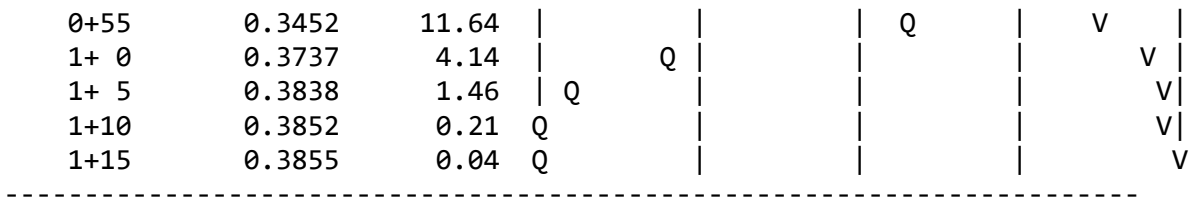
Peak flow rate of this hydrograph = 14.555(CFS)

++

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	0.0031	0.45	Q				
0+10	0.0111	1.16	VQ				
0+15	0.0220	1.58	VQ				
0+20	0.0349	1.86	Q				
0+25	0.0497	2.16	QV				
0+30	0.0681	2.66	Q V				
0+35	0.0902	3.21	Q V				
0+40	0.1189	4.17	Q | V				
0+45	0.1648	6.65	| Q V				
0+50	0.2650	14.55	|			V Q	


0+55 0.3452 11.64
1+ 0 0.3737 4.14
1+ 5 0.3838 1.46
1+10 0.3852 0.21
1+15 0.3855 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 08/16/23 File: ONSITEPOSTE13100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 100-YEAR 3-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            0.80                    3.76

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.00                    9.40

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.312	(0.316)	0.238	0.074
2	0.17	1.30	0.312	(0.316)	0.238	0.074
3	0.25	1.10	0.264	(0.316)	0.202	0.062
4	0.33	1.50	0.360	(0.316)	0.275	0.085
5	0.42	1.50	0.360	(0.316)	0.275	0.085
6	0.50	1.80	0.432	0.316	(0.330)	0.116
7	0.58	1.50	0.360	(0.316)	0.275	0.085
8	0.67	1.80	0.432	0.316	(0.330)	0.116
9	0.75	1.80	0.432	0.316	(0.330)	0.116
10	0.83	1.50	0.360	(0.316)	0.275	0.085
11	0.92	1.60	0.384	(0.316)	0.293	0.091
12	1.00	1.80	0.432	0.316	(0.330)	0.116
13	1.08	2.20	0.528	0.316	(0.403)	0.212
14	1.17	2.20	0.528	0.316	(0.403)	0.212
15	1.25	2.20	0.528	0.316	(0.403)	0.212
16	1.33	2.00	0.480	0.316	(0.367)	0.164
17	1.42	2.60	0.624	0.316	(0.477)	0.308
18	1.50	2.70	0.648	0.316	(0.495)	0.332
19	1.58	2.40	0.576	0.316	(0.440)	0.260
20	1.67	2.70	0.648	0.316	(0.495)	0.332
21	1.75	3.30	0.792	0.316	(0.605)	0.476
22	1.83	3.10	0.744	0.316	(0.568)	0.428
23	1.92	2.90	0.696	0.316	(0.532)	0.380
24	2.00	3.00	0.720	0.316	(0.550)	0.404
25	2.08	3.10	0.744	0.316	(0.568)	0.428
26	2.17	4.20	1.008	0.316	(0.770)	0.692
27	2.25	5.00	1.200	0.316	(0.917)	0.884
28	2.33	3.50	0.840	0.316	(0.642)	0.524
29	2.42	6.80	1.632	0.316	(1.247)	1.316
30	2.50	7.30	1.752	0.316	(1.339)	1.436
31	2.58	8.20	1.968	0.316	(1.504)	1.652
32	2.67	5.90	1.416	0.316	(1.082)	1.100
33	2.75	2.00	0.480	0.316	(0.367)	0.164
34	2.83	1.80	0.432	0.316	(0.330)	0.116
35	2.92	1.80	0.432	0.316	(0.330)	0.116
36	3.00	0.60	0.144	(0.316)	0.110	0.034
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	13.3

Flood volume = Effective rainfall 1.11(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.89(In)
Total soil loss = 0.349(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 18897.9 Cubic Feet
Total soil loss = 15223.4 Cubic Feet

Peak flow rate of this hydrograph = 7.131(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	0.0012	0.17	Q				
0+10	0.0033	0.31	VQ				
0+15	0.0055	0.31	VQ				
0+20	0.0079	0.35	VQ				
0+25	0.0106	0.39	VQ				
0+30	0.0138	0.47	|Q				
0+35	0.0170	0.46	|Q				
0+40	0.0204	0.49	|Q				
0+45	0.0241	0.54	| Q				
0+50	0.0274	0.48	|QV				
0+55	0.0303	0.43	|QV				
1+ 0	0.0337	0.49	|Q V				
1+ 5	0.0389	0.76	| Q				
1+10	0.0455	0.95	| QV				
1+15	0.0523	0.99	| QV				
1+20	0.0585	0.90	| Q V				
1+25	0.0663	1.13	| Q V				
1+30	0.0763	1.45	| Q V				
1+35	0.0858	1.38	| Q V				
1+40	0.0956	1.43	| Q V				
1+45	0.1085	1.88	| Q V				
1+50	0.1228	2.07	| Q |V				
1+55	0.1360	1.92	| Q | V				
2+ 0	0.1490	1.89	| Q | V				
2+ 5	0.1625	1.96	| Q | V				
2+10	0.1805	2.62	| Q V				
2+15	0.2052	3.58	| | Q V |			
2+20	0.2275	3.24	| | Q V				
2+25	0.2581	4.44	| | Q | V				
2+30	0.3006	6.16	| | | Q V				
2+35	0.3497	7.13	| | | Q | V				
2+40	0.3941	6.45	| | | Q | V				
2+45	0.4170	3.33	| | Q | | V |				
2+50	0.4254	1.21	| Q | | V|				
2+55	0.4302	0.70	| Q | | V|				
3+ 0	0.4328	0.37	|Q | | V|				
3+ 5	0.4336	0.12	Q | | V|				
3+10	0.4338	0.03	Q | | V|				

3+15	0.4338	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 08/16/23 File: ONSITEPOSTE16100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 100-YEAR 6-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            1.20                  5.64

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            2.80                 13.16

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

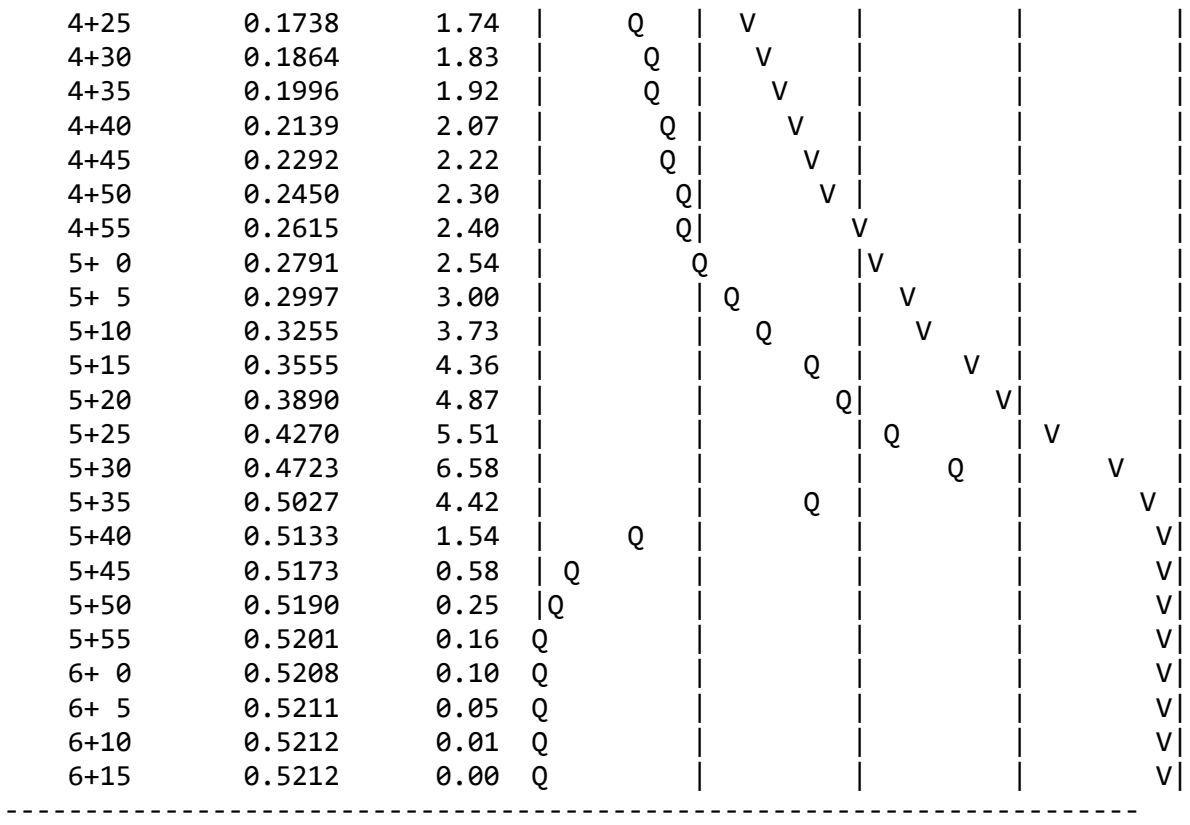
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	(0.316)	0.128	0.040
2	0.17	0.60	0.202	(0.316)	0.154	0.048
3	0.25	0.60	0.202	(0.316)	0.154	0.048
4	0.33	0.60	0.202	(0.316)	0.154	0.048
5	0.42	0.60	0.202	(0.316)	0.154	0.048
6	0.50	0.70	0.235	(0.316)	0.180	0.056
7	0.58	0.70	0.235	(0.316)	0.180	0.056
8	0.67	0.70	0.235	(0.316)	0.180	0.056
9	0.75	0.70	0.235	(0.316)	0.180	0.056
10	0.83	0.70	0.235	(0.316)	0.180	0.056
11	0.92	0.70	0.235	(0.316)	0.180	0.056
12	1.00	0.80	0.269	(0.316)	0.205	0.063
13	1.08	0.80	0.269	(0.316)	0.205	0.063
14	1.17	0.80	0.269	(0.316)	0.205	0.063
15	1.25	0.80	0.269	(0.316)	0.205	0.063
16	1.33	0.80	0.269	(0.316)	0.205	0.063
17	1.42	0.80	0.269	(0.316)	0.205	0.063
18	1.50	0.80	0.269	(0.316)	0.205	0.063
19	1.58	0.80	0.269	(0.316)	0.205	0.063
20	1.67	0.80	0.269	(0.316)	0.205	0.063
21	1.75	0.80	0.269	(0.316)	0.205	0.063
22	1.83	0.80	0.269	(0.316)	0.205	0.063
23	1.92	0.80	0.269	(0.316)	0.205	0.063
24	2.00	0.90	0.302	(0.316)	0.231	0.071
25	2.08	0.80	0.269	(0.316)	0.205	0.063
26	2.17	0.90	0.302	(0.316)	0.231	0.071
27	2.25	0.90	0.302	(0.316)	0.231	0.071
28	2.33	0.90	0.302	(0.316)	0.231	0.071
29	2.42	0.90	0.302	(0.316)	0.231	0.071
30	2.50	0.90	0.302	(0.316)	0.231	0.071
31	2.58	0.90	0.302	(0.316)	0.231	0.071
32	2.67	0.90	0.302	(0.316)	0.231	0.071
33	2.75	1.00	0.336	(0.316)	0.257	0.079
34	2.83	1.00	0.336	(0.316)	0.257	0.079
35	2.92	1.00	0.336	(0.316)	0.257	0.079
36	3.00	1.00	0.336	(0.316)	0.257	0.079
37	3.08	1.00	0.336	(0.316)	0.257	0.079
38	3.17	1.10	0.370	(0.316)	0.282	0.087
39	3.25	1.10	0.370	(0.316)	0.282	0.087
40	3.33	1.10	0.370	(0.316)	0.282	0.087
41	3.42	1.20	0.403	(0.316)	0.308	0.095
42	3.50	1.30	0.437	0.316	(0.334)	0.121
43	3.58	1.40	0.470	0.316	(0.359)	0.155
44	3.67	1.40	0.470	0.316	(0.359)	0.155
45	3.75	1.50	0.504	0.316	(0.385)	0.188

```
46   3.83     1.50      0.504          0.316    (  0.385)        0.188
47   3.92     1.60      0.538          0.316    (  0.411)        0.222
48   4.00     1.60      0.538          0.316    (  0.411)        0.222
49   4.08     1.70      0.571          0.316    (  0.436)        0.255
50   4.17     1.80      0.605          0.316    (  0.462)        0.289
51   4.25     1.90      0.638          0.316    (  0.488)        0.323
52   4.33     2.00      0.672          0.316    (  0.513)        0.356
53   4.42     2.10      0.706          0.316    (  0.539)        0.390
54   4.50     2.10      0.706          0.316    (  0.539)        0.390
55   4.58     2.20      0.739          0.316    (  0.565)        0.423
56   4.67     2.30      0.773          0.316    (  0.590)        0.457
57   4.75     2.40      0.806          0.316    (  0.616)        0.491
58   4.83     2.40      0.806          0.316    (  0.616)        0.491
59   4.92     2.50      0.840          0.316    (  0.642)        0.524
60   5.00     2.60      0.874          0.316    (  0.667)        0.558
61   5.08     3.10      1.042          0.316    (  0.796)        0.726
62   5.17     3.60      1.210          0.316    (  0.924)        0.894
63   5.25     3.90      1.310          0.316    (  1.001)        0.995
64   5.33     4.20      1.411          0.316    (  1.078)        1.095
65   5.42     4.70      1.579          0.316    (  1.206)        1.263
66   5.50     5.60      1.882          0.316    (  1.438)        1.566
67   5.58     1.90      0.638          0.316    (  0.488)        0.323
68   5.67     0.90      0.302       (  0.316)       0.231        0.071
69   5.75     0.60      0.202       (  0.316)       0.154        0.048
70   5.83     0.50      0.168       (  0.316)       0.128        0.040
71   5.92     0.30      0.101       (  0.316)       0.077        0.024
72   6.00     0.20      0.067       (  0.316)       0.051        0.016
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    16.0
      Flood volume = Effective rainfall      1.33(In)
       times area       4.7(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
      Total soil loss =      1.47(In)
      Total soil loss =     0.575(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       22703.6 Cubic Feet
      Total soil loss =       25066.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      6.578(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       0.0006      0.09  Q         |         |         |         |
  0+10       0.0019      0.19  Q         |         |         |         |
```

```
0+15       0.0034      0.22  Q          |          |          |          |
0+20       0.0049      0.22  Q          |          |          |          |
0+25       0.0065      0.23  Q          |          |          |          |
0+30       0.0082      0.24  Q          |          |          |          |
0+35       0.0100      0.26  VQ         |          |          |          |
0+40       0.0118      0.26  VQ         |          |          |          |
0+45       0.0136      0.26  |Q         |          |          |          |
0+50       0.0154      0.26  |Q         |          |          |          |
0+55       0.0172      0.26  |Q         |          |          |          |
1+ 0       0.0191      0.28  |Q         |          |          |          |
1+ 5       0.0212      0.30  |Q         |          |          |          |
1+10       0.0232      0.30  |Q         |          |          |          |
1+15       0.0253      0.30  |Q         |          |          |          |
1+20       0.0274      0.30  |QV        |          |          |          |
1+25       0.0294      0.30  |QV        |          |          |          |
1+30       0.0315      0.30  |QV        |          |          |          |
1+35       0.0336      0.30  |QV        |          |          |          |
1+40       0.0357      0.30  |QV        |          |          |          |
1+45       0.0377      0.30  |QV        |          |          |          |
1+50       0.0398      0.30  |Q V       |          |          |          |
1+55       0.0419      0.30  |Q V       |          |          |          |
2+ 0       0.0441      0.32  |Q V       |          |          |          |
2+ 5       0.0462      0.32  |Q V       |          |          |          |
2+10       0.0485      0.32  |Q V       |          |          |          |
2+15       0.0508      0.34  |Q V       |          |          |          |
2+20       0.0531      0.34  |Q  V      |          |          |          |
2+25       0.0554      0.34  |Q  V      |          |          |          |
2+30       0.0577      0.34  |Q  V      |          |          |          |
2+35       0.0601      0.34  |Q  V      |          |          |          |
2+40       0.0624      0.34  |Q  V      |          |          |          |
2+45       0.0649      0.36  |Q  V      |          |          |          |
2+50       0.0674      0.37  |Q   V     |          |          |          |
2+55       0.0700      0.37  |Q   V     |          |          |          |
3+ 0       0.0726      0.38  |Q   V     |          |          |          |
3+ 5       0.0752      0.38  |Q   V     |          |          |          |
3+10       0.0779      0.39  |Q   V     |          |          |          |
3+15       0.0807      0.41  |Q    V    |          |          |          |
3+20       0.0835      0.41  |Q    V    |          |          |          |
3+25       0.0865      0.43  |Q    V    |          |          |          |
3+30       0.0900      0.51  | Q   V    |          |          |          |
3+35       0.0944      0.64  | Q    V   |          |          |          |
3+40       0.0993      0.71  | Q    V   |          |          |          |
3+45       0.1048      0.80  |  Q    V  |          |          |          |
3+50       0.1109      0.88  |  Q    V  |          |          |          |
3+55       0.1175      0.96  |  Q     V|          |          |          |
4+ 0       0.1246      1.03  |   Q    V|          |          |          |
4+ 5       0.1324      1.12  |   Q     V          |          |          |
4+10       0.1411      1.27  |    Q    V          |          |          |
4+15       0.1509      1.42  |    Q    |V         |          |          |
4+20       0.1618      1.58  |     Q   | V        |          |          |
```


4+25 0.1738 1.74
4+30 0.1864 1.83
4+35 0.1996 1.92
4+40 0.2139 2.07
4+45 0.2292 2.22
4+50 0.2450 2.30
4+55 0.2615 2.40
5+ 0 0.2791 2.54
5+ 5 0.2997 3.00
5+10 0.3255 3.73
5+15 0.3555 4.36
5+20 0.3890 4.87
5+25 0.4270 5.51
5+30 0.4723 6.58
5+35 0.5027 4.42
5+40 0.5133 1.54
5+45 0.5173 0.58
5+50 0.5190 0.25
5+55 0.5201 0.16
6+ 0 0.5208 0.10
6+ 5 0.5211 0.05
6+10 0.5212 0.01
6+15 0.5212 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 08/16/23 File: ONSITEPOSTE124100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-1
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE1.OUT- RSB

Drainage Area = 4.70(Ac.) = 0.007 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 4.70(Ac.) = 0.007 Sq. Mi.
Length along longest watercourse = 596.00(Ft.)
Length along longest watercourse measured to centroid = 301.00(Ft.)
Length along longest watercourse = 0.113 Mi.
Length along longest watercourse measured to centroid = 0.057 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 106.3087 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.036 Hr.
Lag time = 2.18 Min.
25% of lag time = 0.55 Min.
40% of lag time = 0.87 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]
        4.70            2.00                  9.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        4.70            5.40                 25.38

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     4.700           69.00         0.170
 Total Area Entered =      4.70(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.170        0.316       1.000      0.316
                                                 Sum (F) =   0.316
Area averaged mean soil loss (F) (In/Hr) =  0.316
Minimum soil loss rate ((In/Hr)) =  0.158
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.764
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        229.334         48.051              2.276
    2   0.167        458.668         41.372              1.960
    3   0.250        688.002          7.714              0.365
    4   0.333        917.336          2.863              0.136
                               Sum = 100.000   Sum=       4.737
------------------------------------------------------------------------
```

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	0.043	(0.560)	0.033	0.010
2	0.17	0.07	0.043	(0.558)	0.033	0.010
3	0.25	0.07	0.043	(0.555)	0.033	0.010
4	0.33	0.10	0.065	(0.553)	0.050	0.015
5	0.42	0.10	0.065	(0.551)	0.050	0.015
6	0.50	0.10	0.065	(0.549)	0.050	0.015
7	0.58	0.10	0.065	(0.547)	0.050	0.015
8	0.67	0.10	0.065	(0.545)	0.050	0.015
9	0.75	0.10	0.065	(0.543)	0.050	0.015
10	0.83	0.13	0.086	(0.540)	0.066	0.020
11	0.92	0.13	0.086	(0.538)	0.066	0.020
12	1.00	0.13	0.086	(0.536)	0.066	0.020
13	1.08	0.10	0.065	(0.534)	0.050	0.015
14	1.17	0.10	0.065	(0.532)	0.050	0.015
15	1.25	0.10	0.065	(0.530)	0.050	0.015
16	1.33	0.10	0.065	(0.528)	0.050	0.015
17	1.42	0.10	0.065	(0.526)	0.050	0.015
18	1.50	0.10	0.065	(0.524)	0.050	0.015
19	1.58	0.10	0.065	(0.521)	0.050	0.015
20	1.67	0.10	0.065	(0.519)	0.050	0.015
21	1.75	0.10	0.065	(0.517)	0.050	0.015
22	1.83	0.13	0.086	(0.515)	0.066	0.020
23	1.92	0.13	0.086	(0.513)	0.066	0.020
24	2.00	0.13	0.086	(0.511)	0.066	0.020
25	2.08	0.13	0.086	(0.509)	0.066	0.020
26	2.17	0.13	0.086	(0.507)	0.066	0.020
27	2.25	0.13	0.086	(0.505)	0.066	0.020
28	2.33	0.13	0.086	(0.503)	0.066	0.020
29	2.42	0.13	0.086	(0.501)	0.066	0.020
30	2.50	0.13	0.086	(0.499)	0.066	0.020
31	2.58	0.17	0.108	(0.497)	0.083	0.025
32	2.67	0.17	0.108	(0.495)	0.083	0.025
33	2.75	0.17	0.108	(0.493)	0.083	0.025
34	2.83	0.17	0.108	(0.491)	0.083	0.025
35	2.92	0.17	0.108	(0.489)	0.083	0.025
36	3.00	0.17	0.108	(0.487)	0.083	0.025
37	3.08	0.17	0.108	(0.484)	0.083	0.025
38	3.17	0.17	0.108	(0.482)	0.083	0.025
39	3.25	0.17	0.108	(0.480)	0.083	0.025
40	3.33	0.17	0.108	(0.478)	0.083	0.025
41	3.42	0.17	0.108	(0.476)	0.083	0.025
42	3.50	0.17	0.108	(0.474)	0.083	0.025
43	3.58	0.17	0.108	(0.472)	0.083	0.025
44	3.67	0.17	0.108	(0.471)	0.083	0.025
45	3.75	0.17	0.108	(0.469)	0.083	0.025

46	3.83	0.20	0.130	(0.467)	0.099	0.031
47	3.92	0.20	0.130	(0.465)	0.099	0.031
48	4.00	0.20	0.130	(0.463)	0.099	0.031
49	4.08	0.20	0.130	(0.461)	0.099	0.031
50	4.17	0.20	0.130	(0.459)	0.099	0.031
51	4.25	0.20	0.130	(0.457)	0.099	0.031
52	4.33	0.23	0.151	(0.455)	0.116	0.036
53	4.42	0.23	0.151	(0.453)	0.116	0.036
54	4.50	0.23	0.151	(0.451)	0.116	0.036
55	4.58	0.23	0.151	(0.449)	0.116	0.036
56	4.67	0.23	0.151	(0.447)	0.116	0.036
57	4.75	0.23	0.151	(0.445)	0.116	0.036
58	4.83	0.27	0.173	(0.443)	0.132	0.041
59	4.92	0.27	0.173	(0.441)	0.132	0.041
60	5.00	0.27	0.173	(0.439)	0.132	0.041
61	5.08	0.20	0.130	(0.437)	0.099	0.031
62	5.17	0.20	0.130	(0.436)	0.099	0.031
63	5.25	0.20	0.130	(0.434)	0.099	0.031
64	5.33	0.23	0.151	(0.432)	0.116	0.036
65	5.42	0.23	0.151	(0.430)	0.116	0.036
66	5.50	0.23	0.151	(0.428)	0.116	0.036
67	5.58	0.27	0.173	(0.426)	0.132	0.041
68	5.67	0.27	0.173	(0.424)	0.132	0.041
69	5.75	0.27	0.173	(0.422)	0.132	0.041
70	5.83	0.27	0.173	(0.421)	0.132	0.041
71	5.92	0.27	0.173	(0.419)	0.132	0.041
72	6.00	0.27	0.173	(0.417)	0.132	0.041
73	6.08	0.30	0.194	(0.415)	0.149	0.046
74	6.17	0.30	0.194	(0.413)	0.149	0.046
75	6.25	0.30	0.194	(0.411)	0.149	0.046
76	6.33	0.30	0.194	(0.409)	0.149	0.046
77	6.42	0.30	0.194	(0.408)	0.149	0.046
78	6.50	0.30	0.194	(0.406)	0.149	0.046
79	6.58	0.33	0.216	(0.404)	0.165	0.051
80	6.67	0.33	0.216	(0.402)	0.165	0.051
81	6.75	0.33	0.216	(0.400)	0.165	0.051
82	6.83	0.33	0.216	(0.399)	0.165	0.051
83	6.92	0.33	0.216	(0.397)	0.165	0.051
84	7.00	0.33	0.216	(0.395)	0.165	0.051
85	7.08	0.33	0.216	(0.393)	0.165	0.051
86	7.17	0.33	0.216	(0.391)	0.165	0.051
87	7.25	0.33	0.216	(0.390)	0.165	0.051
88	7.33	0.37	0.238	(0.388)	0.182	0.056
89	7.42	0.37	0.238	(0.386)	0.182	0.056
90	7.50	0.37	0.238	(0.384)	0.182	0.056
91	7.58	0.40	0.259	(0.382)	0.198	0.061
92	7.67	0.40	0.259	(0.381)	0.198	0.061
93	7.75	0.40	0.259	(0.379)	0.198	0.061
94	7.83	0.43	0.281	(0.377)	0.215	0.066
95	7.92	0.43	0.281	(0.375)	0.215	0.066

96	8.00	0.43	0.281	(0.374)	0.215	0.066
97	8.08	0.50	0.324	(0.372)	0.248	0.076
98	8.17	0.50	0.324	(0.370)	0.248	0.076
99	8.25	0.50	0.324	(0.369)	0.248	0.076
100	8.33	0.50	0.324	(0.367)	0.248	0.076
101	8.42	0.50	0.324	(0.365)	0.248	0.076
102	8.50	0.50	0.324	(0.363)	0.248	0.076
103	8.58	0.53	0.346	(0.362)	0.264	0.082
104	8.67	0.53	0.346	(0.360)	0.264	0.082
105	8.75	0.53	0.346	(0.358)	0.264	0.082
106	8.83	0.57	0.367	(0.357)	0.281	0.087
107	8.92	0.57	0.367	(0.355)	0.281	0.087
108	9.00	0.57	0.367	(0.353)	0.281	0.087
109	9.08	0.63	0.410	(0.352)	0.314	0.097
110	9.17	0.63	0.410	(0.350)	0.314	0.097
111	9.25	0.63	0.410	(0.348)	0.314	0.097
112	9.33	0.67	0.432	(0.347)	0.330	0.102
113	9.42	0.67	0.432	(0.345)	0.330	0.102
114	9.50	0.67	0.432	(0.343)	0.330	0.102
115	9.58	0.70	0.454	0.342	(0.347)	0.112
116	9.67	0.70	0.454	0.340	(0.347)	0.114
117	9.75	0.70	0.454	0.338	(0.347)	0.115
118	9.83	0.73	0.475	0.337	(0.363)	0.139
119	9.92	0.73	0.475	0.335	(0.363)	0.140
120	10.00	0.73	0.475	0.333	(0.363)	0.142
121	10.08	0.50	0.324	(0.332)	0.248	0.076
122	10.17	0.50	0.324	(0.330)	0.248	0.076
123	10.25	0.50	0.324	(0.329)	0.248	0.076
124	10.33	0.50	0.324	(0.327)	0.248	0.076
125	10.42	0.50	0.324	(0.325)	0.248	0.076
126	10.50	0.50	0.324	(0.324)	0.248	0.076
127	10.58	0.67	0.432	0.322	(0.330)	0.110
128	10.67	0.67	0.432	0.321	(0.330)	0.111
129	10.75	0.67	0.432	0.319	(0.330)	0.113
130	10.83	0.67	0.432	0.318	(0.330)	0.114
131	10.92	0.67	0.432	0.316	(0.330)	0.116
132	11.00	0.67	0.432	0.314	(0.330)	0.118
133	11.08	0.63	0.410	0.313	(0.314)	0.097
134	11.17	0.63	0.410	0.311	(0.314)	0.099
135	11.25	0.63	0.410	0.310	(0.314)	0.101
136	11.33	0.63	0.410	0.308	(0.314)	0.102
137	11.42	0.63	0.410	0.307	(0.314)	0.104
138	11.50	0.63	0.410	0.305	(0.314)	0.105
139	11.58	0.57	0.367	(0.304)	0.281	0.087
140	11.67	0.57	0.367	(0.302)	0.281	0.087
141	11.75	0.57	0.367	(0.301)	0.281	0.087
142	11.83	0.60	0.389	(0.299)	0.297	0.092
143	11.92	0.60	0.389	(0.298)	0.297	0.092
144	12.00	0.60	0.389	0.296	(0.297)	0.093
145	12.08	0.83	0.540	0.295	(0.413)	0.245

146	12.17	0.83	0.540	0.293	(0.413)	0.247
147	12.25	0.83	0.540	0.292	(0.413)	0.248
148	12.33	0.87	0.562	0.290	(0.429)	0.271
149	12.42	0.87	0.562	0.289	(0.429)	0.273
150	12.50	0.87	0.562	0.287	(0.429)	0.274
151	12.58	0.93	0.605	0.286	(0.462)	0.319
152	12.67	0.93	0.605	0.285	(0.462)	0.320
153	12.75	0.93	0.605	0.283	(0.462)	0.322
154	12.83	0.97	0.626	0.282	(0.479)	0.345
155	12.92	0.97	0.626	0.280	(0.479)	0.346
156	13.00	0.97	0.626	0.279	(0.479)	0.348
157	13.08	1.13	0.734	0.277	(0.561)	0.457
158	13.17	1.13	0.734	0.276	(0.561)	0.458
159	13.25	1.13	0.734	0.275	(0.561)	0.460
160	13.33	1.13	0.734	0.273	(0.561)	0.461
161	13.42	1.13	0.734	0.272	(0.561)	0.463
162	13.50	1.13	0.734	0.270	(0.561)	0.464
163	13.58	0.77	0.497	0.269	(0.380)	0.228
164	13.67	0.77	0.497	0.268	(0.380)	0.229
165	13.75	0.77	0.497	0.266	(0.380)	0.230
166	13.83	0.77	0.497	0.265	(0.380)	0.232
167	13.92	0.77	0.497	0.264	(0.380)	0.233
168	14.00	0.77	0.497	0.262	(0.380)	0.235
169	14.08	0.90	0.583	0.261	(0.446)	0.322
170	14.17	0.90	0.583	0.260	(0.446)	0.324
171	14.25	0.90	0.583	0.258	(0.446)	0.325
172	14.33	0.87	0.562	0.257	(0.429)	0.305
173	14.42	0.87	0.562	0.256	(0.429)	0.306
174	14.50	0.87	0.562	0.254	(0.429)	0.307
175	14.58	0.87	0.562	0.253	(0.429)	0.309
176	14.67	0.87	0.562	0.252	(0.429)	0.310
177	14.75	0.87	0.562	0.250	(0.429)	0.311
178	14.83	0.83	0.540	0.249	(0.413)	0.291
179	14.92	0.83	0.540	0.248	(0.413)	0.292
180	15.00	0.83	0.540	0.247	(0.413)	0.293
181	15.08	0.80	0.518	0.245	(0.396)	0.273
182	15.17	0.80	0.518	0.244	(0.396)	0.274
183	15.25	0.80	0.518	0.243	(0.396)	0.276
184	15.33	0.77	0.497	0.242	(0.380)	0.255
185	15.42	0.77	0.497	0.240	(0.380)	0.256
186	15.50	0.77	0.497	0.239	(0.380)	0.258
187	15.58	0.63	0.410	0.238	(0.314)	0.172
188	15.67	0.63	0.410	0.237	(0.314)	0.174
189	15.75	0.63	0.410	0.235	(0.314)	0.175
190	15.83	0.63	0.410	0.234	(0.314)	0.176
191	15.92	0.63	0.410	0.233	(0.314)	0.177
192	16.00	0.63	0.410	0.232	(0.314)	0.179
193	16.08	0.13	0.086	(0.231)	0.066	0.020
194	16.17	0.13	0.086	(0.230)	0.066	0.020
195	16.25	0.13	0.086	(0.228)	0.066	0.020

196	16.33	0.13	0.086	(0.227)	0.066	0.020
197	16.42	0.13	0.086	(0.226)	0.066	0.020
198	16.50	0.13	0.086	(0.225)	0.066	0.020
199	16.58	0.10	0.065	(0.224)	0.050	0.015
200	16.67	0.10	0.065	(0.223)	0.050	0.015
201	16.75	0.10	0.065	(0.221)	0.050	0.015
202	16.83	0.10	0.065	(0.220)	0.050	0.015
203	16.92	0.10	0.065	(0.219)	0.050	0.015
204	17.00	0.10	0.065	(0.218)	0.050	0.015
205	17.08	0.17	0.108	(0.217)	0.083	0.025
206	17.17	0.17	0.108	(0.216)	0.083	0.025
207	17.25	0.17	0.108	(0.215)	0.083	0.025
208	17.33	0.17	0.108	(0.214)	0.083	0.025
209	17.42	0.17	0.108	(0.213)	0.083	0.025
210	17.50	0.17	0.108	(0.212)	0.083	0.025
211	17.58	0.17	0.108	(0.211)	0.083	0.025
212	17.67	0.17	0.108	(0.210)	0.083	0.025
213	17.75	0.17	0.108	(0.208)	0.083	0.025
214	17.83	0.13	0.086	(0.207)	0.066	0.020
215	17.92	0.13	0.086	(0.206)	0.066	0.020
216	18.00	0.13	0.086	(0.205)	0.066	0.020
217	18.08	0.13	0.086	(0.204)	0.066	0.020
218	18.17	0.13	0.086	(0.203)	0.066	0.020
219	18.25	0.13	0.086	(0.202)	0.066	0.020
220	18.33	0.13	0.086	(0.201)	0.066	0.020
221	18.42	0.13	0.086	(0.200)	0.066	0.020
222	18.50	0.13	0.086	(0.199)	0.066	0.020
223	18.58	0.10	0.065	(0.198)	0.050	0.015
224	18.67	0.10	0.065	(0.198)	0.050	0.015
225	18.75	0.10	0.065	(0.197)	0.050	0.015
226	18.83	0.07	0.043	(0.196)	0.033	0.010
227	18.92	0.07	0.043	(0.195)	0.033	0.010
228	19.00	0.07	0.043	(0.194)	0.033	0.010
229	19.08	0.10	0.065	(0.193)	0.050	0.015
230	19.17	0.10	0.065	(0.192)	0.050	0.015
231	19.25	0.10	0.065	(0.191)	0.050	0.015
232	19.33	0.13	0.086	(0.190)	0.066	0.020
233	19.42	0.13	0.086	(0.189)	0.066	0.020
234	19.50	0.13	0.086	(0.188)	0.066	0.020
235	19.58	0.10	0.065	(0.188)	0.050	0.015
236	19.67	0.10	0.065	(0.187)	0.050	0.015
237	19.75	0.10	0.065	(0.186)	0.050	0.015
238	19.83	0.07	0.043	(0.185)	0.033	0.010
239	19.92	0.07	0.043	(0.184)	0.033	0.010
240	20.00	0.07	0.043	(0.183)	0.033	0.010
241	20.08	0.10	0.065	(0.183)	0.050	0.015
242	20.17	0.10	0.065	(0.182)	0.050	0.015
243	20.25	0.10	0.065	(0.181)	0.050	0.015
244	20.33	0.10	0.065	(0.180)	0.050	0.015
245	20.42	0.10	0.065	(0.179)	0.050	0.015

246	20.50	0.10	0.065	(0.179)	0.050	0.015
247	20.58	0.10	0.065	(0.178)	0.050	0.015
248	20.67	0.10	0.065	(0.177)	0.050	0.015
249	20.75	0.10	0.065	(0.176)	0.050	0.015
250	20.83	0.07	0.043	(0.176)	0.033	0.010
251	20.92	0.07	0.043	(0.175)	0.033	0.010
252	21.00	0.07	0.043	(0.174)	0.033	0.010
253	21.08	0.10	0.065	(0.174)	0.050	0.015
254	21.17	0.10	0.065	(0.173)	0.050	0.015
255	21.25	0.10	0.065	(0.172)	0.050	0.015
256	21.33	0.07	0.043	(0.172)	0.033	0.010
257	21.42	0.07	0.043	(0.171)	0.033	0.010
258	21.50	0.07	0.043	(0.170)	0.033	0.010
259	21.58	0.10	0.065	(0.170)	0.050	0.015
260	21.67	0.10	0.065	(0.169)	0.050	0.015
261	21.75	0.10	0.065	(0.168)	0.050	0.015
262	21.83	0.07	0.043	(0.168)	0.033	0.010
263	21.92	0.07	0.043	(0.167)	0.033	0.010
264	22.00	0.07	0.043	(0.167)	0.033	0.010
265	22.08	0.10	0.065	(0.166)	0.050	0.015
266	22.17	0.10	0.065	(0.166)	0.050	0.015
267	22.25	0.10	0.065	(0.165)	0.050	0.015
268	22.33	0.07	0.043	(0.165)	0.033	0.010
269	22.42	0.07	0.043	(0.164)	0.033	0.010
270	22.50	0.07	0.043	(0.164)	0.033	0.010
271	22.58	0.07	0.043	(0.163)	0.033	0.010
272	22.67	0.07	0.043	(0.163)	0.033	0.010
273	22.75	0.07	0.043	(0.162)	0.033	0.010
274	22.83	0.07	0.043	(0.162)	0.033	0.010
275	22.92	0.07	0.043	(0.161)	0.033	0.010
276	23.00	0.07	0.043	(0.161)	0.033	0.010
277	23.08	0.07	0.043	(0.161)	0.033	0.010
278	23.17	0.07	0.043	(0.160)	0.033	0.010
279	23.25	0.07	0.043	(0.160)	0.033	0.010
280	23.33	0.07	0.043	(0.160)	0.033	0.010
281	23.42	0.07	0.043	(0.159)	0.033	0.010
282	23.50	0.07	0.043	(0.159)	0.033	0.010
283	23.58	0.07	0.043	(0.159)	0.033	0.010
284	23.67	0.07	0.043	(0.159)	0.033	0.010
285	23.75	0.07	0.043	(0.158)	0.033	0.010
286	23.83	0.07	0.043	(0.158)	0.033	0.010
287	23.92	0.07	0.043	(0.158)	0.033	0.010
288	24.00	0.07	0.043	(0.158)	0.033	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.3

Flood volume = Effective rainfall 1.94(In)
times area 4.7(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 3.46(In)
Total soil loss = 1.356(Ac.Ft)
Total rainfall = 5.40(In)

Flood volume = 33063.6 Cubic Feet
Total soil loss = 59065.0 Cubic Feet

Peak flow rate of this hydrograph = 2.194(CFS)

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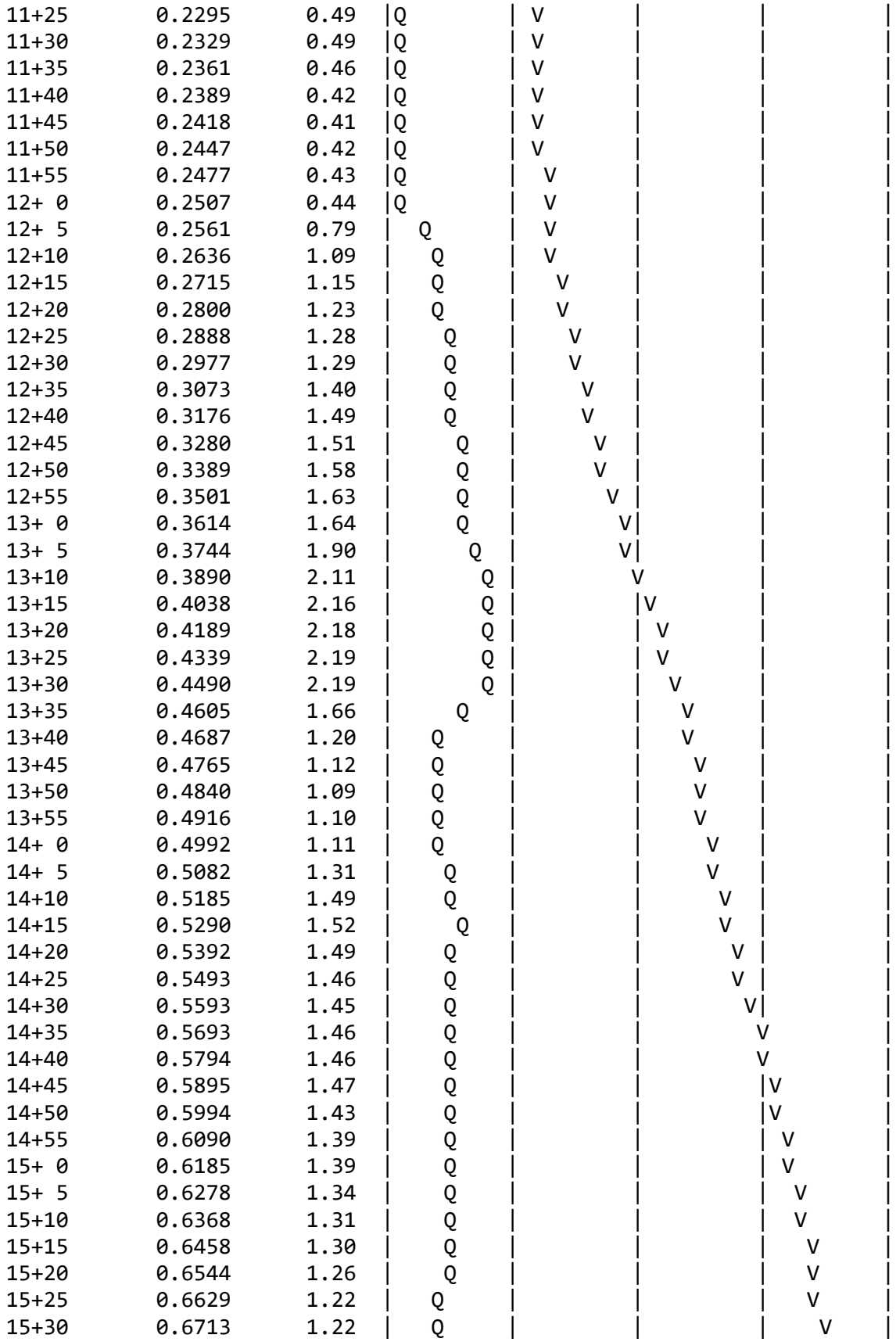
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0002	0.02	Q				
0+10	0.0005	0.04	Q				
0+15	0.0008	0.05	Q				
0+20	0.0012	0.06	Q				
0+25	0.0017	0.07	Q				
0+30	0.0022	0.07	Q				
0+35	0.0027	0.07	Q				
0+40	0.0032	0.07	Q				
0+45	0.0037	0.07	Q				
0+50	0.0042	0.08	Q				
0+55	0.0049	0.09	Q				
1+ 0	0.0056	0.10	Q				
1+ 5	0.0061	0.09	Q				
1+10	0.0067	0.08	Q				
1+15	0.0072	0.07	Q				
1+20	0.0077	0.07	Q				
1+25	0.0082	0.07	Q				
1+30	0.0087	0.07	Q				
1+35	0.0092	0.07	Q				
1+40	0.0097	0.07	Q				
1+45	0.0102	0.07	Q				
1+50	0.0107	0.08	Q				
1+55	0.0114	0.09	Q				
2+ 0	0.0120	0.10	Q				
2+ 5	0.0127	0.10	Q				
2+10	0.0134	0.10	Q				
2+15	0.0140	0.10	Q				
2+20	0.0147	0.10	Q				
2+25	0.0154	0.10	Q				
2+30	0.0160	0.10	Q				
2+35	0.0168	0.11	Q				
2+40	0.0176	0.12	Q				
2+45	0.0184	0.12	Q				
2+50	0.0193	0.12	QV				
2+55	0.0201	0.12	QV				
3+ 0	0.0209	0.12	QV				

3+ 5	0.0218	0.12	QV	|	|	|	|
3+10	0.0226	0.12	QV	|	|	|	|
3+15	0.0234	0.12	QV	|	|	|	|
3+20	0.0242	0.12	QV	|	|	|	|
3+25	0.0251	0.12	QV	|	|	|	|
3+30	0.0259	0.12	QV	|	|	|	|
3+35	0.0267	0.12	QV	|	|	|	|
3+40	0.0276	0.12	QV	|	|	|	|
3+45	0.0284	0.12	QV	|	|	|	|
3+50	0.0293	0.13	QV	|	|	|	|
3+55	0.0303	0.14	QV	|	|	|	|
4+ 0	0.0313	0.14	QV	|	|	|	|
4+ 5	0.0323	0.14	QV	|	|	|	|
4+10	0.0333	0.14	QV	|	|	|	|
4+15	0.0343	0.14	QV	|	|	|	|
4+20	0.0354	0.16	QV	|	|	|	|
4+25	0.0365	0.17	QV	|	|	|	|
4+30	0.0377	0.17	QV	|	|	|	|
4+35	0.0388	0.17	Q V	|	|	|	|
4+40	0.0400	0.17	Q V	|	|	|	|
4+45	0.0412	0.17	Q V	|	|	|	|
4+50	0.0424	0.18	Q V	|	|	|	|
4+55	0.0437	0.19	Q V	|	|	|	|
5+ 0	0.0451	0.19	Q V	|	|	|	|
5+ 5	0.0462	0.17	Q V	|	|	|	|
5+10	0.0473	0.15	Q V	|	|	|	|
5+15	0.0483	0.15	Q V	|	|	|	|
5+20	0.0493	0.16	Q V	|	|	|	|
5+25	0.0505	0.17	Q V	|	|	|	|
5+30	0.0516	0.17	Q V	|	|	|	|
5+35	0.0529	0.18	Q V	|	|	|	|
5+40	0.0542	0.19	Q V	|	|	|	|
5+45	0.0555	0.19	Q V	|	|	|	|
5+50	0.0569	0.19	Q V	|	|	|	|
5+55	0.0582	0.19	Q V	|	|	|	|
6+ 0	0.0595	0.19	Q V	|	|	|	|
6+ 5	0.0609	0.20	Q V	|	|	|	|
6+10	0.0624	0.21	Q V	|	|	|	|
6+15	0.0639	0.22	Q V	|	|	|	|
6+20	0.0654	0.22	Q V	|	|	|	|
6+25	0.0669	0.22	Q V	|	|	|	|
6+30	0.0684	0.22	Q V	|	|	|	|
6+35	0.0700	0.23	Q V	|	|	|	|
6+40	0.0716	0.24	Q V	|	|	|	|
6+45	0.0733	0.24	Q V	|	|	|	|
6+50	0.0749	0.24	Q V	|	|	|	|
6+55	0.0766	0.24	Q V	|	|	|	|
7+ 0	0.0783	0.24	Q V	|	|	|	|
7+ 5	0.0799	0.24	Q V	|	|	|	|
7+10	0.0816	0.24	Q V	|	|	|	|

7+15	0.0833	0.24	Q V	|	|	|	|
7+20	0.0850	0.25	|Q V	|	|	|	|
7+25	0.0868	0.26	|Q V	|	|	|	|
7+30	0.0886	0.27	|Q V	|	|	|	|
7+35	0.0906	0.28	|Q V	|	|	|	|
7+40	0.0925	0.29	|Q V	|	|	|	|
7+45	0.0945	0.29	|Q V	|	|	|	|
7+50	0.0966	0.30	|Q V	|	|	|	|
7+55	0.0988	0.31	|Q V	|	|	|	|
8+ 0	0.1009	0.31	|Q V	|	|	|	|
8+ 5	0.1032	0.34	|Q V	|	|	|	|
8+10	0.1057	0.36	|Q V	|	|	|	|
8+15	0.1082	0.36	|Q V	|	|	|	|
8+20	0.1107	0.36	|Q V	|	|	|	|
8+25	0.1132	0.36	|Q V	|	|	|	|
8+30	0.1157	0.36	|Q V	|	|	|	|
8+35	0.1182	0.37	|Q V	|	|	|	|
8+40	0.1209	0.38	|Q V	|	|	|	|
8+45	0.1235	0.39	|Q V	|	|	|	|
8+50	0.1263	0.40	|Q V	|	|	|	|
8+55	0.1291	0.41	|Q V	|	|	|	|
9+ 0	0.1319	0.41	|Q V	|	|	|	|
9+ 5	0.1349	0.43	|Q V	|	|	|	|
9+10	0.1380	0.45	|Q V	|	|	|	|
9+15	0.1412	0.46	|Q V	|	|	|	|
9+20	0.1444	0.47	|Q V	|	|	|	|
9+25	0.1477	0.48	|Q V	|	|	|	|
9+30	0.1511	0.48	|Q V	|	|	|	|
9+35	0.1545	0.51	| Q V	|	|	|	|
9+40	0.1582	0.53	| Q V	|	|	|	|
9+45	0.1619	0.54	| Q V	|	|	|	|
9+50	0.1660	0.60	| Q V	|	|	|	|
9+55	0.1705	0.65	| Q V	|	|	|	|
10+ 0	0.1751	0.66	| Q V|	|	|	|	|
10+ 5	0.1787	0.52	| Q V|	|	|	|	|
10+10	0.1814	0.39	|Q V|	|	|	|	|
10+15	0.1839	0.37	|Q V|	|	|	|	|
10+20	0.1864	0.36	|Q V|	|	|	|	|
10+25	0.1889	0.36	|Q V|	|	|	|	|
10+30	0.1914	0.36	|Q V	|	|	|	|
10+35	0.1944	0.44	|Q V	|	|	|	|
10+40	0.1979	0.51	| Q V	|	|	|	|
10+45	0.2016	0.53	| Q V	|	|	|	|
10+50	0.2053	0.54	| Q V	|	|	|	|
10+55	0.2090	0.54	| Q |V	|	|	|	|
11+ 0	0.2128	0.55	| Q |V	|	|	|	|
11+ 5	0.2163	0.51	| Q |V	|	|	|	|
11+10	0.2196	0.48	|Q |V	|	|	|	|
11+15	0.2229	0.47	|Q |V	|	|	|	|
11+20	0.2262	0.48	|Q |V	|	|	|	|



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15+35       0.6783      1.03  |   Q     |          |          |    V     |
15+40       0.6843      0.86  |  Q      |          |          |     V    |
15+45       0.6900      0.84  |  Q      |          |          |     V    |
15+50       0.6958      0.83  |  Q      |          |          |     V    |
15+55       0.7015      0.84  |  Q      |          |          |     V    |
16+ 0       0.7073      0.84  |  Q      |          |          |      V   |
16+ 5       0.7107      0.49  |Q        |          |          |      V   |
16+10       0.7119      0.18  Q         |          |          |      V   |
16+15       0.7127      0.12  Q         |          |          |      V   |
16+20       0.7133      0.10  Q         |          |          |      V   |
16+25       0.7140      0.10  Q         |          |          |      V   |
16+30       0.7147      0.10  Q         |          |          |      V   |
16+35       0.7153      0.09  Q         |          |          |      V   |
16+40       0.7158      0.08  Q         |          |          |      V   |
16+45       0.7163      0.07  Q         |          |          |      V   |
16+50       0.7168      0.07  Q         |          |          |      V   |
16+55       0.7173      0.07  Q         |          |          |      V   |
17+ 0       0.7178      0.07  Q         |          |          |      V   |
17+ 5       0.7184      0.10  Q         |          |          |      V   |
17+10       0.7192      0.12  Q         |          |          |      V   |
17+15       0.7201      0.12  Q         |          |          |      V   |
17+20       0.7209      0.12  Q         |          |          |      V   |
17+25       0.7217      0.12  Q         |          |          |       V  |
17+30       0.7226      0.12  Q         |          |          |       V  |
17+35       0.7234      0.12  Q         |          |          |       V  |
17+40       0.7242      0.12  Q         |          |          |       V  |
17+45       0.7250      0.12  Q         |          |          |       V  |
17+50       0.7258      0.11  Q         |          |          |       V  |
17+55       0.7265      0.10  Q         |          |          |       V  |
18+ 0       0.7272      0.10  Q         |          |          |       V  |
18+ 5       0.7278      0.10  Q         |          |          |       V  |
18+10       0.7285      0.10  Q         |          |          |       V  |
18+15       0.7292      0.10  Q         |          |          |       V  |
18+20       0.7298      0.10  Q         |          |          |       V  |
18+25       0.7305      0.10  Q         |          |          |       V  |
18+30       0.7311      0.10  Q         |          |          |       V  |
18+35       0.7317      0.09  Q         |          |          |       V  |
18+40       0.7322      0.08  Q         |          |          |       V  |
18+45       0.7328      0.07  Q         |          |          |       V  |
18+50       0.7332      0.06  Q         |          |          |       V  |
18+55       0.7335      0.05  Q         |          |          |       V  |
19+ 0       0.7339      0.05  Q         |          |          |       V  |
19+ 5       0.7343      0.06  Q         |          |          |       V  |
19+10       0.7348      0.07  Q         |          |          |       V  |
19+15       0.7352      0.07  Q         |          |          |       V  |
19+20       0.7358      0.08  Q         |          |          |       V  |
19+25       0.7365      0.09  Q         |          |          |       V  |
19+30       0.7371      0.10  Q         |          |          |       V  |
19+35       0.7377      0.09  Q         |          |          |       V  |
19+40       0.7382      0.08  Q         |          |          |       V  |
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19+45	0.7387	0.07	Q	|	|	|	V |
19+50	0.7392	0.06	Q	|	|	|	V |
19+55	0.7395	0.05	Q	|	|	|	V |
20+ 0	0.7399	0.05	Q	|	|	|	V |
20+ 5	0.7403	0.06	Q	|	|	|	V|
20+10	0.7407	0.07	Q	|	|	|	V|
20+15	0.7412	0.07	Q	|	|	|	V|
20+20	0.7417	0.07	Q	|	|	|	V|
20+25	0.7422	0.07	Q	|	|	|	V|
20+30	0.7427	0.07	Q	|	|	|	V|
20+35	0.7432	0.07	Q	|	|	|	V|
20+40	0.7437	0.07	Q	|	|	|	V|
20+45	0.7442	0.07	Q	|	|	|	V|
20+50	0.7447	0.06	Q	|	|	|	V|
20+55	0.7450	0.05	Q	|	|	|	V|
21+ 0	0.7453	0.05	Q	|	|	|	V|
21+ 5	0.7458	0.06	Q	|	|	|	V|
21+10	0.7462	0.07	Q	|	|	|	V|
21+15	0.7467	0.07	Q	|	|	|	V|
21+20	0.7471	0.06	Q	|	|	|	V|
21+25	0.7475	0.05	Q	|	|	|	V|
21+30	0.7478	0.05	Q	|	|	|	V|
21+35	0.7482	0.06	Q	|	|	|	V|
21+40	0.7487	0.07	Q	|	|	|	V|
21+45	0.7492	0.07	Q	|	|	|	V|
21+50	0.7496	0.06	Q	|	|	|	V|
21+55	0.7500	0.05	Q	|	|	|	V|
22+ 0	0.7503	0.05	Q	|	|	|	V|
22+ 5	0.7507	0.06	Q	|	|	|	V|
22+10	0.7512	0.07	Q	|	|	|	V|
22+15	0.7517	0.07	Q	|	|	|	V|
22+20	0.7521	0.06	Q	|	|	|	V|
22+25	0.7525	0.05	Q	|	|	|	V|
22+30	0.7528	0.05	Q	|	|	|	V|
22+35	0.7532	0.05	Q	|	|	|	V|
22+40	0.7535	0.05	Q	|	|	|	V|
22+45	0.7538	0.05	Q	|	|	|	V|
22+50	0.7542	0.05	Q	|	|	|	V|
22+55	0.7545	0.05	Q	|	|	|	V|
23+ 0	0.7548	0.05	Q	|	|	|	V|
23+ 5	0.7552	0.05	Q	|	|	|	V|
23+10	0.7555	0.05	Q	|	|	|	V|
23+15	0.7558	0.05	Q	|	|	|	V|
23+20	0.7562	0.05	Q	|	|	|	V|
23+25	0.7565	0.05	Q	|	|	|	V|
23+30	0.7568	0.05	Q	|	|	|	V|
23+35	0.7572	0.05	Q	|	|	|	V|
23+40	0.7575	0.05	Q	|	|	|	V|
23+45	0.7578	0.05	Q	|	|	|	V|
23+50	0.7582	0.05	Q	|	|	|	V|

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   23+55       0.7585      0.05  Q         |         |         |        V|
   24+ 0       0.7588      0.05  Q         |         |         |        V|
   24+ 5       0.7590      0.03  Q         |         |         |        V|
   24+10       0.7590      0.01  Q         |         |         |        V|
   24+15       0.7590      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 05/10/24 File: ONSITEPOSTE2242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.400        0.367       1.000      0.367
                                                 Sum (F) =   0.367
Area averaged mean soil loss (F) (In/Hr) =  0.367
Minimum soil loss rate ((In/Hr)) =  0.184
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                              Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.016	(0.651)	0.009	0.007
2	0.17	0.07	0.016	(0.649)	0.009	0.007
3	0.25	0.07	0.016	(0.646)	0.009	0.007
4	0.33	0.10	0.024	(0.644)	0.014	0.010
5	0.42	0.10	0.024	(0.641)	0.014	0.010
6	0.50	0.10	0.024	(0.639)	0.014	0.010
7	0.58	0.10	0.024	(0.636)	0.014	0.010
8	0.67	0.10	0.024	(0.634)	0.014	0.010
9	0.75	0.10	0.024	(0.631)	0.014	0.010
10	0.83	0.13	0.032	(0.629)	0.019	0.013
11	0.92	0.13	0.032	(0.626)	0.019	0.013
12	1.00	0.13	0.032	(0.624)	0.019	0.013
13	1.08	0.10	0.024	(0.621)	0.014	0.010
14	1.17	0.10	0.024	(0.619)	0.014	0.010
15	1.25	0.10	0.024	(0.616)	0.014	0.010
16	1.33	0.10	0.024	(0.614)	0.014	0.010
17	1.42	0.10	0.024	(0.611)	0.014	0.010
18	1.50	0.10	0.024	(0.609)	0.014	0.010
19	1.58	0.10	0.024	(0.607)	0.014	0.010
20	1.67	0.10	0.024	(0.604)	0.014	0.010
21	1.75	0.10	0.024	(0.602)	0.014	0.010
22	1.83	0.13	0.032	(0.599)	0.019	0.013
23	1.92	0.13	0.032	(0.597)	0.019	0.013
24	2.00	0.13	0.032	(0.595)	0.019	0.013
25	2.08	0.13	0.032	(0.592)	0.019	0.013
26	2.17	0.13	0.032	(0.590)	0.019	0.013
27	2.25	0.13	0.032	(0.587)	0.019	0.013
28	2.33	0.13	0.032	(0.585)	0.019	0.013
29	2.42	0.13	0.032	(0.583)	0.019	0.013
30	2.50	0.13	0.032	(0.580)	0.019	0.013
31	2.58	0.17	0.040	(0.578)	0.023	0.017
32	2.67	0.17	0.040	(0.575)	0.023	0.017
33	2.75	0.17	0.040	(0.573)	0.023	0.017
34	2.83	0.17	0.040	(0.571)	0.023	0.017
35	2.92	0.17	0.040	(0.568)	0.023	0.017
36	3.00	0.17	0.040	(0.566)	0.023	0.017
37	3.08	0.17	0.040	(0.564)	0.023	0.017
38	3.17	0.17	0.040	(0.561)	0.023	0.017
39	3.25	0.17	0.040	(0.559)	0.023	0.017
40	3.33	0.17	0.040	(0.557)	0.023	0.017
41	3.42	0.17	0.040	(0.554)	0.023	0.017
42	3.50	0.17	0.040	(0.552)	0.023	0.017
43	3.58	0.17	0.040	(0.550)	0.023	0.017
44	3.67	0.17	0.040	(0.547)	0.023	0.017
45	3.75	0.17	0.040	(0.545)	0.023	0.017
46	3.83	0.20	0.048	(0.543)	0.028	0.020
47	3.92	0.20	0.048	(0.540)	0.028	0.020

48	4.00	0.20	0.048	(0.538)	0.028	0.020
49	4.08	0.20	0.048	(0.536)	0.028	0.020
50	4.17	0.20	0.048	(0.534)	0.028	0.020
51	4.25	0.20	0.048	(0.531)	0.028	0.020
52	4.33	0.23	0.056	(0.529)	0.032	0.024
53	4.42	0.23	0.056	(0.527)	0.032	0.024
54	4.50	0.23	0.056	(0.525)	0.032	0.024
55	4.58	0.23	0.056	(0.522)	0.032	0.024
56	4.67	0.23	0.056	(0.520)	0.032	0.024
57	4.75	0.23	0.056	(0.518)	0.032	0.024
58	4.83	0.27	0.064	(0.516)	0.037	0.027
59	4.92	0.27	0.064	(0.513)	0.037	0.027
60	5.00	0.27	0.064	(0.511)	0.037	0.027
61	5.08	0.20	0.048	(0.509)	0.028	0.020
62	5.17	0.20	0.048	(0.507)	0.028	0.020
63	5.25	0.20	0.048	(0.505)	0.028	0.020
64	5.33	0.23	0.056	(0.502)	0.032	0.024
65	5.42	0.23	0.056	(0.500)	0.032	0.024
66	5.50	0.23	0.056	(0.498)	0.032	0.024
67	5.58	0.27	0.064	(0.496)	0.037	0.027
68	5.67	0.27	0.064	(0.494)	0.037	0.027
69	5.75	0.27	0.064	(0.491)	0.037	0.027
70	5.83	0.27	0.064	(0.489)	0.037	0.027
71	5.92	0.27	0.064	(0.487)	0.037	0.027
72	6.00	0.27	0.064	(0.485)	0.037	0.027
73	6.08	0.30	0.072	(0.483)	0.042	0.030
74	6.17	0.30	0.072	(0.481)	0.042	0.030
75	6.25	0.30	0.072	(0.478)	0.042	0.030
76	6.33	0.30	0.072	(0.476)	0.042	0.030
77	6.42	0.30	0.072	(0.474)	0.042	0.030
78	6.50	0.30	0.072	(0.472)	0.042	0.030
79	6.58	0.33	0.080	(0.470)	0.046	0.034
80	6.67	0.33	0.080	(0.468)	0.046	0.034
81	6.75	0.33	0.080	(0.466)	0.046	0.034
82	6.83	0.33	0.080	(0.464)	0.046	0.034
83	6.92	0.33	0.080	(0.461)	0.046	0.034
84	7.00	0.33	0.080	(0.459)	0.046	0.034
85	7.08	0.33	0.080	(0.457)	0.046	0.034
86	7.17	0.33	0.080	(0.455)	0.046	0.034
87	7.25	0.33	0.080	(0.453)	0.046	0.034
88	7.33	0.37	0.088	(0.451)	0.051	0.037
89	7.42	0.37	0.088	(0.449)	0.051	0.037
90	7.50	0.37	0.088	(0.447)	0.051	0.037
91	7.58	0.40	0.096	(0.445)	0.056	0.040
92	7.67	0.40	0.096	(0.443)	0.056	0.040
93	7.75	0.40	0.096	(0.441)	0.056	0.040
94	7.83	0.43	0.104	(0.439)	0.060	0.044
95	7.92	0.43	0.104	(0.437)	0.060	0.044
96	8.00	0.43	0.104	(0.435)	0.060	0.044
97	8.08	0.50	0.120	(0.433)	0.070	0.050

98	8.17	0.50	0.120	(0.431)	0.070	0.050
99	8.25	0.50	0.120	(0.429)	0.070	0.050
100	8.33	0.50	0.120	(0.427)	0.070	0.050
101	8.42	0.50	0.120	(0.425)	0.070	0.050
102	8.50	0.50	0.120	(0.423)	0.070	0.050
103	8.58	0.53	0.128	(0.421)	0.074	0.054
104	8.67	0.53	0.128	(0.419)	0.074	0.054
105	8.75	0.53	0.128	(0.417)	0.074	0.054
106	8.83	0.57	0.136	(0.415)	0.079	0.057
107	8.92	0.57	0.136	(0.413)	0.079	0.057
108	9.00	0.57	0.136	(0.411)	0.079	0.057
109	9.08	0.63	0.152	(0.409)	0.088	0.064
110	9.17	0.63	0.152	(0.407)	0.088	0.064
111	9.25	0.63	0.152	(0.405)	0.088	0.064
112	9.33	0.67	0.160	(0.403)	0.093	0.067
113	9.42	0.67	0.160	(0.401)	0.093	0.067
114	9.50	0.67	0.160	(0.399)	0.093	0.067
115	9.58	0.70	0.168	(0.397)	0.097	0.071
116	9.67	0.70	0.168	(0.395)	0.097	0.071
117	9.75	0.70	0.168	(0.394)	0.097	0.071
118	9.83	0.73	0.176	(0.392)	0.102	0.074
119	9.92	0.73	0.176	(0.390)	0.102	0.074
120	10.00	0.73	0.176	(0.388)	0.102	0.074
121	10.08	0.50	0.120	(0.386)	0.070	0.050
122	10.17	0.50	0.120	(0.384)	0.070	0.050
123	10.25	0.50	0.120	(0.382)	0.070	0.050
124	10.33	0.50	0.120	(0.380)	0.070	0.050
125	10.42	0.50	0.120	(0.379)	0.070	0.050
126	10.50	0.50	0.120	(0.377)	0.070	0.050
127	10.58	0.67	0.160	(0.375)	0.093	0.067
128	10.67	0.67	0.160	(0.373)	0.093	0.067
129	10.75	0.67	0.160	(0.371)	0.093	0.067
130	10.83	0.67	0.160	(0.369)	0.093	0.067
131	10.92	0.67	0.160	(0.368)	0.093	0.067
132	11.00	0.67	0.160	(0.366)	0.093	0.067
133	11.08	0.63	0.152	(0.364)	0.088	0.064
134	11.17	0.63	0.152	(0.362)	0.088	0.064
135	11.25	0.63	0.152	(0.360)	0.088	0.064
136	11.33	0.63	0.152	(0.359)	0.088	0.064
137	11.42	0.63	0.152	(0.357)	0.088	0.064
138	11.50	0.63	0.152	(0.355)	0.088	0.064
139	11.58	0.57	0.136	(0.353)	0.079	0.057
140	11.67	0.57	0.136	(0.352)	0.079	0.057
141	11.75	0.57	0.136	(0.350)	0.079	0.057
142	11.83	0.60	0.144	(0.348)	0.084	0.060
143	11.92	0.60	0.144	(0.346)	0.084	0.060
144	12.00	0.60	0.144	(0.345)	0.084	0.060
145	12.08	0.83	0.200	(0.343)	0.116	0.084
146	12.17	0.83	0.200	(0.341)	0.116	0.084
147	12.25	0.83	0.200	(0.339)	0.116	0.084

148	12.33	0.87	0.208	(0.338)	0.121	0.087
149	12.42	0.87	0.208	(0.336)	0.121	0.087
150	12.50	0.87	0.208	(0.334)	0.121	0.087
151	12.58	0.93	0.224	(0.333)	0.130	0.094
152	12.67	0.93	0.224	(0.331)	0.130	0.094
153	12.75	0.93	0.224	(0.329)	0.130	0.094
154	12.83	0.97	0.232	(0.328)	0.135	0.097
155	12.92	0.97	0.232	(0.326)	0.135	0.097
156	13.00	0.97	0.232	(0.324)	0.135	0.097
157	13.08	1.13	0.272	(0.323)	0.158	0.114
158	13.17	1.13	0.272	(0.321)	0.158	0.114
159	13.25	1.13	0.272	(0.319)	0.158	0.114
160	13.33	1.13	0.272	(0.318)	0.158	0.114
161	13.42	1.13	0.272	(0.316)	0.158	0.114
162	13.50	1.13	0.272	(0.315)	0.158	0.114
163	13.58	0.77	0.184	(0.313)	0.107	0.077
164	13.67	0.77	0.184	(0.311)	0.107	0.077
165	13.75	0.77	0.184	(0.310)	0.107	0.077
166	13.83	0.77	0.184	(0.308)	0.107	0.077
167	13.92	0.77	0.184	(0.307)	0.107	0.077
168	14.00	0.77	0.184	(0.305)	0.107	0.077
169	14.08	0.90	0.216	(0.304)	0.125	0.091
170	14.17	0.90	0.216	(0.302)	0.125	0.091
171	14.25	0.90	0.216	(0.300)	0.125	0.091
172	14.33	0.87	0.208	(0.299)	0.121	0.087
173	14.42	0.87	0.208	(0.297)	0.121	0.087
174	14.50	0.87	0.208	(0.296)	0.121	0.087
175	14.58	0.87	0.208	(0.294)	0.121	0.087
176	14.67	0.87	0.208	(0.293)	0.121	0.087
177	14.75	0.87	0.208	(0.291)	0.121	0.087
178	14.83	0.83	0.200	(0.290)	0.116	0.084
179	14.92	0.83	0.200	(0.288)	0.116	0.084
180	15.00	0.83	0.200	(0.287)	0.116	0.084
181	15.08	0.80	0.192	(0.285)	0.111	0.081
182	15.17	0.80	0.192	(0.284)	0.111	0.081
183	15.25	0.80	0.192	(0.283)	0.111	0.081
184	15.33	0.77	0.184	(0.281)	0.107	0.077
185	15.42	0.77	0.184	(0.280)	0.107	0.077
186	15.50	0.77	0.184	(0.278)	0.107	0.077
187	15.58	0.63	0.152	(0.277)	0.088	0.064
188	15.67	0.63	0.152	(0.275)	0.088	0.064
189	15.75	0.63	0.152	(0.274)	0.088	0.064
190	15.83	0.63	0.152	(0.273)	0.088	0.064
191	15.92	0.63	0.152	(0.271)	0.088	0.064
192	16.00	0.63	0.152	(0.270)	0.088	0.064
193	16.08	0.13	0.032	(0.268)	0.019	0.013
194	16.17	0.13	0.032	(0.267)	0.019	0.013
195	16.25	0.13	0.032	(0.266)	0.019	0.013
196	16.33	0.13	0.032	(0.264)	0.019	0.013
197	16.42	0.13	0.032	(0.263)	0.019	0.013

198	16.50	0.13	0.032	(0.262)	0.019	0.013
199	16.58	0.10	0.024	(0.260)	0.014	0.010
200	16.67	0.10	0.024	(0.259)	0.014	0.010
201	16.75	0.10	0.024	(0.258)	0.014	0.010
202	16.83	0.10	0.024	(0.256)	0.014	0.010
203	16.92	0.10	0.024	(0.255)	0.014	0.010
204	17.00	0.10	0.024	(0.254)	0.014	0.010
205	17.08	0.17	0.040	(0.252)	0.023	0.017
206	17.17	0.17	0.040	(0.251)	0.023	0.017
207	17.25	0.17	0.040	(0.250)	0.023	0.017
208	17.33	0.17	0.040	(0.249)	0.023	0.017
209	17.42	0.17	0.040	(0.247)	0.023	0.017
210	17.50	0.17	0.040	(0.246)	0.023	0.017
211	17.58	0.17	0.040	(0.245)	0.023	0.017
212	17.67	0.17	0.040	(0.244)	0.023	0.017
213	17.75	0.17	0.040	(0.243)	0.023	0.017
214	17.83	0.13	0.032	(0.241)	0.019	0.013
215	17.92	0.13	0.032	(0.240)	0.019	0.013
216	18.00	0.13	0.032	(0.239)	0.019	0.013
217	18.08	0.13	0.032	(0.238)	0.019	0.013
218	18.17	0.13	0.032	(0.237)	0.019	0.013
219	18.25	0.13	0.032	(0.235)	0.019	0.013
220	18.33	0.13	0.032	(0.234)	0.019	0.013
221	18.42	0.13	0.032	(0.233)	0.019	0.013
222	18.50	0.13	0.032	(0.232)	0.019	0.013
223	18.58	0.10	0.024	(0.231)	0.014	0.010
224	18.67	0.10	0.024	(0.230)	0.014	0.010
225	18.75	0.10	0.024	(0.229)	0.014	0.010
226	18.83	0.07	0.016	(0.228)	0.009	0.007
227	18.92	0.07	0.016	(0.226)	0.009	0.007
228	19.00	0.07	0.016	(0.225)	0.009	0.007
229	19.08	0.10	0.024	(0.224)	0.014	0.010
230	19.17	0.10	0.024	(0.223)	0.014	0.010
231	19.25	0.10	0.024	(0.222)	0.014	0.010
232	19.33	0.13	0.032	(0.221)	0.019	0.013
233	19.42	0.13	0.032	(0.220)	0.019	0.013
234	19.50	0.13	0.032	(0.219)	0.019	0.013
235	19.58	0.10	0.024	(0.218)	0.014	0.010
236	19.67	0.10	0.024	(0.217)	0.014	0.010
237	19.75	0.10	0.024	(0.216)	0.014	0.010
238	19.83	0.07	0.016	(0.215)	0.009	0.007
239	19.92	0.07	0.016	(0.214)	0.009	0.007
240	20.00	0.07	0.016	(0.213)	0.009	0.007
241	20.08	0.10	0.024	(0.212)	0.014	0.010
242	20.17	0.10	0.024	(0.211)	0.014	0.010
243	20.25	0.10	0.024	(0.211)	0.014	0.010
244	20.33	0.10	0.024	(0.210)	0.014	0.010
245	20.42	0.10	0.024	(0.209)	0.014	0.010
246	20.50	0.10	0.024	(0.208)	0.014	0.010
247	20.58	0.10	0.024	(0.207)	0.014	0.010

248	20.67	0.10	0.024	(0.206)	0.014	0.010
249	20.75	0.10	0.024	(0.205)	0.014	0.010
250	20.83	0.07	0.016	(0.204)	0.009	0.007
251	20.92	0.07	0.016	(0.204)	0.009	0.007
252	21.00	0.07	0.016	(0.203)	0.009	0.007
253	21.08	0.10	0.024	(0.202)	0.014	0.010
254	21.17	0.10	0.024	(0.201)	0.014	0.010
255	21.25	0.10	0.024	(0.200)	0.014	0.010
256	21.33	0.07	0.016	(0.200)	0.009	0.007
257	21.42	0.07	0.016	(0.199)	0.009	0.007
258	21.50	0.07	0.016	(0.198)	0.009	0.007
259	21.58	0.10	0.024	(0.197)	0.014	0.010
260	21.67	0.10	0.024	(0.197)	0.014	0.010
261	21.75	0.10	0.024	(0.196)	0.014	0.010
262	21.83	0.07	0.016	(0.195)	0.009	0.007
263	21.92	0.07	0.016	(0.195)	0.009	0.007
264	22.00	0.07	0.016	(0.194)	0.009	0.007
265	22.08	0.10	0.024	(0.193)	0.014	0.010
266	22.17	0.10	0.024	(0.193)	0.014	0.010
267	22.25	0.10	0.024	(0.192)	0.014	0.010
268	22.33	0.07	0.016	(0.191)	0.009	0.007
269	22.42	0.07	0.016	(0.191)	0.009	0.007
270	22.50	0.07	0.016	(0.190)	0.009	0.007
271	22.58	0.07	0.016	(0.190)	0.009	0.007
272	22.67	0.07	0.016	(0.189)	0.009	0.007
273	22.75	0.07	0.016	(0.189)	0.009	0.007
274	22.83	0.07	0.016	(0.188)	0.009	0.007
275	22.92	0.07	0.016	(0.188)	0.009	0.007
276	23.00	0.07	0.016	(0.187)	0.009	0.007
277	23.08	0.07	0.016	(0.187)	0.009	0.007
278	23.17	0.07	0.016	(0.186)	0.009	0.007
279	23.25	0.07	0.016	(0.186)	0.009	0.007
280	23.33	0.07	0.016	(0.186)	0.009	0.007
281	23.42	0.07	0.016	(0.185)	0.009	0.007
282	23.50	0.07	0.016	(0.185)	0.009	0.007
283	23.58	0.07	0.016	(0.185)	0.009	0.007
284	23.67	0.07	0.016	(0.184)	0.009	0.007
285	23.75	0.07	0.016	(0.184)	0.009	0.007
286	23.83	0.07	0.016	(0.184)	0.009	0.007
287	23.92	0.07	0.016	(0.184)	0.009	0.007
288	24.00	0.07	0.016	(0.184)	0.009	0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 10.1

Flood volume = Effective rainfall 0.84(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.16(In)
Total soil loss = 0.193(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 6098.4 Cubic Feet
Total soil loss = 8421.6 Cubic Feet

Peak flow rate of this hydrograph = 0.230(CFS)

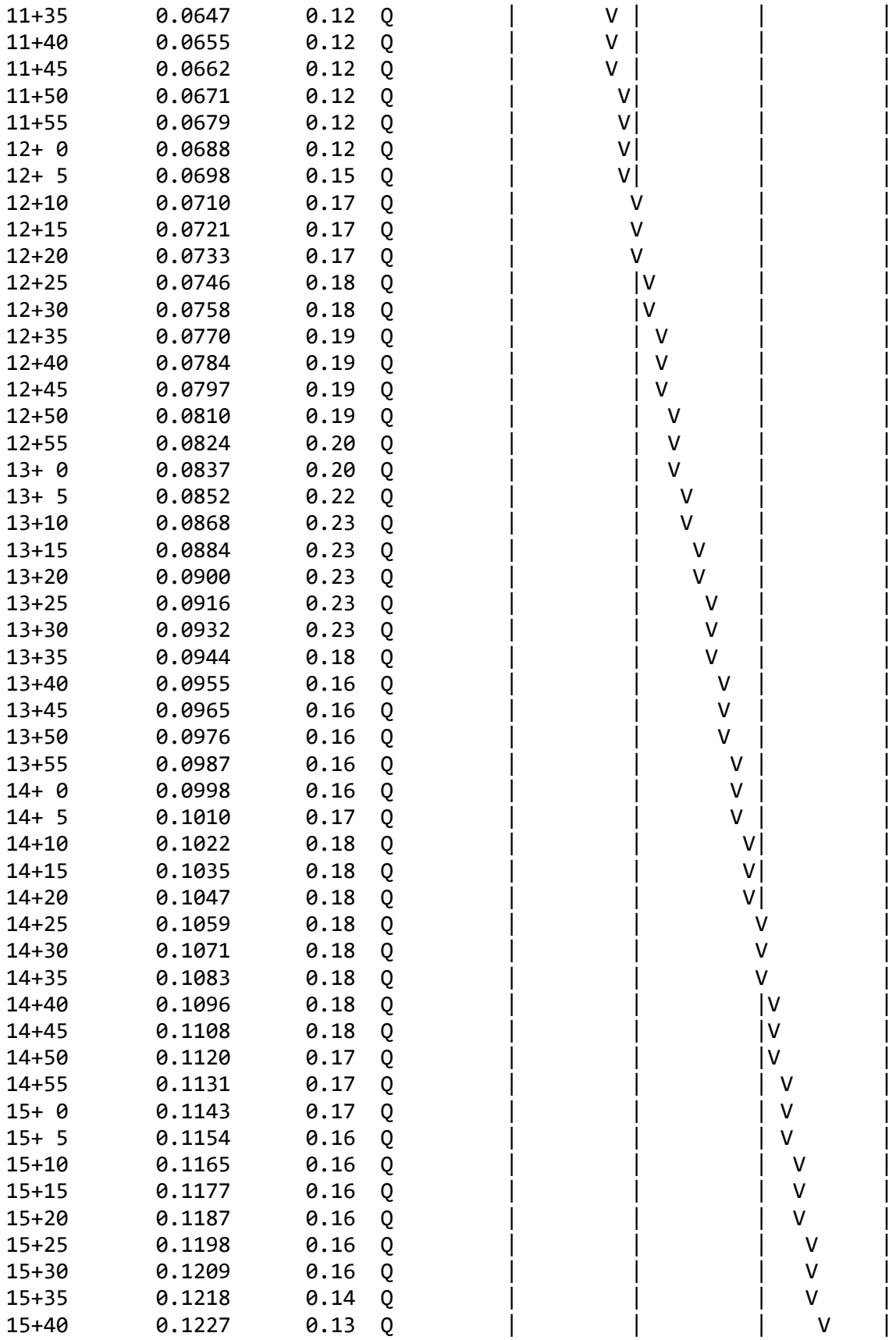
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q				
0+10	0.0002	0.01	Q				
0+15	0.0003	0.01	Q				
0+20	0.0004	0.02	Q				
0+25	0.0005	0.02	Q				
0+30	0.0007	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	0.0012	0.02	Q				
0+55	0.0014	0.03	Q				
1+ 0	0.0016	0.03	Q				
1+ 5	0.0018	0.02	Q				
1+10	0.0019	0.02	Q				
1+15	0.0021	0.02	Q				
1+20	0.0022	0.02	Q				
1+25	0.0023	0.02	Q				
1+30	0.0025	0.02	Q				
1+35	0.0026	0.02	Q				
1+40	0.0028	0.02	Q				
1+45	0.0029	0.02	Q				
1+50	0.0031	0.02	Q				
1+55	0.0033	0.03	Q				
2+ 0	0.0034	0.03	Q				
2+ 5	0.0036	0.03	QV				
2+10	0.0038	0.03	QV				
2+15	0.0040	0.03	QV				
2+20	0.0042	0.03	QV				
2+25	0.0044	0.03	QV				
2+30	0.0046	0.03	QV				
2+35	0.0048	0.03	QV				
2+40	0.0050	0.03	QV				
2+45	0.0052	0.03	QV				
2+50	0.0055	0.03	QV				
2+55	0.0057	0.03	QV				
3+ 0	0.0059	0.03	QV				
3+ 5	0.0062	0.03	QV				
3+10	0.0064	0.03	QV				

3+15	0.0066	0.03	QV	|	|	|	|
3+20	0.0069	0.03	QV	|	|	|	|
3+25	0.0071	0.03	Q V	|	|	|	|
3+30	0.0073	0.03	Q V	|	|	|	|
3+35	0.0076	0.03	Q V	|	|	|	|
3+40	0.0078	0.03	Q V	|	|	|	|
3+45	0.0080	0.03	Q V	|	|	|	|
3+50	0.0083	0.04	Q V	|	|	|	|
3+55	0.0086	0.04	Q V	|	|	|	|
4+ 0	0.0089	0.04	Q V	|	|	|	|
4+ 5	0.0092	0.04	Q V	|	|	|	|
4+10	0.0094	0.04	Q V	|	|	|	|
4+15	0.0097	0.04	Q V	|	|	|	|
4+20	0.0100	0.05	Q V	|	|	|	|
4+25	0.0103	0.05	Q V	|	|	|	|
4+30	0.0107	0.05	Q V	|	|	|	|
4+35	0.0110	0.05	Q V	|	|	|	|
4+40	0.0113	0.05	Q V	|	|	|	|
4+45	0.0117	0.05	Q V	|	|	|	|
4+50	0.0120	0.05	Q V	|	|	|	|
4+55	0.0124	0.05	Q V	|	|	|	|
5+ 0	0.0128	0.05	Q V	|	|	|	|
5+ 5	0.0131	0.05	Q V	|	|	|	|
5+10	0.0134	0.04	Q V	|	|	|	|
5+15	0.0136	0.04	Q V	|	|	|	|
5+20	0.0139	0.05	Q V	|	|	|	|
5+25	0.0143	0.05	Q V	|	|	|	|
5+30	0.0146	0.05	Q V	|	|	|	|
5+35	0.0150	0.05	Q V	|	|	|	|
5+40	0.0153	0.05	Q V	|	|	|	|
5+45	0.0157	0.05	Q V	|	|	|	|
5+50	0.0161	0.05	Q V	|	|	|	|
5+55	0.0164	0.05	Q V	|	|	|	|
6+ 0	0.0168	0.05	Q V	|	|	|	|
6+ 5	0.0172	0.06	Q V	|	|	|	|
6+10	0.0176	0.06	Q V	|	|	|	|
6+15	0.0181	0.06	Q V	|	|	|	|
6+20	0.0185	0.06	Q V	|	|	|	|
6+25	0.0189	0.06	Q V	|	|	|	|
6+30	0.0193	0.06	Q V	|	|	|	|
6+35	0.0198	0.07	Q V	|	|	|	|
6+40	0.0202	0.07	Q V	|	|	|	|
6+45	0.0207	0.07	Q V	|	|	|	|
6+50	0.0212	0.07	Q V	|	|	|	|
6+55	0.0216	0.07	Q V	|	|	|	|
7+ 0	0.0221	0.07	Q V	|	|	|	|
7+ 5	0.0226	0.07	Q V	|	|	|	|
7+10	0.0230	0.07	Q V	|	|	|	|
7+15	0.0235	0.07	Q V	|	|	|	|
7+20	0.0240	0.07	Q V	|	|	|	|

```
 7+25       0.0245      0.07  Q      V  |          |          |          |
 7+30       0.0250      0.07  Q      V  |          |          |          |
 7+35       0.0256      0.08  Q      V  |          |          |          |
 7+40       0.0261      0.08  Q      V  |          |          |          |
 7+45       0.0267      0.08  Q      V  |          |          |          |
 7+50       0.0273      0.09  Q      V  |          |          |          |
 7+55       0.0279      0.09  Q      V  |          |          |          |
 8+ 0       0.0285      0.09  Q       V |          |          |          |
 8+ 5       0.0292      0.10  Q       V |          |          |          |
 8+10       0.0299      0.10  Q       V |          |          |          |
 8+15       0.0306      0.10  Q       V |          |          |          |
 8+20       0.0313      0.10  Q       V |          |          |          |
 8+25       0.0320      0.10  Q        V|          |          |          |
 8+30       0.0327      0.10  Q        V|          |          |          |
 8+35       0.0334      0.11  Q        V|          |          |          |
 8+40       0.0342      0.11  Q        V|          |          |          |
 8+45       0.0349      0.11  Q        V|          |          |          |
 8+50       0.0357      0.11  Q         V          |          |          |
 8+55       0.0365      0.12  Q         V          |          |          |
 9+ 0       0.0373      0.12  Q         V          |          |          |
 9+ 5       0.0381      0.12  Q         V          |          |          |
 9+10       0.0390      0.13  Q         |V         |          |          |
 9+15       0.0399      0.13  Q         |V         |          |          |
 9+20       0.0408      0.13  Q         |V         |          |          |
 9+25       0.0417      0.14  Q         |V         |          |          |
 9+30       0.0427      0.14  Q         | V        |          |          |
 9+35       0.0436      0.14  Q         | V        |          |          |
 9+40       0.0446      0.14  Q         | V        |          |          |
 9+45       0.0456      0.14  Q         |  V       |          |          |
 9+50       0.0466      0.15  Q         |  V       |          |          |
 9+55       0.0476      0.15  Q         |  V       |          |          |
10+ 0       0.0487      0.15  Q         |  V       |          |          |
10+ 5       0.0495      0.12  Q         |   V      |          |          |
10+10       0.0502      0.10  Q         |   V      |          |          |
10+15       0.0509      0.10  Q         |   V      |          |          |
10+20       0.0516      0.10  Q         |   V      |          |          |
10+25       0.0523      0.10  Q         |   V      |          |          |
10+30       0.0530      0.10  Q         |    V     |          |          |
10+35       0.0538      0.12  Q         |    V     |          |          |
10+40       0.0548      0.14  Q         |    V     |          |          |
10+45       0.0557      0.14  Q         |    V     |          |          |
10+50       0.0566      0.14  Q         |     V    |          |          |
10+55       0.0576      0.14  Q         |     V    |          |          |
11+ 0       0.0585      0.14  Q         |     V    |          |          |
11+ 5       0.0594      0.13  Q         |     V    |          |          |
11+10       0.0603      0.13  Q         |      V   |          |          |
11+15       0.0612      0.13  Q         |      V   |          |          |
11+20       0.0621      0.13  Q         |      V   |          |          |
11+25       0.0629      0.13  Q         |      V   |          |          |
11+30       0.0638      0.13  Q         |       V  |          |          |
```



15+45	0.1236	0.13	Q	|	|	|	V |
15+50	0.1245	0.13	Q	|	|	|	V |
15+55	0.1254	0.13	Q	|	|	|	V |
16+ 0	0.1263	0.13	Q	|	|	|	V |
16+ 5	0.1267	0.06	Q	|	|	|	V |
16+10	0.1269	0.03	Q	|	|	|	V |
16+15	0.1271	0.03	Q	|	|	|	V |
16+20	0.1272	0.03	Q	|	|	|	V |
16+25	0.1274	0.03	Q	|	|	|	V |
16+30	0.1276	0.03	Q	|	|	|	V |
16+35	0.1278	0.02	Q	|	|	|	V |
16+40	0.1279	0.02	Q	|	|	|	V |
16+45	0.1281	0.02	Q	|	|	|	V |
16+50	0.1282	0.02	Q	|	|	|	V |
16+55	0.1283	0.02	Q	|	|	|	V |
17+ 0	0.1285	0.02	Q	|	|	|	V |
17+ 5	0.1287	0.03	Q	|	|	|	V |
17+10	0.1289	0.03	Q	|	|	|	V |
17+15	0.1291	0.03	Q	|	|	|	V |
17+20	0.1294	0.03	Q	|	|	|	V |
17+25	0.1296	0.03	Q	|	|	|	V |
17+30	0.1298	0.03	Q	|	|	|	V |
17+35	0.1301	0.03	Q	|	|	|	V |
17+40	0.1303	0.03	Q	|	|	|	V |
17+45	0.1305	0.03	Q	|	|	|	V |
17+50	0.1307	0.03	Q	|	|	|	V |
17+55	0.1309	0.03	Q	|	|	|	V |
18+ 0	0.1311	0.03	Q	|	|	|	V |
18+ 5	0.1313	0.03	Q	|	|	|	V |
18+10	0.1315	0.03	Q	|	|	|	V |
18+15	0.1317	0.03	Q	|	|	|	V |
18+20	0.1319	0.03	Q	|	|	|	V |
18+25	0.1321	0.03	Q	|	|	|	V |
18+30	0.1322	0.03	Q	|	|	|	V |
18+35	0.1324	0.02	Q	|	|	|	V |
18+40	0.1325	0.02	Q	|	|	|	V |
18+45	0.1327	0.02	Q	|	|	|	V |
18+50	0.1328	0.02	Q	|	|	|	V |
18+55	0.1329	0.01	Q	|	|	|	V |
19+ 0	0.1330	0.01	Q	|	|	|	V |
19+ 5	0.1331	0.02	Q	|	|	|	V |
19+10	0.1332	0.02	Q	|	|	|	V |
19+15	0.1334	0.02	Q	|	|	|	V |
19+20	0.1335	0.02	Q	|	|	|	V |
19+25	0.1337	0.03	Q	|	|	|	V |
19+30	0.1339	0.03	Q	|	|	|	V |
19+35	0.1341	0.02	Q	|	|	|	V |
19+40	0.1342	0.02	Q	|	|	|	V |
19+45	0.1344	0.02	Q	|	|	|	V |
19+50	0.1345	0.02	Q	|	|	|	V |

19+55	0.1346	0.01	Q	|	|	|	V |
20+ 0	0.1346	0.01	Q	|	|	|	V |
20+ 5	0.1348	0.02	Q	|	|	|	V |
20+10	0.1349	0.02	Q	|	|	|	V |
20+15	0.1351	0.02	Q	|	|	|	V |
20+20	0.1352	0.02	Q	|	|	|	V |
20+25	0.1353	0.02	Q	|	|	|	V |
20+30	0.1355	0.02	Q	|	|	|	V |
20+35	0.1356	0.02	Q	|	|	|	V |
20+40	0.1358	0.02	Q	|	|	|	V |
20+45	0.1359	0.02	Q	|	|	|	V |
20+50	0.1360	0.02	Q	|	|	|	V |
20+55	0.1361	0.01	Q	|	|	|	V |
21+ 0	0.1362	0.01	Q	|	|	|	V |
21+ 5	0.1363	0.02	Q	|	|	|	V |
21+10	0.1365	0.02	Q	|	|	|	V |
21+15	0.1366	0.02	Q	|	|	|	V|
21+20	0.1367	0.02	Q	|	|	|	V|
21+25	0.1368	0.01	Q	|	|	|	V|
21+30	0.1369	0.01	Q	|	|	|	V|
21+35	0.1370	0.02	Q	|	|	|	V|
21+40	0.1372	0.02	Q	|	|	|	V|
21+45	0.1373	0.02	Q	|	|	|	V|
21+50	0.1374	0.02	Q	|	|	|	V|
21+55	0.1375	0.01	Q	|	|	|	V|
22+ 0	0.1376	0.01	Q	|	|	|	V|
22+ 5	0.1377	0.02	Q	|	|	|	V|
22+10	0.1379	0.02	Q	|	|	|	V|
22+15	0.1380	0.02	Q	|	|	|	V|
22+20	0.1381	0.02	Q	|	|	|	V|
22+25	0.1382	0.01	Q	|	|	|	V|
22+30	0.1383	0.01	Q	|	|	|	V|
22+35	0.1384	0.01	Q	|	|	|	V|
22+40	0.1385	0.01	Q	|	|	|	V|
22+45	0.1386	0.01	Q	|	|	|	V|
22+50	0.1387	0.01	Q	|	|	|	V|
22+55	0.1388	0.01	Q	|	|	|	V|
23+ 0	0.1388	0.01	Q	|	|	|	V|
23+ 5	0.1389	0.01	Q	|	|	|	V|
23+10	0.1390	0.01	Q	|	|	|	V|
23+15	0.1391	0.01	Q	|	|	|	V|
23+20	0.1392	0.01	Q	|	|	|	V|
23+25	0.1393	0.01	Q	|	|	|	V|
23+30	0.1394	0.01	Q	|	|	|	V|
23+35	0.1395	0.01	Q	|	|	|	V|
23+40	0.1396	0.01	Q	|	|	|	V|
23+45	0.1397	0.01	Q	|	|	|	V|
23+50	0.1398	0.01	Q	|	|	|	V|
23+55	0.1399	0.01	Q	|	|	|	V|
24+ 0	0.1400	0.01	Q	|	|	|	V|

```
   24+ 5       0.1400      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 - 2018, Version 9.0
Study date 05/10/24 File: ONSITEPOSTE2110.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            0.50                   1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                   2.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.328	(0.239)	0.190	0.138
2	0.17	4.20	0.418	0.239	(0.242)	0.179
3	0.25	4.40	0.438	0.239	(0.254)	0.199
4	0.33	4.80	0.478	0.239	(0.277)	0.239
5	0.42	5.20	0.517	0.239	(0.300)	0.279
6	0.50	6.20	0.617	0.239	(0.358)	0.378
7	0.58	6.80	0.677	0.239	(0.392)	0.438
8	0.67	8.80	0.876	0.239	(0.508)	0.637
9	0.75	13.90	1.383	0.239	(0.802)	1.144
10	0.83	31.40	3.124	0.239	(1.812)	2.885
11	0.92	7.20	0.716	0.239	(0.415)	0.478
12	1.00	3.80	0.378	(0.239)	0.219	0.159

(Loss Rate Not Used)

Sum = 100.0 Sum = 7.2

Flood volume = Effective rainfall 0.60(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.23(In)
Total soil loss = 0.039(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 4328.0 Cubic Feet
Total soil loss = 1691.4 Cubic Feet

Peak flow rate of this hydrograph = 4.692(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	0.0013	0.19	Q				
0+10	0.0036	0.33	Q				
0+15	0.0063	0.39	QV				
0+20	0.0094	0.46	Q V				
0+25	0.0131	0.54	Q V				
0+30	0.0179	0.70	Q V				
0+35	0.0237	0.84	Q V				
0+40	0.0317	1.16	Q V				
0+45	0.0453	1.98	Q V				
0+50	0.0776	4.69	Q	V			
0+55	0.0950	2.52	Q			V	
1+ 0	0.0986	0.53	Q			V	

```
    1+ 5       0.0994      0.10  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 05/10/24 File: ONSITEPOSTE2310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            0.80                  1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                  4.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                              Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.202	(0.239)	0.117	0.085
2	0.17	1.30	0.202	(0.239)	0.117	0.085
3	0.25	1.10	0.171	(0.239)	0.099	0.072
4	0.33	1.50	0.233	(0.239)	0.135	0.098
5	0.42	1.50	0.233	(0.239)	0.135	0.098
6	0.50	1.80	0.279	(0.239)	0.162	0.117
7	0.58	1.50	0.233	(0.239)	0.135	0.098
8	0.67	1.80	0.279	(0.239)	0.162	0.117
9	0.75	1.80	0.279	(0.239)	0.162	0.117
10	0.83	1.50	0.233	(0.239)	0.135	0.098
11	0.92	1.60	0.248	(0.239)	0.144	0.104
12	1.00	1.80	0.279	(0.239)	0.162	0.117
13	1.08	2.20	0.342	(0.239)	0.198	0.143
14	1.17	2.20	0.342	(0.239)	0.198	0.143
15	1.25	2.20	0.342	(0.239)	0.198	0.143
16	1.33	2.00	0.310	(0.239)	0.180	0.130
17	1.42	2.60	0.404	(0.239)	0.234	0.170
18	1.50	2.70	0.419	0.239	(0.243)	0.181
19	1.58	2.40	0.373	(0.239)	0.216	0.156
20	1.67	2.70	0.419	0.239	(0.243)	0.181
21	1.75	3.30	0.512	0.239	(0.297)	0.274
22	1.83	3.10	0.481	0.239	(0.279)	0.243
23	1.92	2.90	0.450	0.239	(0.261)	0.212
24	2.00	3.00	0.466	0.239	(0.270)	0.227
25	2.08	3.10	0.481	0.239	(0.279)	0.243
26	2.17	4.20	0.652	0.239	(0.378)	0.413
27	2.25	5.00	0.776	0.239	(0.450)	0.538
28	2.33	3.50	0.543	0.239	(0.315)	0.305
29	2.42	6.80	1.056	0.239	(0.612)	0.817
30	2.50	7.30	1.133	0.239	(0.657)	0.895
31	2.58	8.20	1.273	0.239	(0.738)	1.034
32	2.67	5.90	0.916	0.239	(0.531)	0.677
33	2.75	2.00	0.310	(0.239)	0.180	0.130
34	2.83	1.80	0.279	(0.239)	0.162	0.117
35	2.92	1.80	0.279	(0.239)	0.162	0.117
36	3.00	0.60	0.093	(0.239)	0.054	0.039
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.7

Flood volume = Effective rainfall 0.73(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.57(In)
Total soil loss = 0.094(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 5284.9 Cubic Feet
Total soil loss = 4107.2 Cubic Feet

Peak flow rate of this hydrograph = 1.996(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	0.0008	0.12	Q				
0+10	0.0020	0.17	Q				
0+15	0.0030	0.15	Q				
0+20	0.0043	0.18	QV				
0+25	0.0056	0.20	QV				
0+30	0.0072	0.22	Q V				
0+35	0.0086	0.21	Q V				
0+40	0.0102	0.22	Q V				
0+45	0.0118	0.24	Q V				
0+50	0.0132	0.21	Q V				
0+55	0.0147	0.21	Q V				
1+ 0	0.0162	0.23	Q V				
1+ 5	0.0181	0.27	|Q V				
1+10	0.0201	0.29	|Q V				
1+15	0.0221	0.29	|Q V				
1+20	0.0240	0.27	|Q V				
1+25	0.0261	0.32	|Q V				
1+30	0.0286	0.36	|Q V				
1+35	0.0309	0.33	|Q V				
1+40	0.0333	0.35	|Q V				
1+45	0.0367	0.49	|Q V				
1+50	0.0402	0.51	| Q V				
1+55	0.0433	0.45	|Q V				
2+ 0	0.0463	0.45	|Q V				
2+ 5	0.0496	0.48	|Q V				
2+10	0.0546	0.72	| Q V				
2+15	0.0615	1.00	| Q V				
2+20	0.0668	0.77	| Q V				
2+25	0.0759	1.32	| Q V				
2+30	0.0879	1.75	| Q V				
2+35	0.1017	2.00	| Q V				
2+40	0.1127	1.60	| Q V				
2+45	0.1169	0.62	| Q V				
2+50	0.1186	0.25	Q V				
2+55	0.1203	0.24	Q V				
3+ 0	0.1211	0.13	Q V				
3+ 5	0.1213	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 05/10/24 File: ONSITEPOSTE2610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

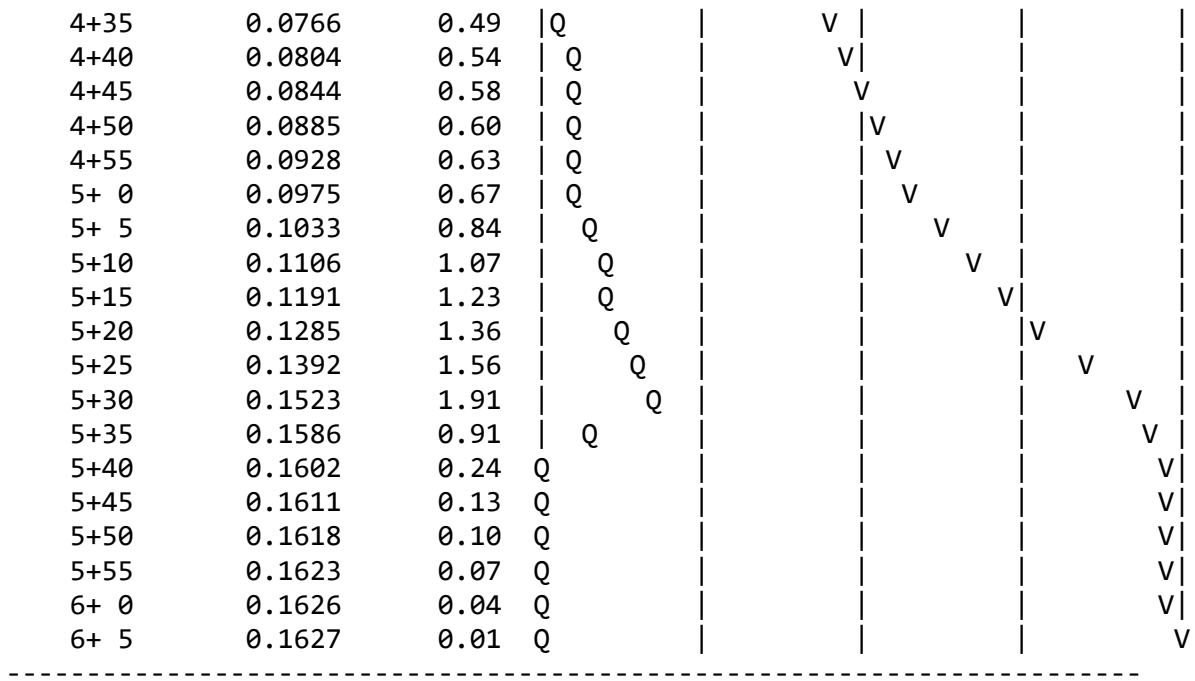
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.239)	0.065	0.047
2	0.17	0.60	0.134	(0.239)	0.078	0.056
3	0.25	0.60	0.134	(0.239)	0.078	0.056
4	0.33	0.60	0.134	(0.239)	0.078	0.056
5	0.42	0.60	0.134	(0.239)	0.078	0.056
6	0.50	0.70	0.156	(0.239)	0.091	0.066
7	0.58	0.70	0.156	(0.239)	0.091	0.066
8	0.67	0.70	0.156	(0.239)	0.091	0.066
9	0.75	0.70	0.156	(0.239)	0.091	0.066
10	0.83	0.70	0.156	(0.239)	0.091	0.066
11	0.92	0.70	0.156	(0.239)	0.091	0.066
12	1.00	0.80	0.178	(0.239)	0.103	0.075
13	1.08	0.80	0.178	(0.239)	0.103	0.075
14	1.17	0.80	0.178	(0.239)	0.103	0.075
15	1.25	0.80	0.178	(0.239)	0.103	0.075
16	1.33	0.80	0.178	(0.239)	0.103	0.075
17	1.42	0.80	0.178	(0.239)	0.103	0.075
18	1.50	0.80	0.178	(0.239)	0.103	0.075
19	1.58	0.80	0.178	(0.239)	0.103	0.075
20	1.67	0.80	0.178	(0.239)	0.103	0.075
21	1.75	0.80	0.178	(0.239)	0.103	0.075
22	1.83	0.80	0.178	(0.239)	0.103	0.075
23	1.92	0.80	0.178	(0.239)	0.103	0.075
24	2.00	0.90	0.201	(0.239)	0.116	0.084
25	2.08	0.80	0.178	(0.239)	0.103	0.075
26	2.17	0.90	0.201	(0.239)	0.116	0.084
27	2.25	0.90	0.201	(0.239)	0.116	0.084
28	2.33	0.90	0.201	(0.239)	0.116	0.084
29	2.42	0.90	0.201	(0.239)	0.116	0.084
30	2.50	0.90	0.201	(0.239)	0.116	0.084
31	2.58	0.90	0.201	(0.239)	0.116	0.084
32	2.67	0.90	0.201	(0.239)	0.116	0.084
33	2.75	1.00	0.223	(0.239)	0.129	0.094
34	2.83	1.00	0.223	(0.239)	0.129	0.094
35	2.92	1.00	0.223	(0.239)	0.129	0.094
36	3.00	1.00	0.223	(0.239)	0.129	0.094
37	3.08	1.00	0.223	(0.239)	0.129	0.094
38	3.17	1.10	0.245	(0.239)	0.142	0.103
39	3.25	1.10	0.245	(0.239)	0.142	0.103
40	3.33	1.10	0.245	(0.239)	0.142	0.103
41	3.42	1.20	0.268	(0.239)	0.155	0.112
42	3.50	1.30	0.290	(0.239)	0.168	0.122
43	3.58	1.40	0.312	(0.239)	0.181	0.131
44	3.67	1.40	0.312	(0.239)	0.181	0.131
45	3.75	1.50	0.334	(0.239)	0.194	0.140
46	3.83	1.50	0.334	(0.239)	0.194	0.140
47	3.92	1.60	0.357	(0.239)	0.207	0.150

```
48   4.00     1.60      0.357       (  0.239)       0.207        0.150
49   4.08     1.70      0.379       (  0.239)       0.220        0.159
50   4.17     1.80      0.401       (  0.239)       0.233        0.169
51   4.25     1.90      0.424          0.239    (  0.246)        0.185
52   4.33     2.00      0.446          0.239    (  0.259)        0.207
53   4.42     2.10      0.468          0.239    (  0.272)        0.230
54   4.50     2.10      0.468          0.239    (  0.272)        0.230
55   4.58     2.20      0.491          0.239    (  0.285)        0.252
56   4.67     2.30      0.513          0.239    (  0.297)        0.274
57   4.75     2.40      0.535          0.239    (  0.310)        0.297
58   4.83     2.40      0.535          0.239    (  0.310)        0.297
59   4.92     2.50      0.557          0.239    (  0.323)        0.319
60   5.00     2.60      0.580          0.239    (  0.336)        0.341
61   5.08     3.10      0.691          0.239    (  0.401)        0.453
62   5.17     3.60      0.803          0.239    (  0.466)        0.564
63   5.25     3.90      0.870          0.239    (  0.504)        0.631
64   5.33     4.20      0.937          0.239    (  0.543)        0.698
65   5.42     4.70      1.048          0.239    (  0.608)        0.809
66   5.50     5.60      1.249          0.239    (  0.724)        1.010
67   5.58     1.90      0.424          0.239    (  0.246)        0.185
68   5.67     0.90      0.201       (  0.239)       0.116        0.084
69   5.75     0.60      0.134       (  0.239)       0.078        0.056
70   5.83     0.50      0.111       (  0.239)       0.065        0.047
71   5.92     0.30      0.067       (  0.239)       0.039        0.028
72   6.00     0.20      0.045       (  0.239)       0.026        0.019
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    11.7
      Flood volume = Effective rainfall      0.98(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
      Total soil loss =      0.88(In)
      Total soil loss =     0.147(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        7085.4 Cubic Feet
      Total soil loss =        6405.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      1.907(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       0.0004      0.06  Q         |         |         |         |
  0+10       0.0012      0.11  Q         |         |         |         |
  0+15       0.0020      0.11  Q         |         |         |         |
  0+20       0.0027      0.11  Q         |         |         |         |
```

```
0+25       0.0035      0.11  Q         |         |         |         |
0+30       0.0044      0.13  QV        |         |         |         |
0+35       0.0053      0.13  QV        |         |         |         |
0+40       0.0062      0.13  QV        |         |         |         |
0+45       0.0071      0.13  QV        |         |         |         |
0+50       0.0080      0.13  QV        |         |         |         |
0+55       0.0089      0.13  Q V       |         |         |         |
1+ 0       0.0099      0.15  Q V       |         |         |         |
1+ 5       0.0110      0.15  Q V       |         |         |         |
1+10       0.0120      0.15  Q V       |         |         |         |
1+15       0.0131      0.15  Q  V      |         |         |         |
1+20       0.0141      0.15  Q  V      |         |         |         |
1+25       0.0151      0.15  Q  V      |         |         |         |
1+30       0.0162      0.15  Q  V      |         |         |         |
1+35       0.0172      0.15  Q   V     |         |         |         |
1+40       0.0183      0.15  Q   V     |         |         |         |
1+45       0.0193      0.15  Q   V     |         |         |         |
1+50       0.0203      0.15  Q    V    |         |         |         |
1+55       0.0214      0.15  Q    V    |         |         |         |
2+ 0       0.0225      0.16  Q    V    |         |         |         |
2+ 5       0.0236      0.16  Q    V    |         |         |         |
2+10       0.0247      0.16  Q     V   |         |         |         |
2+15       0.0259      0.17  Q     V   |         |         |         |
2+20       0.0271      0.17  Q     V   |         |         |         |
2+25       0.0282      0.17  Q     V   |         |         |         |
2+30       0.0294      0.17  Q      V  |         |         |         |
2+35       0.0306      0.17  Q      V  |         |         |         |
2+40       0.0318      0.17  Q      V  |         |         |         |
2+45       0.0330      0.18  Q       V |         |         |         |
2+50       0.0343      0.19  Q       V |         |         |         |
2+55       0.0356      0.19  Q       V |         |         |         |
3+ 0       0.0369      0.19  Q        V|         |         |         |
3+ 5       0.0382      0.19  Q        V|         |         |         |
3+10       0.0396      0.20  Q        V|         |         |         |
3+15       0.0410      0.21  Q         V         |         |         |
3+20       0.0425      0.21  Q         V         |         |         |
3+25       0.0440      0.22  Q         V         |         |         |
3+30       0.0456      0.24  Q         |V        |         |         |
3+35       0.0474      0.26  |Q        |V        |         |         |
3+40       0.0492      0.26  |Q        | V       |         |         |
3+45       0.0511      0.28  |Q        | V       |         |         |
3+50       0.0531      0.28  |Q        |  V      |         |         |
3+55       0.0551      0.30  |Q        |  V      |         |         |
4+ 0       0.0572      0.30  |Q        |   V     |         |         |
4+ 5       0.0594      0.32  |Q        |   V     |         |         |
4+10       0.0617      0.33  |Q        |    V    |         |         |
4+15       0.0642      0.36  |Q        |    V    |         |         |
4+20       0.0670      0.40  |Q        |     V   |         |         |
4+25       0.0701      0.45  |Q        |      V  |         |         |
4+30       0.0732      0.46  |Q        |       V |         |         |
```


4+35 0.0766 0.49
4+40 0.0804 0.54
4+45 0.0844 0.58
4+50 0.0885 0.60
4+55 0.0928 0.63
5+ 0 0.0975 0.67
5+ 5 0.1033 0.84
5+10 0.1106 1.07
5+15 0.1191 1.23
5+20 0.1285 1.36
5+25 0.1392 1.56
5+30 0.1523 1.91
5+35 0.1586 0.91
5+40 0.1602 0.24
5+45 0.1611 0.13
5+50 0.1618 0.10
5+55 0.1623 0.07
6+ 0 0.1626 0.04
6+ 5 0.1627 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 05/10/24 File: ONSITEPOSTE22410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	(0.423)	0.016	0.011
2	0.17	0.07	0.027	(0.421)	0.016	0.011
3	0.25	0.07	0.027	(0.420)	0.016	0.011
4	0.33	0.10	0.041	(0.418)	0.024	0.017
5	0.42	0.10	0.041	(0.416)	0.024	0.017
6	0.50	0.10	0.041	(0.415)	0.024	0.017
7	0.58	0.10	0.041	(0.413)	0.024	0.017
8	0.67	0.10	0.041	(0.412)	0.024	0.017
9	0.75	0.10	0.041	(0.410)	0.024	0.017
10	0.83	0.13	0.054	(0.408)	0.032	0.023
11	0.92	0.13	0.054	(0.407)	0.032	0.023
12	1.00	0.13	0.054	(0.405)	0.032	0.023
13	1.08	0.10	0.041	(0.404)	0.024	0.017
14	1.17	0.10	0.041	(0.402)	0.024	0.017
15	1.25	0.10	0.041	(0.400)	0.024	0.017
16	1.33	0.10	0.041	(0.399)	0.024	0.017
17	1.42	0.10	0.041	(0.397)	0.024	0.017
18	1.50	0.10	0.041	(0.396)	0.024	0.017
19	1.58	0.10	0.041	(0.394)	0.024	0.017
20	1.67	0.10	0.041	(0.392)	0.024	0.017
21	1.75	0.10	0.041	(0.391)	0.024	0.017
22	1.83	0.13	0.054	(0.389)	0.032	0.023
23	1.92	0.13	0.054	(0.388)	0.032	0.023
24	2.00	0.13	0.054	(0.386)	0.032	0.023
25	2.08	0.13	0.054	(0.385)	0.032	0.023
26	2.17	0.13	0.054	(0.383)	0.032	0.023
27	2.25	0.13	0.054	(0.381)	0.032	0.023
28	2.33	0.13	0.054	(0.380)	0.032	0.023
29	2.42	0.13	0.054	(0.378)	0.032	0.023
30	2.50	0.13	0.054	(0.377)	0.032	0.023
31	2.58	0.17	0.068	(0.375)	0.039	0.029
32	2.67	0.17	0.068	(0.374)	0.039	0.029
33	2.75	0.17	0.068	(0.372)	0.039	0.029
34	2.83	0.17	0.068	(0.371)	0.039	0.029
35	2.92	0.17	0.068	(0.369)	0.039	0.029
36	3.00	0.17	0.068	(0.368)	0.039	0.029
37	3.08	0.17	0.068	(0.366)	0.039	0.029
38	3.17	0.17	0.068	(0.365)	0.039	0.029
39	3.25	0.17	0.068	(0.363)	0.039	0.029
40	3.33	0.17	0.068	(0.362)	0.039	0.029
41	3.42	0.17	0.068	(0.360)	0.039	0.029
42	3.50	0.17	0.068	(0.359)	0.039	0.029
43	3.58	0.17	0.068	(0.357)	0.039	0.029
44	3.67	0.17	0.068	(0.356)	0.039	0.029
45	3.75	0.17	0.068	(0.354)	0.039	0.029
46	3.83	0.20	0.082	(0.353)	0.047	0.034
47	3.92	0.20	0.082	(0.351)	0.047	0.034

48	4.00	0.20	0.082	(0.350)	0.047	0.034
49	4.08	0.20	0.082	(0.348)	0.047	0.034
50	4.17	0.20	0.082	(0.347)	0.047	0.034
51	4.25	0.20	0.082	(0.345)	0.047	0.034
52	4.33	0.23	0.095	(0.344)	0.055	0.040
53	4.42	0.23	0.095	(0.342)	0.055	0.040
54	4.50	0.23	0.095	(0.341)	0.055	0.040
55	4.58	0.23	0.095	(0.339)	0.055	0.040
56	4.67	0.23	0.095	(0.338)	0.055	0.040
57	4.75	0.23	0.095	(0.336)	0.055	0.040
58	4.83	0.27	0.109	(0.335)	0.063	0.046
59	4.92	0.27	0.109	(0.333)	0.063	0.046
60	5.00	0.27	0.109	(0.332)	0.063	0.046
61	5.08	0.20	0.082	(0.331)	0.047	0.034
62	5.17	0.20	0.082	(0.329)	0.047	0.034
63	5.25	0.20	0.082	(0.328)	0.047	0.034
64	5.33	0.23	0.095	(0.326)	0.055	0.040
65	5.42	0.23	0.095	(0.325)	0.055	0.040
66	5.50	0.23	0.095	(0.323)	0.055	0.040
67	5.58	0.27	0.109	(0.322)	0.063	0.046
68	5.67	0.27	0.109	(0.321)	0.063	0.046
69	5.75	0.27	0.109	(0.319)	0.063	0.046
70	5.83	0.27	0.109	(0.318)	0.063	0.046
71	5.92	0.27	0.109	(0.316)	0.063	0.046
72	6.00	0.27	0.109	(0.315)	0.063	0.046
73	6.08	0.30	0.122	(0.314)	0.071	0.051
74	6.17	0.30	0.122	(0.312)	0.071	0.051
75	6.25	0.30	0.122	(0.311)	0.071	0.051
76	6.33	0.30	0.122	(0.309)	0.071	0.051
77	6.42	0.30	0.122	(0.308)	0.071	0.051
78	6.50	0.30	0.122	(0.307)	0.071	0.051
79	6.58	0.33	0.136	(0.305)	0.079	0.057
80	6.67	0.33	0.136	(0.304)	0.079	0.057
81	6.75	0.33	0.136	(0.302)	0.079	0.057
82	6.83	0.33	0.136	(0.301)	0.079	0.057
83	6.92	0.33	0.136	(0.300)	0.079	0.057
84	7.00	0.33	0.136	(0.298)	0.079	0.057
85	7.08	0.33	0.136	(0.297)	0.079	0.057
86	7.17	0.33	0.136	(0.296)	0.079	0.057
87	7.25	0.33	0.136	(0.294)	0.079	0.057
88	7.33	0.37	0.150	(0.293)	0.087	0.063
89	7.42	0.37	0.150	(0.292)	0.087	0.063
90	7.50	0.37	0.150	(0.290)	0.087	0.063
91	7.58	0.40	0.163	(0.289)	0.095	0.069
92	7.67	0.40	0.163	(0.288)	0.095	0.069
93	7.75	0.40	0.163	(0.286)	0.095	0.069
94	7.83	0.43	0.177	(0.285)	0.103	0.074
95	7.92	0.43	0.177	(0.284)	0.103	0.074
96	8.00	0.43	0.177	(0.282)	0.103	0.074
97	8.08	0.50	0.204	(0.281)	0.118	0.086

98	8.17	0.50	0.204	(0.280)	0.118	0.086
99	8.25	0.50	0.204	(0.278)	0.118	0.086
100	8.33	0.50	0.204	(0.277)	0.118	0.086
101	8.42	0.50	0.204	(0.276)	0.118	0.086
102	8.50	0.50	0.204	(0.275)	0.118	0.086
103	8.58	0.53	0.218	(0.273)	0.126	0.091
104	8.67	0.53	0.218	(0.272)	0.126	0.091
105	8.75	0.53	0.218	(0.271)	0.126	0.091
106	8.83	0.57	0.231	(0.269)	0.134	0.097
107	8.92	0.57	0.231	(0.268)	0.134	0.097
108	9.00	0.57	0.231	(0.267)	0.134	0.097
109	9.08	0.63	0.258	(0.266)	0.150	0.108
110	9.17	0.63	0.258	(0.264)	0.150	0.108
111	9.25	0.63	0.258	(0.263)	0.150	0.108
112	9.33	0.67	0.272	(0.262)	0.158	0.114
113	9.42	0.67	0.272	(0.261)	0.158	0.114
114	9.50	0.67	0.272	(0.259)	0.158	0.114
115	9.58	0.70	0.285	(0.258)	0.166	0.120
116	9.67	0.70	0.285	(0.257)	0.166	0.120
117	9.75	0.70	0.285	(0.256)	0.166	0.120
118	9.83	0.73	0.299	(0.254)	0.173	0.126
119	9.92	0.73	0.299	(0.253)	0.173	0.126
120	10.00	0.73	0.299	(0.252)	0.173	0.126
121	10.08	0.50	0.204	(0.251)	0.118	0.086
122	10.17	0.50	0.204	(0.250)	0.118	0.086
123	10.25	0.50	0.204	(0.248)	0.118	0.086
124	10.33	0.50	0.204	(0.247)	0.118	0.086
125	10.42	0.50	0.204	(0.246)	0.118	0.086
126	10.50	0.50	0.204	(0.245)	0.118	0.086
127	10.58	0.67	0.272	(0.244)	0.158	0.114
128	10.67	0.67	0.272	(0.242)	0.158	0.114
129	10.75	0.67	0.272	(0.241)	0.158	0.114
130	10.83	0.67	0.272	(0.240)	0.158	0.114
131	10.92	0.67	0.272	(0.239)	0.158	0.114
132	11.00	0.67	0.272	(0.238)	0.158	0.114
133	11.08	0.63	0.258	(0.236)	0.150	0.108
134	11.17	0.63	0.258	(0.235)	0.150	0.108
135	11.25	0.63	0.258	(0.234)	0.150	0.108
136	11.33	0.63	0.258	(0.233)	0.150	0.108
137	11.42	0.63	0.258	(0.232)	0.150	0.108
138	11.50	0.63	0.258	(0.231)	0.150	0.108
139	11.58	0.57	0.231	(0.229)	0.134	0.097
140	11.67	0.57	0.231	(0.228)	0.134	0.097
141	11.75	0.57	0.231	(0.227)	0.134	0.097
142	11.83	0.60	0.245	(0.226)	0.142	0.103
143	11.92	0.60	0.245	(0.225)	0.142	0.103
144	12.00	0.60	0.245	(0.224)	0.142	0.103
145	12.08	0.83	0.340	(0.223)	0.197	0.143
146	12.17	0.83	0.340	(0.222)	0.197	0.143
147	12.25	0.83	0.340	(0.220)	0.197	0.143

148	12.33	0.87	0.353	(0.219)	0.205	0.148
149	12.42	0.87	0.353	(0.218)	0.205	0.148
150	12.50	0.87	0.353	(0.217)	0.205	0.148
151	12.58	0.93	0.381	0.216	(0.221)	0.165
152	12.67	0.93	0.381	0.215	(0.221)	0.166
153	12.75	0.93	0.381	0.214	(0.221)	0.167
154	12.83	0.97	0.394	0.213	(0.229)	0.181
155	12.92	0.97	0.394	0.212	(0.229)	0.182
156	13.00	0.97	0.394	0.211	(0.229)	0.184
157	13.08	1.13	0.462	0.210	(0.268)	0.253
158	13.17	1.13	0.462	0.209	(0.268)	0.254
159	13.25	1.13	0.462	0.208	(0.268)	0.255
160	13.33	1.13	0.462	0.206	(0.268)	0.256
161	13.42	1.13	0.462	0.205	(0.268)	0.257
162	13.50	1.13	0.462	0.204	(0.268)	0.258
163	13.58	0.77	0.313	(0.203)	0.181	0.131
164	13.67	0.77	0.313	(0.202)	0.181	0.131
165	13.75	0.77	0.313	(0.201)	0.181	0.131
166	13.83	0.77	0.313	(0.200)	0.181	0.131
167	13.92	0.77	0.313	(0.199)	0.181	0.131
168	14.00	0.77	0.313	(0.198)	0.181	0.131
169	14.08	0.90	0.367	0.197	(0.213)	0.170
170	14.17	0.90	0.367	0.196	(0.213)	0.171
171	14.25	0.90	0.367	0.195	(0.213)	0.172
172	14.33	0.87	0.353	0.194	(0.205)	0.159
173	14.42	0.87	0.353	0.193	(0.205)	0.160
174	14.50	0.87	0.353	0.192	(0.205)	0.161
175	14.58	0.87	0.353	0.191	(0.205)	0.162
176	14.67	0.87	0.353	0.190	(0.205)	0.163
177	14.75	0.87	0.353	0.189	(0.205)	0.164
178	14.83	0.83	0.340	0.188	(0.197)	0.152
179	14.92	0.83	0.340	0.187	(0.197)	0.153
180	15.00	0.83	0.340	0.186	(0.197)	0.154
181	15.08	0.80	0.326	0.185	(0.189)	0.141
182	15.17	0.80	0.326	0.184	(0.189)	0.142
183	15.25	0.80	0.326	0.183	(0.189)	0.143
184	15.33	0.77	0.313	(0.183)	0.181	0.131
185	15.42	0.77	0.313	(0.182)	0.181	0.131
186	15.50	0.77	0.313	0.181	(0.181)	0.132
187	15.58	0.63	0.258	(0.180)	0.150	0.108
188	15.67	0.63	0.258	(0.179)	0.150	0.108
189	15.75	0.63	0.258	(0.178)	0.150	0.108
190	15.83	0.63	0.258	(0.177)	0.150	0.108
191	15.92	0.63	0.258	(0.176)	0.150	0.108
192	16.00	0.63	0.258	(0.175)	0.150	0.108
193	16.08	0.13	0.054	(0.174)	0.032	0.023
194	16.17	0.13	0.054	(0.173)	0.032	0.023
195	16.25	0.13	0.054	(0.173)	0.032	0.023
196	16.33	0.13	0.054	(0.172)	0.032	0.023
197	16.42	0.13	0.054	(0.171)	0.032	0.023

198	16.50	0.13	0.054	(0.170)	0.032	0.023
199	16.58	0.10	0.041	(0.169)	0.024	0.017
200	16.67	0.10	0.041	(0.168)	0.024	0.017
201	16.75	0.10	0.041	(0.167)	0.024	0.017
202	16.83	0.10	0.041	(0.166)	0.024	0.017
203	16.92	0.10	0.041	(0.166)	0.024	0.017
204	17.00	0.10	0.041	(0.165)	0.024	0.017
205	17.08	0.17	0.068	(0.164)	0.039	0.029
206	17.17	0.17	0.068	(0.163)	0.039	0.029
207	17.25	0.17	0.068	(0.162)	0.039	0.029
208	17.33	0.17	0.068	(0.162)	0.039	0.029
209	17.42	0.17	0.068	(0.161)	0.039	0.029
210	17.50	0.17	0.068	(0.160)	0.039	0.029
211	17.58	0.17	0.068	(0.159)	0.039	0.029
212	17.67	0.17	0.068	(0.158)	0.039	0.029
213	17.75	0.17	0.068	(0.158)	0.039	0.029
214	17.83	0.13	0.054	(0.157)	0.032	0.023
215	17.92	0.13	0.054	(0.156)	0.032	0.023
216	18.00	0.13	0.054	(0.155)	0.032	0.023
217	18.08	0.13	0.054	(0.154)	0.032	0.023
218	18.17	0.13	0.054	(0.154)	0.032	0.023
219	18.25	0.13	0.054	(0.153)	0.032	0.023
220	18.33	0.13	0.054	(0.152)	0.032	0.023
221	18.42	0.13	0.054	(0.151)	0.032	0.023
222	18.50	0.13	0.054	(0.151)	0.032	0.023
223	18.58	0.10	0.041	(0.150)	0.024	0.017
224	18.67	0.10	0.041	(0.149)	0.024	0.017
225	18.75	0.10	0.041	(0.149)	0.024	0.017
226	18.83	0.07	0.027	(0.148)	0.016	0.011
227	18.92	0.07	0.027	(0.147)	0.016	0.011
228	19.00	0.07	0.027	(0.146)	0.016	0.011
229	19.08	0.10	0.041	(0.146)	0.024	0.017
230	19.17	0.10	0.041	(0.145)	0.024	0.017
231	19.25	0.10	0.041	(0.144)	0.024	0.017
232	19.33	0.13	0.054	(0.144)	0.032	0.023
233	19.42	0.13	0.054	(0.143)	0.032	0.023
234	19.50	0.13	0.054	(0.142)	0.032	0.023
235	19.58	0.10	0.041	(0.142)	0.024	0.017
236	19.67	0.10	0.041	(0.141)	0.024	0.017
237	19.75	0.10	0.041	(0.140)	0.024	0.017
238	19.83	0.07	0.027	(0.140)	0.016	0.011
239	19.92	0.07	0.027	(0.139)	0.016	0.011
240	20.00	0.07	0.027	(0.139)	0.016	0.011
241	20.08	0.10	0.041	(0.138)	0.024	0.017
242	20.17	0.10	0.041	(0.137)	0.024	0.017
243	20.25	0.10	0.041	(0.137)	0.024	0.017
244	20.33	0.10	0.041	(0.136)	0.024	0.017
245	20.42	0.10	0.041	(0.136)	0.024	0.017
246	20.50	0.10	0.041	(0.135)	0.024	0.017
247	20.58	0.10	0.041	(0.134)	0.024	0.017

248	20.67	0.10	0.041	(0.134)	0.024	0.017
249	20.75	0.10	0.041	(0.133)	0.024	0.017
250	20.83	0.07	0.027	(0.133)	0.016	0.011
251	20.92	0.07	0.027	(0.132)	0.016	0.011
252	21.00	0.07	0.027	(0.132)	0.016	0.011
253	21.08	0.10	0.041	(0.131)	0.024	0.017
254	21.17	0.10	0.041	(0.131)	0.024	0.017
255	21.25	0.10	0.041	(0.130)	0.024	0.017
256	21.33	0.07	0.027	(0.130)	0.016	0.011
257	21.42	0.07	0.027	(0.129)	0.016	0.011
258	21.50	0.07	0.027	(0.129)	0.016	0.011
259	21.58	0.10	0.041	(0.128)	0.024	0.017
260	21.67	0.10	0.041	(0.128)	0.024	0.017
261	21.75	0.10	0.041	(0.127)	0.024	0.017
262	21.83	0.07	0.027	(0.127)	0.016	0.011
263	21.92	0.07	0.027	(0.126)	0.016	0.011
264	22.00	0.07	0.027	(0.126)	0.016	0.011
265	22.08	0.10	0.041	(0.126)	0.024	0.017
266	22.17	0.10	0.041	(0.125)	0.024	0.017
267	22.25	0.10	0.041	(0.125)	0.024	0.017
268	22.33	0.07	0.027	(0.124)	0.016	0.011
269	22.42	0.07	0.027	(0.124)	0.016	0.011
270	22.50	0.07	0.027	(0.124)	0.016	0.011
271	22.58	0.07	0.027	(0.123)	0.016	0.011
272	22.67	0.07	0.027	(0.123)	0.016	0.011
273	22.75	0.07	0.027	(0.123)	0.016	0.011
274	22.83	0.07	0.027	(0.122)	0.016	0.011
275	22.92	0.07	0.027	(0.122)	0.016	0.011
276	23.00	0.07	0.027	(0.122)	0.016	0.011
277	23.08	0.07	0.027	(0.121)	0.016	0.011
278	23.17	0.07	0.027	(0.121)	0.016	0.011
279	23.25	0.07	0.027	(0.121)	0.016	0.011
280	23.33	0.07	0.027	(0.121)	0.016	0.011
281	23.42	0.07	0.027	(0.120)	0.016	0.011
282	23.50	0.07	0.027	(0.120)	0.016	0.011
283	23.58	0.07	0.027	(0.120)	0.016	0.011
284	23.67	0.07	0.027	(0.120)	0.016	0.011
285	23.75	0.07	0.027	(0.120)	0.016	0.011
286	23.83	0.07	0.027	(0.119)	0.016	0.011
287	23.92	0.07	0.027	(0.119)	0.016	0.011
288	24.00	0.07	0.027	(0.119)	0.016	0.011

(Loss Rate Not Used)

Sum = 100.0 Sum = 17.7

Flood volume = Effective rainfall 1.48(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 1.92(In)
Total soil loss = 0.320(Ac.Ft)
Total rainfall = 3.40(In)
Flood volume = 10732.2 Cubic Feet
Total soil loss = 13942.9 Cubic Feet

Peak flow rate of this hydrograph = 0.519(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	0.0003	0.02	Q				
0+15	0.0004	0.02	Q				
0+20	0.0006	0.03	Q				
0+25	0.0009	0.03	Q				
0+30	0.0011	0.03	Q				
0+35	0.0014	0.03	Q				
0+40	0.0016	0.03	Q				
0+45	0.0018	0.03	Q				
0+50	0.0021	0.04	Q				
0+55	0.0024	0.05	Q				
1+ 0	0.0028	0.05	Q				
1+ 5	0.0030	0.04	Q				
1+10	0.0033	0.03	Q				
1+15	0.0035	0.03	Q				
1+20	0.0037	0.03	Q				
1+25	0.0040	0.03	Q				
1+30	0.0042	0.03	Q				
1+35	0.0044	0.03	Q				
1+40	0.0047	0.03	Q				
1+45	0.0049	0.03	Q				
1+50	0.0052	0.04	Q				
1+55	0.0055	0.05	Q				
2+ 0	0.0058	0.05	Q				
2+ 5	0.0062	0.05	QV				
2+10	0.0065	0.05	QV				
2+15	0.0068	0.05	QV				
2+20	0.0071	0.05	QV				
2+25	0.0074	0.05	QV				
2+30	0.0077	0.05	QV				
2+35	0.0081	0.05	QV				
2+40	0.0085	0.06	QV				
2+45	0.0089	0.06	QV				
2+50	0.0093	0.06	QV				
2+55	0.0097	0.06	QV				
3+ 0	0.0101	0.06	QV				
3+ 5	0.0105	0.06	QV				
3+10	0.0109	0.06	QV				

3+15	0.0113	0.06	QV	|	|	|	|
3+20	0.0117	0.06	QV	|	|	|	|
3+25	0.0121	0.06	QV	|	|	|	|
3+30	0.0125	0.06	Q V	|	|	|	|
3+35	0.0129	0.06	Q V	|	|	|	|
3+40	0.0133	0.06	Q V	|	|	|	|
3+45	0.0137	0.06	Q V	|	|	|	|
3+50	0.0141	0.07	Q V	|	|	|	|
3+55	0.0146	0.07	Q V	|	|	|	|
4+ 0	0.0151	0.07	Q V	|	|	|	|
4+ 5	0.0155	0.07	Q V	|	|	|	|
4+10	0.0160	0.07	Q V	|	|	|	|
4+15	0.0165	0.07	Q V	|	|	|	|
4+20	0.0170	0.08	Q V	|	|	|	|
4+25	0.0176	0.08	Q V	|	|	|	|
4+30	0.0181	0.08	Q V	|	|	|	|
4+35	0.0187	0.08	Q V	|	|	|	|
4+40	0.0193	0.08	Q V	|	|	|	|
4+45	0.0198	0.08	Q V	|	|	|	|
4+50	0.0204	0.09	Q V	|	|	|	|
4+55	0.0210	0.09	Q V	|	|	|	|
5+ 0	0.0217	0.09	Q V	|	|	|	|
5+ 5	0.0222	0.08	Q V	|	|	|	|
5+10	0.0227	0.07	Q V	|	|	|	|
5+15	0.0232	0.07	Q V	|	|	|	|
5+20	0.0237	0.08	Q V	|	|	|	|
5+25	0.0242	0.08	Q V	|	|	|	|
5+30	0.0248	0.08	Q V	|	|	|	|
5+35	0.0254	0.09	Q V	|	|	|	|
5+40	0.0260	0.09	Q V	|	|	|	|
5+45	0.0267	0.09	Q V	|	|	|	|
5+50	0.0273	0.09	Q V	|	|	|	|
5+55	0.0279	0.09	Q V	|	|	|	|
6+ 0	0.0286	0.09	Q V	|	|	|	|
6+ 5	0.0293	0.10	Q V	|	|	|	|
6+10	0.0300	0.10	Q V	|	|	|	|
6+15	0.0307	0.10	Q V	|	|	|	|
6+20	0.0314	0.10	Q V	|	|	|	|
6+25	0.0321	0.10	Q V	|	|	|	|
6+30	0.0328	0.10	Q V	|	|	|	|
6+35	0.0336	0.11	Q V	|	|	|	|
6+40	0.0344	0.12	Q V	|	|	|	|
6+45	0.0352	0.12	Q V	|	|	|	|
6+50	0.0360	0.12	Q V	|	|	|	|
6+55	0.0368	0.12	Q V	|	|	|	|
7+ 0	0.0376	0.12	Q V	|	|	|	|
7+ 5	0.0384	0.12	Q V	|	|	|	|
7+10	0.0392	0.12	Q V	|	|	|	|
7+15	0.0400	0.12	Q V	|	|	|	|
7+20	0.0408	0.12	Q V	|	|	|	|

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 7+25       0.0417      0.13  Q     V   |          |          |          |
 7+30       0.0425      0.13  Q     V   |          |          |          |
 7+35       0.0435      0.13  Q      V  |          |          |          |
 7+40       0.0444      0.14  Q      V  |          |          |          |
 7+45       0.0454      0.14  Q      V  |          |          |          |
 7+50       0.0464      0.15  Q      V  |          |          |          |
 7+55       0.0474      0.15  Q      V  |          |          |          |
 8+ 0       0.0484      0.15  Q      V  |          |          |          |
 8+ 5       0.0496      0.17  Q       V |          |          |          |
 8+10       0.0508      0.17  Q       V |          |          |          |
 8+15       0.0520      0.17  Q       V |          |          |          |
 8+20       0.0531      0.17  Q       V |          |          |          |
 8+25       0.0543      0.17  Q       V |          |          |          |
 8+30       0.0555      0.17  Q        V|          |          |          |
 8+35       0.0568      0.18  Q        V|          |          |          |
 8+40       0.0580      0.18  Q        V|          |          |          |
 8+45       0.0593      0.18  Q        V|          |          |          |
 8+50       0.0606      0.19  Q        V|          |          |          |
 8+55       0.0620      0.20  Q         V          |          |          |
 9+ 0       0.0633      0.20  Q         V          |          |          |
 9+ 5       0.0648      0.21  Q         V          |          |          |
 9+10       0.0663      0.22  Q         V          |          |          |
 9+15       0.0678      0.22  Q         |V         |          |          |
 9+20       0.0694      0.23  Q         |V         |          |          |
 9+25       0.0709      0.23  Q         |V         |          |          |
 9+30       0.0725      0.23  Q         |V         |          |          |
 9+35       0.0742      0.24  Q         | V        |          |          |
 9+40       0.0758      0.24  Q         | V        |          |          |
 9+45       0.0775      0.24  Q         | V        |          |          |
 9+50       0.0792      0.25  Q         | V        |          |          |
 9+55       0.0810      0.25  |Q        |  V        |          |          |
10+ 0       0.0827      0.25  |Q        |  V        |          |          |
10+ 5       0.0841      0.20  Q         |  V        |          |          |
10+10       0.0853      0.17  Q         |  V        |          |          |
10+15       0.0865      0.17  Q         |   V       |          |          |
10+20       0.0876      0.17  Q         |   V       |          |          |
10+25       0.0888      0.17  Q         |   V       |          |          |
10+30       0.0900      0.17  Q         |   V       |          |          |
10+35       0.0915      0.21  Q         |   V       |          |          |
10+40       0.0931      0.23  Q         |    V      |          |          |
10+45       0.0947      0.23  Q         |    V      |          |          |
10+50       0.0962      0.23  Q         |    V      |          |          |
10+55       0.0978      0.23  Q         |    V      |          |          |
11+ 0       0.0994      0.23  Q         |     V     |          |          |
11+ 5       0.1009      0.22  Q         |     V     |          |          |
11+10       0.1025      0.22  Q         |     V     |          |          |
11+15       0.1040      0.22  Q         |     V     |          |          |
11+20       0.1055      0.22  Q         |      V    |          |          |
11+25       0.1070      0.22  Q         |      V    |          |          |
11+30       0.1085      0.22  Q         |      V    |          |          |
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11+35       0.1099      0.20  Q         |      V  |         |         |
11+40       0.1112      0.20  Q         |       V |         |         |
11+45       0.1126      0.20  Q         |       V |         |         |
11+50       0.1140      0.20  Q         |       V |         |         |
11+55       0.1154      0.21  Q         |       V |         |         |
12+ 0       0.1168      0.21  Q         |       V |         |         |
12+ 5       0.1186      0.26  |Q        |        V|         |         |
12+10       0.1206      0.29  |Q        |        V|         |         |
12+15       0.1226      0.29  |Q        |        V|         |         |
12+20       0.1246      0.30  |Q        |         V         |         |
12+25       0.1267      0.30  |Q        |         V         |         |
12+30       0.1288      0.30  |Q        |         V         |         |
12+35       0.1310      0.32  |Q        |         |V        |         |
12+40       0.1333      0.33  |Q        |         |V        |         |
12+45       0.1356      0.34  |Q        |         | V       |         |
12+50       0.1380      0.36  |Q        |         | V       |         |
12+55       0.1406      0.37  |Q        |         | V       |         |
13+ 0       0.1431      0.37  |Q        |         |  V      |         |
13+ 5       0.1463      0.46  |Q        |         |  V      |         |
13+10       0.1498      0.51  | Q       |         |   V     |         |
13+15       0.1534      0.51  | Q       |         |   V     |         |
13+20       0.1569      0.52  | Q       |         |    V    |         |
13+25       0.1605      0.52  | Q       |         |     V   |         |
13+30       0.1641      0.52  | Q       |         |     V   |         |
13+35       0.1664      0.35  |Q        |         |      V  |         |
13+40       0.1683      0.26  |Q        |         |      V  |         |
13+45       0.1701      0.26  |Q        |         |      V  |         |
13+50       0.1719      0.26  |Q        |         |      V  |         |
13+55       0.1737      0.26  |Q        |         |       V |         |
14+ 0       0.1756      0.26  |Q        |         |       V |         |
14+ 5       0.1777      0.32  |Q        |         |       V |         |
14+10       0.1801      0.34  |Q        |         |        V|         |
14+15       0.1825      0.35  |Q        |         |        V|         |
14+20       0.1848      0.33  |Q        |         |        V|         |
14+25       0.1870      0.32  |Q        |         |         V         |
14+30       0.1892      0.32  |Q        |         |         V         |
14+35       0.1915      0.33  |Q        |         |         |V        |
14+40       0.1937      0.33  |Q        |         |         |V        |
14+45       0.1960      0.33  |Q        |         |         |V        |
14+50       0.1982      0.31  |Q        |         |         | V       |
14+55       0.2003      0.31  |Q        |         |         | V       |
15+ 0       0.2024      0.31  |Q        |         |         | V       |
15+ 5       0.2044      0.29  |Q        |         |         |  V      |
15+10       0.2064      0.29  |Q        |         |         |  V      |
15+15       0.2084      0.29  |Q        |         |         |  V      |
15+20       0.2103      0.27  |Q        |         |         |   V     |
15+25       0.2121      0.26  |Q        |         |         |   V     |
15+30       0.2139      0.27  |Q        |         |         |   V     |
15+35       0.2155      0.23  Q         |         |         |   V     |
15+40       0.2170      0.22  Q         |         |         |    V    |
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15+45	0.2185	0.22	Q	|	|	|	V |
15+50	0.2200	0.22	Q	|	|	|	V |
15+55	0.2215	0.22	Q	|	|	|	V |
16+ 0	0.2231	0.22	Q	|	|	|	V |
16+ 5	0.2238	0.10	Q	|	|	|	V |
16+10	0.2241	0.05	Q	|	|	|	V |
16+15	0.2244	0.05	Q	|	|	|	V |
16+20	0.2247	0.05	Q	|	|	|	V |
16+25	0.2250	0.05	Q	|	|	|	V |
16+30	0.2253	0.05	Q	|	|	|	V |
16+35	0.2256	0.04	Q	|	|	|	V |
16+40	0.2258	0.03	Q	|	|	|	V |
16+45	0.2261	0.03	Q	|	|	|	V |
16+50	0.2263	0.03	Q	|	|	|	V |
16+55	0.2266	0.03	Q	|	|	|	V |
17+ 0	0.2268	0.03	Q	|	|	|	V |
17+ 5	0.2271	0.05	Q	|	|	|	V |
17+10	0.2275	0.06	Q	|	|	|	V |
17+15	0.2279	0.06	Q	|	|	|	V |
17+20	0.2283	0.06	Q	|	|	|	V |
17+25	0.2287	0.06	Q	|	|	|	V |
17+30	0.2291	0.06	Q	|	|	|	V |
17+35	0.2295	0.06	Q	|	|	|	V |
17+40	0.2299	0.06	Q	|	|	|	V |
17+45	0.2303	0.06	Q	|	|	|	V |
17+50	0.2307	0.05	Q	|	|	|	V |
17+55	0.2310	0.05	Q	|	|	|	V |
18+ 0	0.2313	0.05	Q	|	|	|	V |
18+ 5	0.2316	0.05	Q	|	|	|	V |
18+10	0.2319	0.05	Q	|	|	|	V |
18+15	0.2322	0.05	Q	|	|	|	V |
18+20	0.2326	0.05	Q	|	|	|	V |
18+25	0.2329	0.05	Q	|	|	|	V |
18+30	0.2332	0.05	Q	|	|	|	V |
18+35	0.2335	0.04	Q	|	|	|	V |
18+40	0.2337	0.03	Q	|	|	|	V |
18+45	0.2339	0.03	Q	|	|	|	V |
18+50	0.2341	0.03	Q	|	|	|	V |
18+55	0.2343	0.02	Q	|	|	|	V |
19+ 0	0.2344	0.02	Q	|	|	|	V |
19+ 5	0.2346	0.03	Q	|	|	|	V |
19+10	0.2349	0.03	Q	|	|	|	V |
19+15	0.2351	0.03	Q	|	|	|	V |
19+20	0.2354	0.04	Q	|	|	|	V |
19+25	0.2357	0.05	Q	|	|	|	V |
19+30	0.2360	0.05	Q	|	|	|	V |
19+35	0.2363	0.04	Q	|	|	|	V |
19+40	0.2365	0.03	Q	|	|	|	V |
19+45	0.2368	0.03	Q	|	|	|	V |
19+50	0.2370	0.03	Q	|	|	|	V |

19+55	0.2371	0.02	Q	|	|	|	V |
20+ 0	0.2373	0.02	Q	|	|	|	V |
20+ 5	0.2375	0.03	Q	|	|	|	V |
20+10	0.2377	0.03	Q	|	|	|	V |
20+15	0.2380	0.03	Q	|	|	|	V |
20+20	0.2382	0.03	Q	|	|	|	V |
20+25	0.2384	0.03	Q	|	|	|	V |
20+30	0.2387	0.03	Q	|	|	|	V |
20+35	0.2389	0.03	Q	|	|	|	V |
20+40	0.2392	0.03	Q	|	|	|	V |
20+45	0.2394	0.03	Q	|	|	|	V |
20+50	0.2396	0.03	Q	|	|	|	V |
20+55	0.2397	0.02	Q	|	|	|	V |
21+ 0	0.2399	0.02	Q	|	|	|	V |
21+ 5	0.2401	0.03	Q	|	|	|	V |
21+10	0.2404	0.03	Q	|	|	|	V|
21+15	0.2406	0.03	Q	|	|	|	V|
21+20	0.2408	0.03	Q	|	|	|	V|
21+25	0.2409	0.02	Q	|	|	|	V|
21+30	0.2411	0.02	Q	|	|	|	V|
21+35	0.2413	0.03	Q	|	|	|	V|
21+40	0.2415	0.03	Q	|	|	|	V|
21+45	0.2418	0.03	Q	|	|	|	V|
21+50	0.2420	0.03	Q	|	|	|	V|
21+55	0.2421	0.02	Q	|	|	|	V|
22+ 0	0.2423	0.02	Q	|	|	|	V|
22+ 5	0.2425	0.03	Q	|	|	|	V|
22+10	0.2427	0.03	Q	|	|	|	V|
22+15	0.2430	0.03	Q	|	|	|	V|
22+20	0.2432	0.03	Q	|	|	|	V|
22+25	0.2433	0.02	Q	|	|	|	V|
22+30	0.2435	0.02	Q	|	|	|	V|
22+35	0.2436	0.02	Q	|	|	|	V|
22+40	0.2438	0.02	Q	|	|	|	V|
22+45	0.2439	0.02	Q	|	|	|	V|
22+50	0.2441	0.02	Q	|	|	|	V|
22+55	0.2443	0.02	Q	|	|	|	V|
23+ 0	0.2444	0.02	Q	|	|	|	V|
23+ 5	0.2446	0.02	Q	|	|	|	V|
23+10	0.2447	0.02	Q	|	|	|	V|
23+15	0.2449	0.02	Q	|	|	|	V|
23+20	0.2451	0.02	Q	|	|	|	V|
23+25	0.2452	0.02	Q	|	|	|	V|
23+30	0.2454	0.02	Q	|	|	|	V|
23+35	0.2455	0.02	Q	|	|	|	V|
23+40	0.2457	0.02	Q	|	|	|	V|
23+45	0.2459	0.02	Q	|	|	|	V|
23+50	0.2460	0.02	Q	|	|	|	V|
23+55	0.2462	0.02	Q	|	|	|	V|
24+ 0	0.2463	0.02	Q	|	|	|	V|

```
   24+ 5       0.2464      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 05/09/24 File: ONSITEPOSTE21100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            0.50                  1.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            1.30                  2.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
-----------------------------------------------------------------
```

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	3.30	0.515	0.239	(0.299)	0.276
2	0.17	4.20	0.655	0.239	(0.380)	0.417
3	0.25	4.40	0.686	0.239	(0.398)	0.448
4	0.33	4.80	0.749	0.239	(0.434)	0.510
5	0.42	5.20	0.811	0.239	(0.470)	0.573
6	0.50	6.20	0.967	0.239	(0.561)	0.729
7	0.58	6.80	1.061	0.239	(0.615)	0.822
8	0.67	8.80	1.373	0.239	(0.796)	1.134
9	0.75	13.90	2.168	0.239	(1.258)	1.930
10	0.83	31.40	4.898	0.239	(2.841)	4.660
11	0.92	7.20	1.123	0.239	(0.651)	0.885
12	1.00	3.80	0.593	0.239	(0.344)	0.354
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	12.7

Flood volume = Effective rainfall 1.06(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.24(In)
Total soil loss = 0.040(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 7705.7 Cubic Feet
Total soil loss = 1732.2 Cubic Feet

Peak flow rate of this hydrograph = 7.629(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	0.0026	0.38	VQ				
0+10	0.0078	0.75	VQ				
0+15	0.0138	0.88	Q				
0+20	0.0207	0.99	QV				
0+25	0.0283	1.11	Q V				
0+30	0.0378	1.37	Q V				
0+35	0.0488	1.60	Q	V			
0+40	0.0631	2.09	Q	V			
0+45	0.0864	3.38		Q V			
0+50	0.1389	7.63				QV	
0+55	0.1680	4.23		Q			V
1+ 0	0.1753	1.06	Q				V

```
    1+ 5       0.1769      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 05/09/24 File: ONSITEPOSTE23100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            0.80                  1.60

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.00                  4.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                              Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.312	(0.239)	0.181	0.131
2	0.17	1.30	0.312	(0.239)	0.181	0.131
3	0.25	1.10	0.264	(0.239)	0.153	0.111
4	0.33	1.50	0.360	(0.239)	0.209	0.151
5	0.42	1.50	0.360	(0.239)	0.209	0.151
6	0.50	1.80	0.432	0.239	(0.251)	0.193
7	0.58	1.50	0.360	(0.239)	0.209	0.151
8	0.67	1.80	0.432	0.239	(0.251)	0.193
9	0.75	1.80	0.432	0.239	(0.251)	0.193
10	0.83	1.50	0.360	(0.239)	0.209	0.151
11	0.92	1.60	0.384	(0.239)	0.223	0.161
12	1.00	1.80	0.432	0.239	(0.251)	0.193
13	1.08	2.20	0.528	0.239	(0.306)	0.289
14	1.17	2.20	0.528	0.239	(0.306)	0.289
15	1.25	2.20	0.528	0.239	(0.306)	0.289
16	1.33	2.00	0.480	0.239	(0.278)	0.241
17	1.42	2.60	0.624	0.239	(0.362)	0.385
18	1.50	2.70	0.648	0.239	(0.376)	0.409
19	1.58	2.40	0.576	0.239	(0.334)	0.337
20	1.67	2.70	0.648	0.239	(0.376)	0.409
21	1.75	3.30	0.792	0.239	(0.459)	0.553
22	1.83	3.10	0.744	0.239	(0.432)	0.505
23	1.92	2.90	0.696	0.239	(0.404)	0.457
24	2.00	3.00	0.720	0.239	(0.418)	0.481
25	2.08	3.10	0.744	0.239	(0.432)	0.505
26	2.17	4.20	1.008	0.239	(0.585)	0.769
27	2.25	5.00	1.200	0.239	(0.696)	0.961
28	2.33	3.50	0.840	0.239	(0.487)	0.601
29	2.42	6.80	1.632	0.239	(0.947)	1.393
30	2.50	7.30	1.752	0.239	(1.016)	1.513
31	2.58	8.20	1.968	0.239	(1.141)	1.729
32	2.67	5.90	1.416	0.239	(0.821)	1.177
33	2.75	2.00	0.480	0.239	(0.278)	0.241
34	2.83	1.80	0.432	0.239	(0.251)	0.193
35	2.92	1.80	0.432	0.239	(0.251)	0.193
36	3.00	0.60	0.144	(0.239)	0.084	0.060
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	15.9

Flood volume = Effective rainfall 1.33(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.67(In)
Total soil loss = 0.112(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 9620.3 Cubic Feet
Total soil loss = 4899.6 Cubic Feet

Peak flow rate of this hydrograph = 3.348(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	0.0012	0.18	Q				
0+10	0.0031	0.26	VQ				
0+15	0.0047	0.24	Q				
0+20	0.0066	0.28	|Q				
0+25	0.0087	0.30	|Q				
0+30	0.0112	0.36	|QV				
0+35	0.0135	0.33	|QV				
0+40	0.0160	0.36	|QV				
0+45	0.0187	0.39	|Q V				
0+50	0.0210	0.33	|Q V				
0+55	0.0232	0.32	|Q V				
1+ 0	0.0257	0.37	|Q V				
1+ 5	0.0293	0.52	| Q V				
1+10	0.0333	0.58	| Q V				
1+15	0.0373	0.58	| Q V				
1+20	0.0409	0.52	| Q V				
1+25	0.0456	0.68	| Q V				
1+30	0.0512	0.81	| Q V				
1+35	0.0562	0.73	| Q V				
1+40	0.0616	0.78	| Q |V				
1+45	0.0686	1.02	| Q | V				
1+50	0.0758	1.05	| Q | V				
1+55	0.0824	0.95	| Q | V				
2+ 0	0.0890	0.96	| Q | V				
2+ 5	0.0959	1.00	| Q | V				
2+10	0.1054	1.38	| Q | V				
2+15	0.1179	1.81	| Q | V				
2+20	0.1279	1.45	| Q | V				
2+25	0.1437	2.30	| Q | V				
2+30	0.1642	2.97	| |Q | V				
2+35	0.1872	3.35	| | Q | V				
2+40	0.2060	2.73	| Q | V				
2+45	0.2136	1.09	| Q | V				
2+50	0.2165	0.42	|Q | V				
2+55	0.2191	0.39	|Q | V				
3+ 0	0.2206	0.21	Q | V				
3+ 5	0.2209	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 05/09/24 File: ONSITEPOSTE26100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            1.20                  2.40

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            2.80                  5.60

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

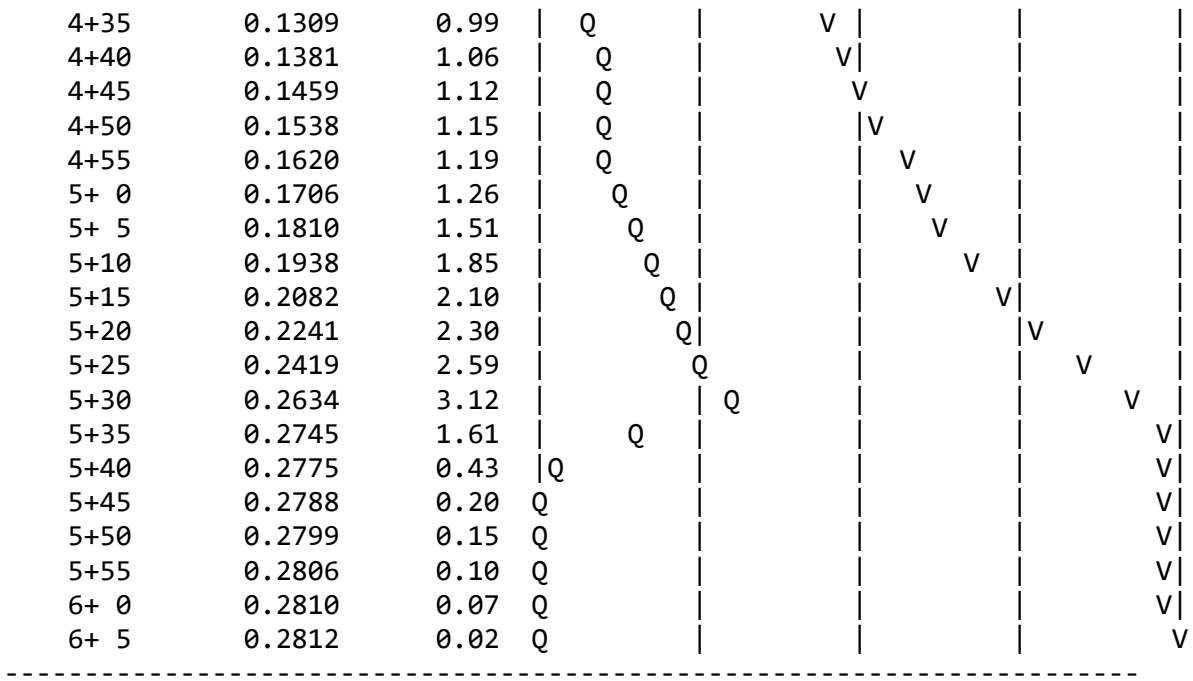
 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value
```

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	(0.239)	0.097	0.071
2	0.17	0.60	0.202	(0.239)	0.117	0.085
3	0.25	0.60	0.202	(0.239)	0.117	0.085
4	0.33	0.60	0.202	(0.239)	0.117	0.085
5	0.42	0.60	0.202	(0.239)	0.117	0.085
6	0.50	0.70	0.235	(0.239)	0.136	0.099
7	0.58	0.70	0.235	(0.239)	0.136	0.099
8	0.67	0.70	0.235	(0.239)	0.136	0.099
9	0.75	0.70	0.235	(0.239)	0.136	0.099
10	0.83	0.70	0.235	(0.239)	0.136	0.099
11	0.92	0.70	0.235	(0.239)	0.136	0.099
12	1.00	0.80	0.269	(0.239)	0.156	0.113
13	1.08	0.80	0.269	(0.239)	0.156	0.113
14	1.17	0.80	0.269	(0.239)	0.156	0.113
15	1.25	0.80	0.269	(0.239)	0.156	0.113
16	1.33	0.80	0.269	(0.239)	0.156	0.113
17	1.42	0.80	0.269	(0.239)	0.156	0.113
18	1.50	0.80	0.269	(0.239)	0.156	0.113
19	1.58	0.80	0.269	(0.239)	0.156	0.113
20	1.67	0.80	0.269	(0.239)	0.156	0.113
21	1.75	0.80	0.269	(0.239)	0.156	0.113
22	1.83	0.80	0.269	(0.239)	0.156	0.113
23	1.92	0.80	0.269	(0.239)	0.156	0.113
24	2.00	0.90	0.302	(0.239)	0.175	0.127
25	2.08	0.80	0.269	(0.239)	0.156	0.113
26	2.17	0.90	0.302	(0.239)	0.175	0.127
27	2.25	0.90	0.302	(0.239)	0.175	0.127
28	2.33	0.90	0.302	(0.239)	0.175	0.127
29	2.42	0.90	0.302	(0.239)	0.175	0.127
30	2.50	0.90	0.302	(0.239)	0.175	0.127
31	2.58	0.90	0.302	(0.239)	0.175	0.127
32	2.67	0.90	0.302	(0.239)	0.175	0.127
33	2.75	1.00	0.336	(0.239)	0.195	0.141
34	2.83	1.00	0.336	(0.239)	0.195	0.141
35	2.92	1.00	0.336	(0.239)	0.195	0.141
36	3.00	1.00	0.336	(0.239)	0.195	0.141
37	3.08	1.00	0.336	(0.239)	0.195	0.141
38	3.17	1.10	0.370	(0.239)	0.214	0.155
39	3.25	1.10	0.370	(0.239)	0.214	0.155
40	3.33	1.10	0.370	(0.239)	0.214	0.155
41	3.42	1.20	0.403	(0.239)	0.234	0.169
42	3.50	1.30	0.437	0.239	(0.253)	0.198
43	3.58	1.40	0.470	0.239	(0.273)	0.232
44	3.67	1.40	0.470	0.239	(0.273)	0.232
45	3.75	1.50	0.504	0.239	(0.292)	0.265
46	3.83	1.50	0.504	0.239	(0.292)	0.265
47	3.92	1.60	0.538	0.239	(0.312)	0.299

```
48   4.00     1.60      0.538          0.239    (  0.312)        0.299
49   4.08     1.70      0.571          0.239    (  0.331)        0.333
50   4.17     1.80      0.605          0.239    (  0.351)        0.366
51   4.25     1.90      0.638          0.239    (  0.370)        0.400
52   4.33     2.00      0.672          0.239    (  0.390)        0.433
53   4.42     2.10      0.706          0.239    (  0.409)        0.467
54   4.50     2.10      0.706          0.239    (  0.409)        0.467
55   4.58     2.20      0.739          0.239    (  0.429)        0.501
56   4.67     2.30      0.773          0.239    (  0.448)        0.534
57   4.75     2.40      0.806          0.239    (  0.468)        0.568
58   4.83     2.40      0.806          0.239    (  0.468)        0.568
59   4.92     2.50      0.840          0.239    (  0.487)        0.601
60   5.00     2.60      0.874          0.239    (  0.507)        0.635
61   5.08     3.10      1.042          0.239    (  0.604)        0.803
62   5.17     3.60      1.210          0.239    (  0.702)        0.971
63   5.25     3.90      1.310          0.239    (  0.760)        1.072
64   5.33     4.20      1.411          0.239    (  0.818)        1.173
65   5.42     4.70      1.579          0.239    (  0.916)        1.341
66   5.50     5.60      1.882          0.239    (  1.091)        1.643
67   5.58     1.90      0.638          0.239    (  0.370)        0.400
68   5.67     0.90      0.302       (  0.239)       0.175        0.127
69   5.75     0.60      0.202       (  0.239)       0.117        0.085
70   5.83     0.50      0.168       (  0.239)       0.097        0.071
71   5.92     0.30      0.101       (  0.239)       0.058        0.042
72   6.00     0.20      0.067       (  0.239)       0.039        0.028
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    20.2
      Flood volume = Effective rainfall      1.69(In)
       times area       2.0(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
      Total soil loss =      1.11(In)
      Total soil loss =     0.185(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       12247.8 Cubic Feet
      Total soil loss =        8080.0 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.118(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       0.0007      0.10  Q         |         |         |         |
  0+10       0.0018      0.16  Q         |         |         |         |
  0+15       0.0030      0.17  Q         |         |         |         |
  0+20       0.0041      0.17  Q         |         |         |         |
```

```
0+25       0.0053      0.17  Q         |         |         |         |
0+30       0.0066      0.19  Q         |         |         |         |
0+35       0.0080      0.20  QV        |         |         |         |
0+40       0.0094      0.20  QV        |         |         |         |
0+45       0.0107      0.20  QV        |         |         |         |
0+50       0.0121      0.20  QV        |         |         |         |
0+55       0.0135      0.20  QV        |         |         |         |
1+ 0       0.0150      0.22  Q V       |         |         |         |
1+ 5       0.0165      0.23  Q V       |         |         |         |
1+10       0.0181      0.23  Q V       |         |         |         |
1+15       0.0197      0.23  Q V       |         |         |         |
1+20       0.0213      0.23  Q  V      |         |         |         |
1+25       0.0228      0.23  Q  V      |         |         |         |
1+30       0.0244      0.23  Q  V      |         |         |         |
1+35       0.0260      0.23  Q  V      |         |         |         |
1+40       0.0275      0.23  Q  V      |         |         |         |
1+45       0.0291      0.23  Q   V     |         |         |         |
1+50       0.0307      0.23  Q   V     |         |         |         |
1+55       0.0322      0.23  Q   V     |         |         |         |
2+ 0       0.0339      0.25  Q   V     |         |         |         |
2+ 5       0.0356      0.24  Q    V    |         |         |         |
2+10       0.0373      0.25  Q    V    |         |         |         |
2+15       0.0390      0.26  |Q   V    |         |         |         |
2+20       0.0408      0.26  |Q   V    |         |         |         |
2+25       0.0426      0.26  |Q    V   |         |         |         |
2+30       0.0443      0.26  |Q    V   |         |         |         |
2+35       0.0461      0.26  |Q    V   |         |         |         |
2+40       0.0478      0.26  |Q    V   |         |         |         |
2+45       0.0497      0.28  |Q     V  |         |         |         |
2+50       0.0517      0.28  |Q     V  |         |         |         |
2+55       0.0537      0.28  |Q     V  |         |         |         |
3+ 0       0.0556      0.28  |Q     V  |         |         |         |
3+ 5       0.0576      0.28  |Q      V |         |         |         |
3+10       0.0597      0.30  |Q      V |         |         |         |
3+15       0.0618      0.31  |Q      V |         |         |         |
3+20       0.0640      0.31  |Q       V|         |         |         |
3+25       0.0663      0.33  |Q       V|         |         |         |
3+30       0.0689      0.38  |Q       V|         |         |         |
3+35       0.0720      0.45  |Q        V         |         |         |
3+40       0.0752      0.47  |Q        V         |         |         |
3+45       0.0787      0.51  | Q       |V        |         |         |
3+50       0.0824      0.54  | Q       |V        |         |         |
3+55       0.0864      0.58  | Q       | V       |         |         |
4+ 0       0.0906      0.60  | Q       | V       |         |         |
4+ 5       0.0950      0.65  | Q       |  V      |         |         |
4+10       0.1000      0.72  | Q       |   V     |         |         |
4+15       0.1054      0.78  |  Q      |   V     |         |         |
4+20       0.1112      0.85  |  Q      |    V    |         |         |
4+25       0.1176      0.92  |  Q      |     V   |         |         |
4+30       0.1241      0.94  |  Q      |      V  |         |         |
```


4+35 0.1309 0.99
4+40 0.1381 1.06
4+45 0.1459 1.12
4+50 0.1538 1.15
4+55 0.1620 1.19
5+ 0 0.1706 1.26
5+ 5 0.1810 1.51
5+10 0.1938 1.85
5+15 0.2082 2.10
5+20 0.2241 2.30
5+25 0.2419 2.59
5+30 0.2634 3.12
5+35 0.2745 1.61
5+40 0.2775 0.43
5+45 0.2788 0.20
5+50 0.2799 0.15
5+55 0.2806 0.10
6+ 0 0.2810 0.07
6+ 5 0.2812 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 05/09/24 File: ONSITEPOSTE224100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-2
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE2.OUT- RSB

Drainage Area = 2.00(Ac.) = 0.003 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.00(Ac.) = 0.003 Sq. Mi.
Length along longest watercourse = 380.00(Ft.)
Length along longest watercourse measured to centroid = 90.00(Ft.)
Length along longest watercourse = 0.072 Mi.
Length along longest watercourse measured to centroid = 0.017 Mi.
Difference in elevation = 9.00(Ft.)
Slope along watercourse = 125.0526 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.019 Hr.
Lag time = 1.13 Min.
25% of lag time = 0.28 Min.
40% of lag time = 0.45 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]
        2.00            2.00                  4.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.00            5.40                 10.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.000           69.00         0.400
 Total Area Entered =      2.00(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.400        0.239       1.000      0.239
                                                 Sum (F) =   0.239
Area averaged mean soil loss (F) (In/Hr) =  0.239
Minimum soil loss rate ((In/Hr)) =  0.119
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.580
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
------------------------------------------------------------------------
                Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        444.004         67.892              1.368
    2   0.167        888.008         32.108              0.647
                               Sum = 100.000   Sum=       2.016
------------------------------------------------------------------------

 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	0.043	(0.423)	0.025	0.018
2	0.17	0.07	0.043	(0.421)	0.025	0.018
3	0.25	0.07	0.043	(0.420)	0.025	0.018
4	0.33	0.10	0.065	(0.418)	0.038	0.027
5	0.42	0.10	0.065	(0.416)	0.038	0.027
6	0.50	0.10	0.065	(0.415)	0.038	0.027
7	0.58	0.10	0.065	(0.413)	0.038	0.027
8	0.67	0.10	0.065	(0.412)	0.038	0.027
9	0.75	0.10	0.065	(0.410)	0.038	0.027
10	0.83	0.13	0.086	(0.408)	0.050	0.036
11	0.92	0.13	0.086	(0.407)	0.050	0.036
12	1.00	0.13	0.086	(0.405)	0.050	0.036
13	1.08	0.10	0.065	(0.404)	0.038	0.027
14	1.17	0.10	0.065	(0.402)	0.038	0.027
15	1.25	0.10	0.065	(0.400)	0.038	0.027
16	1.33	0.10	0.065	(0.399)	0.038	0.027
17	1.42	0.10	0.065	(0.397)	0.038	0.027
18	1.50	0.10	0.065	(0.396)	0.038	0.027
19	1.58	0.10	0.065	(0.394)	0.038	0.027
20	1.67	0.10	0.065	(0.392)	0.038	0.027
21	1.75	0.10	0.065	(0.391)	0.038	0.027
22	1.83	0.13	0.086	(0.389)	0.050	0.036
23	1.92	0.13	0.086	(0.388)	0.050	0.036
24	2.00	0.13	0.086	(0.386)	0.050	0.036
25	2.08	0.13	0.086	(0.385)	0.050	0.036
26	2.17	0.13	0.086	(0.383)	0.050	0.036
27	2.25	0.13	0.086	(0.381)	0.050	0.036
28	2.33	0.13	0.086	(0.380)	0.050	0.036
29	2.42	0.13	0.086	(0.378)	0.050	0.036
30	2.50	0.13	0.086	(0.377)	0.050	0.036
31	2.58	0.17	0.108	(0.375)	0.063	0.045
32	2.67	0.17	0.108	(0.374)	0.063	0.045
33	2.75	0.17	0.108	(0.372)	0.063	0.045
34	2.83	0.17	0.108	(0.371)	0.063	0.045
35	2.92	0.17	0.108	(0.369)	0.063	0.045
36	3.00	0.17	0.108	(0.368)	0.063	0.045
37	3.08	0.17	0.108	(0.366)	0.063	0.045
38	3.17	0.17	0.108	(0.365)	0.063	0.045
39	3.25	0.17	0.108	(0.363)	0.063	0.045
40	3.33	0.17	0.108	(0.362)	0.063	0.045
41	3.42	0.17	0.108	(0.360)	0.063	0.045
42	3.50	0.17	0.108	(0.359)	0.063	0.045
43	3.58	0.17	0.108	(0.357)	0.063	0.045
44	3.67	0.17	0.108	(0.356)	0.063	0.045
45	3.75	0.17	0.108	(0.354)	0.063	0.045
46	3.83	0.20	0.130	(0.353)	0.075	0.054
47	3.92	0.20	0.130	(0.351)	0.075	0.054

48	4.00	0.20	0.130	(0.350)	0.075	0.054
49	4.08	0.20	0.130	(0.348)	0.075	0.054
50	4.17	0.20	0.130	(0.347)	0.075	0.054
51	4.25	0.20	0.130	(0.345)	0.075	0.054
52	4.33	0.23	0.151	(0.344)	0.088	0.064
53	4.42	0.23	0.151	(0.342)	0.088	0.064
54	4.50	0.23	0.151	(0.341)	0.088	0.064
55	4.58	0.23	0.151	(0.339)	0.088	0.064
56	4.67	0.23	0.151	(0.338)	0.088	0.064
57	4.75	0.23	0.151	(0.336)	0.088	0.064
58	4.83	0.27	0.173	(0.335)	0.100	0.073
59	4.92	0.27	0.173	(0.333)	0.100	0.073
60	5.00	0.27	0.173	(0.332)	0.100	0.073
61	5.08	0.20	0.130	(0.331)	0.075	0.054
62	5.17	0.20	0.130	(0.329)	0.075	0.054
63	5.25	0.20	0.130	(0.328)	0.075	0.054
64	5.33	0.23	0.151	(0.326)	0.088	0.064
65	5.42	0.23	0.151	(0.325)	0.088	0.064
66	5.50	0.23	0.151	(0.323)	0.088	0.064
67	5.58	0.27	0.173	(0.322)	0.100	0.073
68	5.67	0.27	0.173	(0.321)	0.100	0.073
69	5.75	0.27	0.173	(0.319)	0.100	0.073
70	5.83	0.27	0.173	(0.318)	0.100	0.073
71	5.92	0.27	0.173	(0.316)	0.100	0.073
72	6.00	0.27	0.173	(0.315)	0.100	0.073
73	6.08	0.30	0.194	(0.314)	0.113	0.082
74	6.17	0.30	0.194	(0.312)	0.113	0.082
75	6.25	0.30	0.194	(0.311)	0.113	0.082
76	6.33	0.30	0.194	(0.309)	0.113	0.082
77	6.42	0.30	0.194	(0.308)	0.113	0.082
78	6.50	0.30	0.194	(0.307)	0.113	0.082
79	6.58	0.33	0.216	(0.305)	0.125	0.091
80	6.67	0.33	0.216	(0.304)	0.125	0.091
81	6.75	0.33	0.216	(0.302)	0.125	0.091
82	6.83	0.33	0.216	(0.301)	0.125	0.091
83	6.92	0.33	0.216	(0.300)	0.125	0.091
84	7.00	0.33	0.216	(0.298)	0.125	0.091
85	7.08	0.33	0.216	(0.297)	0.125	0.091
86	7.17	0.33	0.216	(0.296)	0.125	0.091
87	7.25	0.33	0.216	(0.294)	0.125	0.091
88	7.33	0.37	0.238	(0.293)	0.138	0.100
89	7.42	0.37	0.238	(0.292)	0.138	0.100
90	7.50	0.37	0.238	(0.290)	0.138	0.100
91	7.58	0.40	0.259	(0.289)	0.150	0.109
92	7.67	0.40	0.259	(0.288)	0.150	0.109
93	7.75	0.40	0.259	(0.286)	0.150	0.109
94	7.83	0.43	0.281	(0.285)	0.163	0.118
95	7.92	0.43	0.281	(0.284)	0.163	0.118
96	8.00	0.43	0.281	(0.282)	0.163	0.118
97	8.08	0.50	0.324	(0.281)	0.188	0.136

98	8.17	0.50	0.324	(	0.280)	0.188		0.136
99	8.25	0.50	0.324	(	0.278)	0.188		0.136
100	8.33	0.50	0.324	(	0.277)	0.188		0.136
101	8.42	0.50	0.324	(	0.276)	0.188		0.136
102	8.50	0.50	0.324	(	0.275)	0.188		0.136
103	8.58	0.53	0.346	(	0.273)	0.200		0.145
104	8.67	0.53	0.346	(	0.272)	0.200		0.145
105	8.75	0.53	0.346	(	0.271)	0.200		0.145
106	8.83	0.57	0.367	(	0.269)	0.213		0.154
107	8.92	0.57	0.367	(	0.268)	0.213		0.154
108	9.00	0.57	0.367	(	0.267)	0.213		0.154
109	9.08	0.63	0.410	(	0.266)	0.238		0.172
110	9.17	0.63	0.410	(	0.264)	0.238		0.172
111	9.25	0.63	0.410	(	0.263)	0.238		0.172
112	9.33	0.67	0.432	(	0.262)	0.251		0.181
113	9.42	0.67	0.432	(	0.261)	0.251		0.181
114	9.50	0.67	0.432	(	0.259)	0.251		0.181
115	9.58	0.70	0.454		0.258	(	0.263)	0.195
116	9.67	0.70	0.454		0.257	(	0.263)	0.197
117	9.75	0.70	0.454		0.256	(	0.263)	0.198
118	9.83	0.73	0.475		0.254	(	0.276)	0.221
119	9.92	0.73	0.475		0.253	(	0.276)	0.222
120	10.00	0.73	0.475		0.252	(	0.276)	0.223
121	10.08	0.50	0.324	(	0.251)	0.188		0.136
122	10.17	0.50	0.324	(	0.250)	0.188		0.136
123	10.25	0.50	0.324	(	0.248)	0.188		0.136
124	10.33	0.50	0.324	(	0.247)	0.188		0.136
125	10.42	0.50	0.324	(	0.246)	0.188		0.136
126	10.50	0.50	0.324	(	0.245)	0.188		0.136
127	10.58	0.67	0.432		0.244	(	0.251)	0.188
128	10.67	0.67	0.432		0.242	(	0.251)	0.190
129	10.75	0.67	0.432		0.241	(	0.251)	0.191
130	10.83	0.67	0.432		0.240	(	0.251)	0.192
131	10.92	0.67	0.432		0.239	(	0.251)	0.193
132	11.00	0.67	0.432		0.238	(	0.251)	0.194
133	11.08	0.63	0.410		0.236	(	0.238)	0.174
134	11.17	0.63	0.410		0.235	(	0.238)	0.175
135	11.25	0.63	0.410		0.234	(	0.238)	0.176
136	11.33	0.63	0.410		0.233	(	0.238)	0.177
137	11.42	0.63	0.410		0.232	(	0.238)	0.179
138	11.50	0.63	0.410		0.231	(	0.238)	0.180
139	11.58	0.57	0.367	(	0.229)	0.213		0.154
140	11.67	0.57	0.367	(	0.228)	0.213		0.154
141	11.75	0.57	0.367	(	0.227)	0.213		0.154
142	11.83	0.60	0.389	(	0.226)	0.226		0.163
143	11.92	0.60	0.389		0.225	(	0.226)	0.164
144	12.00	0.60	0.389		0.224	(	0.226)	0.165
145	12.08	0.83	0.540		0.223	(	0.313)	0.317
146	12.17	0.83	0.540		0.222	(	0.313)	0.318
147	12.25	0.83	0.540		0.220	(	0.313)	0.320

148	12.33	0.87	0.562	0.219	(0.326)	0.342
149	12.42	0.87	0.562	0.218	(0.326)	0.343
150	12.50	0.87	0.562	0.217	(0.326)	0.344
151	12.58	0.93	0.605	0.216	(0.351)	0.389
152	12.67	0.93	0.605	0.215	(0.351)	0.390
153	12.75	0.93	0.605	0.214	(0.351)	0.391
154	12.83	0.97	0.626	0.213	(0.363)	0.414
155	12.92	0.97	0.626	0.212	(0.363)	0.415
156	13.00	0.97	0.626	0.211	(0.363)	0.416
157	13.08	1.13	0.734	0.210	(0.426)	0.525
158	13.17	1.13	0.734	0.209	(0.426)	0.526
159	13.25	1.13	0.734	0.208	(0.426)	0.527
160	13.33	1.13	0.734	0.206	(0.426)	0.528
161	13.42	1.13	0.734	0.205	(0.426)	0.529
162	13.50	1.13	0.734	0.204	(0.426)	0.530
163	13.58	0.77	0.497	0.203	(0.288)	0.293
164	13.67	0.77	0.497	0.202	(0.288)	0.295
165	13.75	0.77	0.497	0.201	(0.288)	0.296
166	13.83	0.77	0.497	0.200	(0.288)	0.297
167	13.92	0.77	0.497	0.199	(0.288)	0.298
168	14.00	0.77	0.497	0.198	(0.288)	0.299
169	14.08	0.90	0.583	0.197	(0.338)	0.386
170	14.17	0.90	0.583	0.196	(0.338)	0.387
171	14.25	0.90	0.583	0.195	(0.338)	0.388
172	14.33	0.87	0.562	0.194	(0.326)	0.367
173	14.42	0.87	0.562	0.193	(0.326)	0.368
174	14.50	0.87	0.562	0.192	(0.326)	0.369
175	14.58	0.87	0.562	0.191	(0.326)	0.370
176	14.67	0.87	0.562	0.190	(0.326)	0.371
177	14.75	0.87	0.562	0.189	(0.326)	0.372
178	14.83	0.83	0.540	0.188	(0.313)	0.352
179	14.92	0.83	0.540	0.187	(0.313)	0.353
180	15.00	0.83	0.540	0.186	(0.313)	0.354
181	15.08	0.80	0.518	0.185	(0.301)	0.333
182	15.17	0.80	0.518	0.184	(0.301)	0.334
183	15.25	0.80	0.518	0.183	(0.301)	0.335
184	15.33	0.77	0.497	0.183	(0.288)	0.314
185	15.42	0.77	0.497	0.182	(0.288)	0.315
186	15.50	0.77	0.497	0.181	(0.288)	0.316
187	15.58	0.63	0.410	0.180	(0.238)	0.231
188	15.67	0.63	0.410	0.179	(0.238)	0.232
189	15.75	0.63	0.410	0.178	(0.238)	0.232
190	15.83	0.63	0.410	0.177	(0.238)	0.233
191	15.92	0.63	0.410	0.176	(0.238)	0.234
192	16.00	0.63	0.410	0.175	(0.238)	0.235
193	16.08	0.13	0.086	(0.174)	0.050	0.036
194	16.17	0.13	0.086	(0.173)	0.050	0.036
195	16.25	0.13	0.086	(0.173)	0.050	0.036
196	16.33	0.13	0.086	(0.172)	0.050	0.036
197	16.42	0.13	0.086	(0.171)	0.050	0.036

198	16.50	0.13	0.086	(0.170)	0.050	0.036
199	16.58	0.10	0.065	(0.169)	0.038	0.027
200	16.67	0.10	0.065	(0.168)	0.038	0.027
201	16.75	0.10	0.065	(0.167)	0.038	0.027
202	16.83	0.10	0.065	(0.166)	0.038	0.027
203	16.92	0.10	0.065	(0.166)	0.038	0.027
204	17.00	0.10	0.065	(0.165)	0.038	0.027
205	17.08	0.17	0.108	(0.164)	0.063	0.045
206	17.17	0.17	0.108	(0.163)	0.063	0.045
207	17.25	0.17	0.108	(0.162)	0.063	0.045
208	17.33	0.17	0.108	(0.162)	0.063	0.045
209	17.42	0.17	0.108	(0.161)	0.063	0.045
210	17.50	0.17	0.108	(0.160)	0.063	0.045
211	17.58	0.17	0.108	(0.159)	0.063	0.045
212	17.67	0.17	0.108	(0.158)	0.063	0.045
213	17.75	0.17	0.108	(0.158)	0.063	0.045
214	17.83	0.13	0.086	(0.157)	0.050	0.036
215	17.92	0.13	0.086	(0.156)	0.050	0.036
216	18.00	0.13	0.086	(0.155)	0.050	0.036
217	18.08	0.13	0.086	(0.154)	0.050	0.036
218	18.17	0.13	0.086	(0.154)	0.050	0.036
219	18.25	0.13	0.086	(0.153)	0.050	0.036
220	18.33	0.13	0.086	(0.152)	0.050	0.036
221	18.42	0.13	0.086	(0.151)	0.050	0.036
222	18.50	0.13	0.086	(0.151)	0.050	0.036
223	18.58	0.10	0.065	(0.150)	0.038	0.027
224	18.67	0.10	0.065	(0.149)	0.038	0.027
225	18.75	0.10	0.065	(0.149)	0.038	0.027
226	18.83	0.07	0.043	(0.148)	0.025	0.018
227	18.92	0.07	0.043	(0.147)	0.025	0.018
228	19.00	0.07	0.043	(0.146)	0.025	0.018
229	19.08	0.10	0.065	(0.146)	0.038	0.027
230	19.17	0.10	0.065	(0.145)	0.038	0.027
231	19.25	0.10	0.065	(0.144)	0.038	0.027
232	19.33	0.13	0.086	(0.144)	0.050	0.036
233	19.42	0.13	0.086	(0.143)	0.050	0.036
234	19.50	0.13	0.086	(0.142)	0.050	0.036
235	19.58	0.10	0.065	(0.142)	0.038	0.027
236	19.67	0.10	0.065	(0.141)	0.038	0.027
237	19.75	0.10	0.065	(0.140)	0.038	0.027
238	19.83	0.07	0.043	(0.140)	0.025	0.018
239	19.92	0.07	0.043	(0.139)	0.025	0.018
240	20.00	0.07	0.043	(0.139)	0.025	0.018
241	20.08	0.10	0.065	(0.138)	0.038	0.027
242	20.17	0.10	0.065	(0.137)	0.038	0.027
243	20.25	0.10	0.065	(0.137)	0.038	0.027
244	20.33	0.10	0.065	(0.136)	0.038	0.027
245	20.42	0.10	0.065	(0.136)	0.038	0.027
246	20.50	0.10	0.065	(0.135)	0.038	0.027
247	20.58	0.10	0.065	(0.134)	0.038	0.027

248	20.67	0.10	0.065	(0.134)	0.038	0.027
249	20.75	0.10	0.065	(0.133)	0.038	0.027
250	20.83	0.07	0.043	(0.133)	0.025	0.018
251	20.92	0.07	0.043	(0.132)	0.025	0.018
252	21.00	0.07	0.043	(0.132)	0.025	0.018
253	21.08	0.10	0.065	(0.131)	0.038	0.027
254	21.17	0.10	0.065	(0.131)	0.038	0.027
255	21.25	0.10	0.065	(0.130)	0.038	0.027
256	21.33	0.07	0.043	(0.130)	0.025	0.018
257	21.42	0.07	0.043	(0.129)	0.025	0.018
258	21.50	0.07	0.043	(0.129)	0.025	0.018
259	21.58	0.10	0.065	(0.128)	0.038	0.027
260	21.67	0.10	0.065	(0.128)	0.038	0.027
261	21.75	0.10	0.065	(0.127)	0.038	0.027
262	21.83	0.07	0.043	(0.127)	0.025	0.018
263	21.92	0.07	0.043	(0.126)	0.025	0.018
264	22.00	0.07	0.043	(0.126)	0.025	0.018
265	22.08	0.10	0.065	(0.126)	0.038	0.027
266	22.17	0.10	0.065	(0.125)	0.038	0.027
267	22.25	0.10	0.065	(0.125)	0.038	0.027
268	22.33	0.07	0.043	(0.124)	0.025	0.018
269	22.42	0.07	0.043	(0.124)	0.025	0.018
270	22.50	0.07	0.043	(0.124)	0.025	0.018
271	22.58	0.07	0.043	(0.123)	0.025	0.018
272	22.67	0.07	0.043	(0.123)	0.025	0.018
273	22.75	0.07	0.043	(0.123)	0.025	0.018
274	22.83	0.07	0.043	(0.122)	0.025	0.018
275	22.92	0.07	0.043	(0.122)	0.025	0.018
276	23.00	0.07	0.043	(0.122)	0.025	0.018
277	23.08	0.07	0.043	(0.121)	0.025	0.018
278	23.17	0.07	0.043	(0.121)	0.025	0.018
279	23.25	0.07	0.043	(0.121)	0.025	0.018
280	23.33	0.07	0.043	(0.121)	0.025	0.018
281	23.42	0.07	0.043	(0.120)	0.025	0.018
282	23.50	0.07	0.043	(0.120)	0.025	0.018
283	23.58	0.07	0.043	(0.120)	0.025	0.018
284	23.67	0.07	0.043	(0.120)	0.025	0.018
285	23.75	0.07	0.043	(0.120)	0.025	0.018
286	23.83	0.07	0.043	(0.119)	0.025	0.018
287	23.92	0.07	0.043	(0.119)	0.025	0.018
288	24.00	0.07	0.043	(0.119)	0.025	0.018

(Loss Rate Not Used)

Sum = 100.0 Sum = 33.3

Flood volume = Effective rainfall 2.78(In)
times area 2.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 2.62(In)
Total soil loss = 0.437(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 20163.5 Cubic Feet
Total soil loss = 19040.4 Cubic Feet

Peak flow rate of this hydrograph = 1.068(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	0.0002	0.02	Q				
0+10	0.0004	0.04	Q				
0+15	0.0007	0.04	Q				
0+20	0.0010	0.05	Q				
0+25	0.0014	0.05	Q				
0+30	0.0018	0.05	Q				
0+35	0.0021	0.05	Q				
0+40	0.0025	0.05	Q				
0+45	0.0029	0.05	Q				
0+50	0.0034	0.07	Q				
0+55	0.0039	0.07	Q				
1+ 0	0.0044	0.07	Q				
1+ 5	0.0048	0.06	Q				
1+10	0.0052	0.05	Q				
1+15	0.0055	0.05	Q				
1+20	0.0059	0.05	Q				
1+25	0.0063	0.05	Q				
1+30	0.0067	0.05	Q				
1+35	0.0071	0.05	Q				
1+40	0.0074	0.05	Q				
1+45	0.0078	0.05	Q				
1+50	0.0083	0.07	Q				
1+55	0.0088	0.07	Q				
2+ 0	0.0093	0.07	Q				
2+ 5	0.0098	0.07	Q				
2+10	0.0103	0.07	Q				
2+15	0.0108	0.07	Q				
2+20	0.0113	0.07	Q				
2+25	0.0118	0.07	QV				
2+30	0.0123	0.07	QV				
2+35	0.0129	0.09	QV				
2+40	0.0135	0.09	QV				
2+45	0.0142	0.09	QV				
2+50	0.0148	0.09	QV				
2+55	0.0154	0.09	QV				
3+ 0	0.0161	0.09	QV				
3+ 5	0.0167	0.09	QV				
3+10	0.0173	0.09	QV				

3+15	0.0179	0.09	QV	|	|	|	|
3+20	0.0186	0.09	QV	|	|	|	|
3+25	0.0192	0.09	QV	|	|	|	|
3+30	0.0198	0.09	QV	|	|	|	|
3+35	0.0205	0.09	QV	|	|	|	|
3+40	0.0211	0.09	QV	|	|	|	|
3+45	0.0217	0.09	QV	|	|	|	|
3+50	0.0224	0.10	QV	|	|	|	|
3+55	0.0232	0.11	Q V	|	|	|	|
4+ 0	0.0239	0.11	Q V	|	|	|	|
4+ 5	0.0247	0.11	Q V	|	|	|	|
4+10	0.0255	0.11	Q V	|	|	|	|
4+15	0.0262	0.11	Q V	|	|	|	|
4+20	0.0271	0.12	Q V	|	|	|	|
4+25	0.0279	0.13	Q V	|	|	|	|
4+30	0.0288	0.13	Q V	|	|	|	|
4+35	0.0297	0.13	Q V	|	|	|	|
4+40	0.0306	0.13	Q V	|	|	|	|
4+45	0.0315	0.13	Q V	|	|	|	|
4+50	0.0324	0.14	Q V	|	|	|	|
4+55	0.0334	0.15	Q V	|	|	|	|
5+ 0	0.0345	0.15	Q V	|	|	|	|
5+ 5	0.0353	0.12	Q V	|	|	|	|
5+10	0.0360	0.11	Q V	|	|	|	|
5+15	0.0368	0.11	Q V	|	|	|	|
5+20	0.0376	0.12	Q V	|	|	|	|
5+25	0.0385	0.13	Q V	|	|	|	|
5+30	0.0394	0.13	Q V	|	|	|	|
5+35	0.0404	0.14	Q V	|	|	|	|
5+40	0.0414	0.15	Q V	|	|	|	|
5+45	0.0424	0.15	Q V	|	|	|	|
5+50	0.0434	0.15	Q V	|	|	|	|
5+55	0.0444	0.15	Q V	|	|	|	|
6+ 0	0.0454	0.15	Q V	|	|	|	|
6+ 5	0.0465	0.16	Q V	|	|	|	|
6+10	0.0476	0.16	Q V	|	|	|	|
6+15	0.0488	0.16	Q V	|	|	|	|
6+20	0.0499	0.16	Q V	|	|	|	|
6+25	0.0510	0.16	Q V	|	|	|	|
6+30	0.0522	0.16	Q V	|	|	|	|
6+35	0.0534	0.18	Q V	|	|	|	|
6+40	0.0547	0.18	Q V	|	|	|	|
6+45	0.0559	0.18	Q V	|	|	|	|
6+50	0.0572	0.18	Q V	|	|	|	|
6+55	0.0584	0.18	Q V	|	|	|	|
7+ 0	0.0597	0.18	Q V	|	|	|	|
7+ 5	0.0610	0.18	Q V	|	|	|	|
7+10	0.0622	0.18	Q V	|	|	|	|
7+15	0.0635	0.18	Q V	|	|	|	|
7+20	0.0648	0.20	Q V	|	|	|	|

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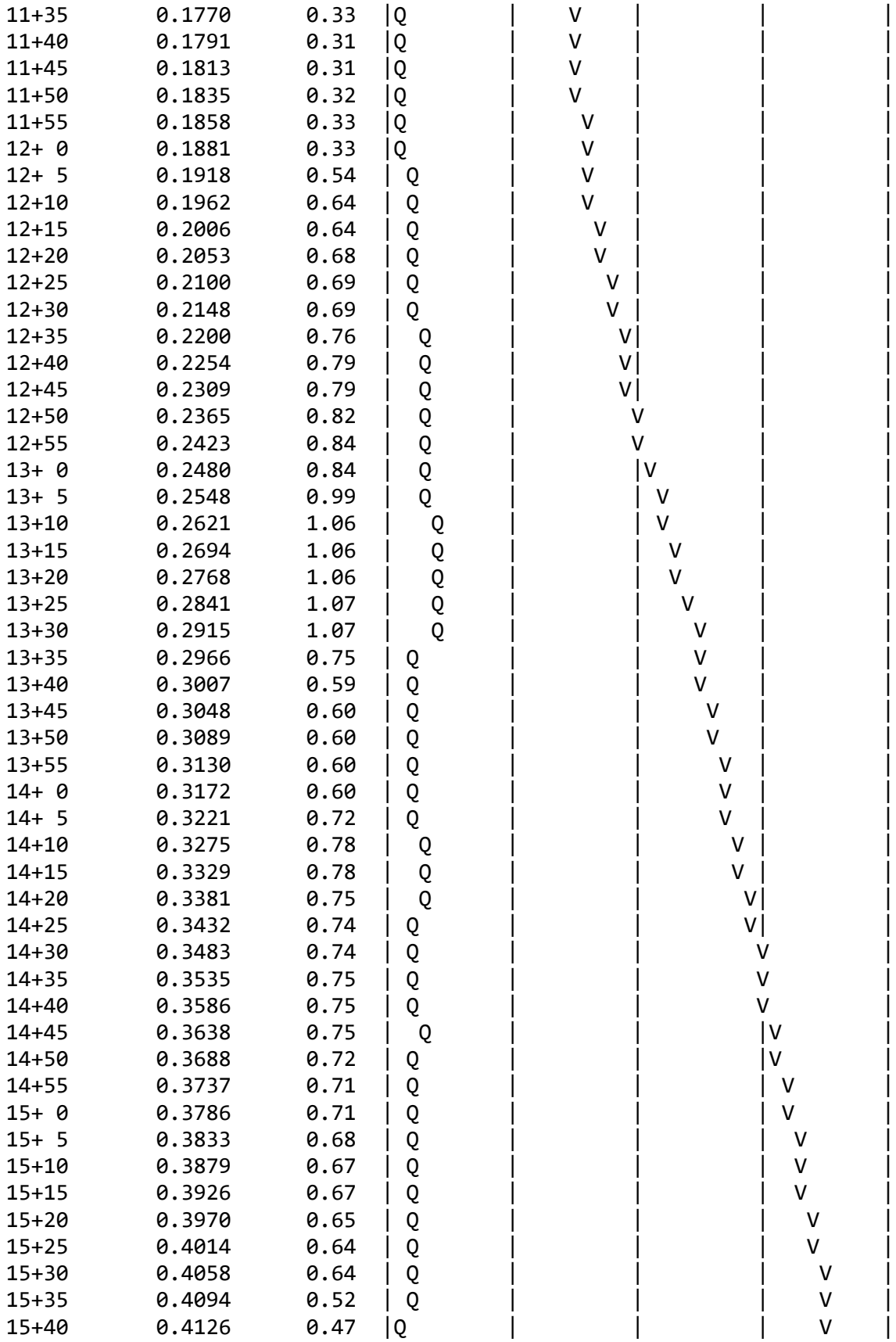
 7+25       0.0662      0.20  Q    V    |          |          |          |
 7+30       0.0676      0.20  Q    V    |          |          |          |
 7+35       0.0691      0.21  Q    V    |          |          |          |
 7+40       0.0706      0.22  Q     V   |          |          |          |
 7+45       0.0721      0.22  Q     V   |          |          |          |
 7+50       0.0737      0.23  Q     V   |          |          |          |
 7+55       0.0753      0.24  Q     V   |          |          |          |
 8+ 0       0.0770      0.24  Q     V   |          |          |          |
 8+ 5       0.0788      0.26  |Q    V   |          |          |          |
 8+10       0.0807      0.27  |Q    V   |          |          |          |
 8+15       0.0826      0.27  |Q     V  |          |          |          |
 8+20       0.0844      0.27  |Q     V  |          |          |          |
 8+25       0.0863      0.27  |Q     V  |          |          |          |
 8+30       0.0882      0.27  |Q     V  |          |          |          |
 8+35       0.0902      0.29  |Q     V  |          |          |          |
 8+40       0.0922      0.29  |Q     V  |          |          |          |
 8+45       0.0942      0.29  |Q      V |          |          |          |
 8+50       0.0963      0.31  |Q      V |          |          |          |
 8+55       0.0985      0.31  |Q      V |          |          |          |
 9+ 0       0.1006      0.31  |Q      V |          |          |          |
 9+ 5       0.1029      0.34  |Q      V |          |          |          |
 9+10       0.1053      0.35  |Q       V|          |          |          |
 9+15       0.1077      0.35  |Q       V|          |          |          |
 9+20       0.1102      0.36  |Q       V|          |          |          |
 9+25       0.1127      0.37  |Q       V|          |          |          |
 9+30       0.1152      0.37  |Q       V|          |          |          |
 9+35       0.1179      0.39  |Q        V          |          |          |
 9+40       0.1206      0.40  |Q        V          |          |          |
 9+45       0.1234      0.40  |Q        V          |          |          |
 9+50       0.1263      0.43  |Q        V          |          |          |
 9+55       0.1294      0.45  |Q        |V         |          |          |
10+ 0       0.1325      0.45  |Q        |V         |          |          |
10+ 5       0.1348      0.33  |Q        |V         |          |          |
10+10       0.1367      0.27  |Q        |V         |          |          |
10+15       0.1386      0.27  |Q        |V         |          |          |
10+20       0.1404      0.27  |Q        | V        |          |          |
10+25       0.1423      0.27  |Q        | V        |          |          |
10+30       0.1442      0.27  |Q        | V        |          |          |
10+35       0.1466      0.35  |Q        | V        |          |          |
10+40       0.1492      0.38  |Q        | V        |          |          |
10+45       0.1519      0.38  |Q        |  V       |          |          |
10+50       0.1545      0.39  |Q        |  V       |          |          |
10+55       0.1572      0.39  |Q        |  V       |          |          |
11+ 0       0.1599      0.39  |Q        |  V       |          |          |
11+ 5       0.1624      0.36  |Q        |   V      |          |          |
11+10       0.1649      0.35  |Q        |   V      |          |          |
11+15       0.1673      0.35  |Q        |   V      |          |          |
11+20       0.1698      0.36  |Q        |   V      |          |          |
11+25       0.1722      0.36  |Q        |   V      |          |          |
11+30       0.1747      0.36  |Q        |    V     |          |          |
```



```
15+45       0.4158      0.47  |Q        |         |         |    V    |
15+50       0.4190      0.47  |Q        |         |         |     V   |
15+55       0.4223      0.47  |Q        |         |         |     V   |
16+ 0       0.4256      0.47  |Q        |         |         |     V   |
16+ 5       0.4269      0.20  Q         |         |         |     V   |
16+10       0.4274      0.07  Q         |         |         |     V   |
16+15       0.4280      0.07  Q         |         |         |     V   |
16+20       0.4285      0.07  Q         |         |         |      V  |
16+25       0.4290      0.07  Q         |         |         |      V  |
16+30       0.4295      0.07  Q         |         |         |      V  |
16+35       0.4299      0.06  Q         |         |         |      V  |
16+40       0.4303      0.05  Q         |         |         |      V  |
16+45       0.4306      0.05  Q         |         |         |      V  |
16+50       0.4310      0.05  Q         |         |         |      V  |
16+55       0.4314      0.05  Q         |         |         |      V  |
17+ 0       0.4318      0.05  Q         |         |         |      V  |
17+ 5       0.4323      0.08  Q         |         |         |      V  |
17+10       0.4330      0.09  Q         |         |         |      V  |
17+15       0.4336      0.09  Q         |         |         |      V  |
17+20       0.4342      0.09  Q         |         |         |      V  |
17+25       0.4348      0.09  Q         |         |         |      V  |
17+30       0.4355      0.09  Q         |         |         |      V  |
17+35       0.4361      0.09  Q         |         |         |      V  |
17+40       0.4367      0.09  Q         |         |         |      V  |
17+45       0.4374      0.09  Q         |         |         |      V  |
17+50       0.4379      0.08  Q         |         |         |      V  |
17+55       0.4384      0.07  Q         |         |         |      V  |
18+ 0       0.4389      0.07  Q         |         |         |      V  |
18+ 5       0.4394      0.07  Q         |         |         |      V  |
18+10       0.4399      0.07  Q         |         |         |       V |
18+15       0.4404      0.07  Q         |         |         |       V |
18+20       0.4409      0.07  Q         |         |         |       V |
18+25       0.4414      0.07  Q         |         |         |       V |
18+30       0.4419      0.07  Q         |         |         |       V |
18+35       0.4424      0.06  Q         |         |         |       V |
18+40       0.4427      0.05  Q         |         |         |       V |
18+45       0.4431      0.05  Q         |         |         |       V |
18+50       0.4434      0.04  Q         |         |         |       V |
18+55       0.4437      0.04  Q         |         |         |       V |
19+ 0       0.4439      0.04  Q         |         |         |       V |
19+ 5       0.4442      0.05  Q         |         |         |       V |
19+10       0.4446      0.05  Q         |         |         |       V |
19+15       0.4450      0.05  Q         |         |         |       V |
19+20       0.4455      0.07  Q         |         |         |       V |
19+25       0.4460      0.07  Q         |         |         |       V |
19+30       0.4465      0.07  Q         |         |         |       V |
19+35       0.4469      0.06  Q         |         |         |       V |
19+40       0.4473      0.05  Q         |         |         |       V |
19+45       0.4476      0.05  Q         |         |         |       V |
19+50       0.4479      0.04  Q         |         |         |       V |
```

19+55	0.4482	0.04	Q	|	|	|	V |
20+ 0	0.4484	0.04	Q	|	|	|	V |
20+ 5	0.4488	0.05	Q	|	|	|	V |
20+10	0.4492	0.05	Q	|	|	|	V |
20+15	0.4495	0.05	Q	|	|	|	V |
20+20	0.4499	0.05	Q	|	|	|	V |
20+25	0.4503	0.05	Q	|	|	|	V |
20+30	0.4507	0.05	Q	|	|	|	V |
20+35	0.4510	0.05	Q	|	|	|	V |
20+40	0.4514	0.05	Q	|	|	|	V|
20+45	0.4518	0.05	Q	|	|	|	V|
20+50	0.4521	0.04	Q	|	|	|	V|
20+55	0.4524	0.04	Q	|	|	|	V|
21+ 0	0.4526	0.04	Q	|	|	|	V|
21+ 5	0.4529	0.05	Q	|	|	|	V|
21+10	0.4533	0.05	Q	|	|	|	V|
21+15	0.4537	0.05	Q	|	|	|	V|
21+20	0.4540	0.04	Q	|	|	|	V|
21+25	0.4542	0.04	Q	|	|	|	V|
21+30	0.4545	0.04	Q	|	|	|	V|
21+35	0.4548	0.05	Q	|	|	|	V|
21+40	0.4552	0.05	Q	|	|	|	V|
21+45	0.4556	0.05	Q	|	|	|	V|
21+50	0.4559	0.04	Q	|	|	|	V|
21+55	0.4561	0.04	Q	|	|	|	V|
22+ 0	0.4564	0.04	Q	|	|	|	V|
22+ 5	0.4567	0.05	Q	|	|	|	V|
22+10	0.4571	0.05	Q	|	|	|	V|
22+15	0.4575	0.05	Q	|	|	|	V|
22+20	0.4578	0.04	Q	|	|	|	V|
22+25	0.4580	0.04	Q	|	|	|	V|
22+30	0.4583	0.04	Q	|	|	|	V|
22+35	0.4585	0.04	Q	|	|	|	V|
22+40	0.4588	0.04	Q	|	|	|	V|
22+45	0.4590	0.04	Q	|	|	|	V|
22+50	0.4593	0.04	Q	|	|	|	V|
22+55	0.4595	0.04	Q	|	|	|	V|
23+ 0	0.4598	0.04	Q	|	|	|	V|
23+ 5	0.4600	0.04	Q	|	|	|	V|
23+10	0.4603	0.04	Q	|	|	|	V|
23+15	0.4605	0.04	Q	|	|	|	V|
23+20	0.4608	0.04	Q	|	|	|	V|
23+25	0.4610	0.04	Q	|	|	|	V|
23+30	0.4613	0.04	Q	|	|	|	V|
23+35	0.4615	0.04	Q	|	|	|	V|
23+40	0.4618	0.04	Q	|	|	|	V|
23+45	0.4621	0.04	Q	|	|	|	V|
23+50	0.4623	0.04	Q	|	|	|	V|
23+55	0.4626	0.04	Q	|	|	|	V|
24+ 0	0.4628	0.04	Q	|	|	|	V|

```
   24+ 5       0.4629      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/04/24 File: ONSITEPOSTE3242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.090        0.527       1.000      0.527
                                                 Sum (F) =   0.527
Area averaged mean soil loss (F) (In/Hr) =  0.527
Minimum soil loss rate ((In/Hr)) =  0.264
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                               Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 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	0.016	(0.935)	0.013	0.003
2	0.17	0.07	0.016	(0.931)	0.013	0.003
3	0.25	0.07	0.016	(0.928)	0.013	0.003
4	0.33	0.10	0.024	(0.924)	0.020	0.004
5	0.42	0.10	0.024	(0.921)	0.020	0.004
6	0.50	0.10	0.024	(0.917)	0.020	0.004
7	0.58	0.10	0.024	(0.913)	0.020	0.004
8	0.67	0.10	0.024	(0.910)	0.020	0.004
9	0.75	0.10	0.024	(0.906)	0.020	0.004
10	0.83	0.13	0.032	(0.903)	0.026	0.006
11	0.92	0.13	0.032	(0.899)	0.026	0.006
12	1.00	0.13	0.032	(0.896)	0.026	0.006
13	1.08	0.10	0.024	(0.892)	0.020	0.004
14	1.17	0.10	0.024	(0.889)	0.020	0.004
15	1.25	0.10	0.024	(0.885)	0.020	0.004
16	1.33	0.10	0.024	(0.882)	0.020	0.004
17	1.42	0.10	0.024	(0.878)	0.020	0.004
18	1.50	0.10	0.024	(0.875)	0.020	0.004
19	1.58	0.10	0.024	(0.871)	0.020	0.004
20	1.67	0.10	0.024	(0.868)	0.020	0.004
21	1.75	0.10	0.024	(0.864)	0.020	0.004
22	1.83	0.13	0.032	(0.861)	0.026	0.006
23	1.92	0.13	0.032	(0.857)	0.026	0.006
24	2.00	0.13	0.032	(0.854)	0.026	0.006
25	2.08	0.13	0.032	(0.850)	0.026	0.006
26	2.17	0.13	0.032	(0.847)	0.026	0.006
27	2.25	0.13	0.032	(0.843)	0.026	0.006
28	2.33	0.13	0.032	(0.840)	0.026	0.006
29	2.42	0.13	0.032	(0.836)	0.026	0.006
30	2.50	0.13	0.032	(0.833)	0.026	0.006
31	2.58	0.17	0.040	(0.830)	0.033	0.007
32	2.67	0.17	0.040	(0.826)	0.033	0.007
33	2.75	0.17	0.040	(0.823)	0.033	0.007
34	2.83	0.17	0.040	(0.819)	0.033	0.007
35	2.92	0.17	0.040	(0.816)	0.033	0.007
36	3.00	0.17	0.040	(0.813)	0.033	0.007
37	3.08	0.17	0.040	(0.809)	0.033	0.007
38	3.17	0.17	0.040	(0.806)	0.033	0.007
39	3.25	0.17	0.040	(0.803)	0.033	0.007
40	3.33	0.17	0.040	(0.799)	0.033	0.007
41	3.42	0.17	0.040	(0.796)	0.033	0.007
42	3.50	0.17	0.040	(0.793)	0.033	0.007
43	3.58	0.17	0.040	(0.789)	0.033	0.007
44	3.67	0.17	0.040	(0.786)	0.033	0.007
45	3.75	0.17	0.040	(0.783)	0.033	0.007
46	3.83	0.20	0.048	(0.779)	0.040	0.008

47	3.92	0.20	0.048	(0.776)	0.040	0.008
48	4.00	0.20	0.048	(0.773)	0.040	0.008
49	4.08	0.20	0.048	(0.770)	0.040	0.008
50	4.17	0.20	0.048	(0.766)	0.040	0.008
51	4.25	0.20	0.048	(0.763)	0.040	0.008
52	4.33	0.23	0.056	(0.760)	0.046	0.010
53	4.42	0.23	0.056	(0.756)	0.046	0.010
54	4.50	0.23	0.056	(0.753)	0.046	0.010
55	4.58	0.23	0.056	(0.750)	0.046	0.010
56	4.67	0.23	0.056	(0.747)	0.046	0.010
57	4.75	0.23	0.056	(0.744)	0.046	0.010
58	4.83	0.27	0.064	(0.740)	0.053	0.011
59	4.92	0.27	0.064	(0.737)	0.053	0.011
60	5.00	0.27	0.064	(0.734)	0.053	0.011
61	5.08	0.20	0.048	(0.731)	0.040	0.008
62	5.17	0.20	0.048	(0.728)	0.040	0.008
63	5.25	0.20	0.048	(0.724)	0.040	0.008
64	5.33	0.23	0.056	(0.721)	0.046	0.010
65	5.42	0.23	0.056	(0.718)	0.046	0.010
66	5.50	0.23	0.056	(0.715)	0.046	0.010
67	5.58	0.27	0.064	(0.712)	0.053	0.011
68	5.67	0.27	0.064	(0.709)	0.053	0.011
69	5.75	0.27	0.064	(0.706)	0.053	0.011
70	5.83	0.27	0.064	(0.702)	0.053	0.011
71	5.92	0.27	0.064	(0.699)	0.053	0.011
72	6.00	0.27	0.064	(0.696)	0.053	0.011
73	6.08	0.30	0.072	(0.693)	0.060	0.012
74	6.17	0.30	0.072	(0.690)	0.060	0.012
75	6.25	0.30	0.072	(0.687)	0.060	0.012
76	6.33	0.30	0.072	(0.684)	0.060	0.012
77	6.42	0.30	0.072	(0.681)	0.060	0.012
78	6.50	0.30	0.072	(0.678)	0.060	0.012
79	6.58	0.33	0.080	(0.675)	0.066	0.014
80	6.67	0.33	0.080	(0.672)	0.066	0.014
81	6.75	0.33	0.080	(0.669)	0.066	0.014
82	6.83	0.33	0.080	(0.666)	0.066	0.014
83	6.92	0.33	0.080	(0.663)	0.066	0.014
84	7.00	0.33	0.080	(0.660)	0.066	0.014
85	7.08	0.33	0.080	(0.657)	0.066	0.014
86	7.17	0.33	0.080	(0.654)	0.066	0.014
87	7.25	0.33	0.080	(0.651)	0.066	0.014
88	7.33	0.37	0.088	(0.648)	0.073	0.015
89	7.42	0.37	0.088	(0.645)	0.073	0.015
90	7.50	0.37	0.088	(0.642)	0.073	0.015
91	7.58	0.40	0.096	(0.639)	0.079	0.017
92	7.67	0.40	0.096	(0.636)	0.079	0.017
93	7.75	0.40	0.096	(0.633)	0.079	0.017
94	7.83	0.43	0.104	(0.630)	0.086	0.018
95	7.92	0.43	0.104	(0.627)	0.086	0.018
96	8.00	0.43	0.104	(0.624)	0.086	0.018

97	8.08	0.50	0.120	(0.621)	0.099	0.021
98	8.17	0.50	0.120	(0.618)	0.099	0.021
99	8.25	0.50	0.120	(0.616)	0.099	0.021
100	8.33	0.50	0.120	(0.613)	0.099	0.021
101	8.42	0.50	0.120	(0.610)	0.099	0.021
102	8.50	0.50	0.120	(0.607)	0.099	0.021
103	8.58	0.53	0.128	(0.604)	0.106	0.022
104	8.67	0.53	0.128	(0.601)	0.106	0.022
105	8.75	0.53	0.128	(0.598)	0.106	0.022
106	8.83	0.57	0.136	(0.596)	0.113	0.023
107	8.92	0.57	0.136	(0.593)	0.113	0.023
108	9.00	0.57	0.136	(0.590)	0.113	0.023
109	9.08	0.63	0.152	(0.587)	0.126	0.026
110	9.17	0.63	0.152	(0.584)	0.126	0.026
111	9.25	0.63	0.152	(0.582)	0.126	0.026
112	9.33	0.67	0.160	(0.579)	0.132	0.028
113	9.42	0.67	0.160	(0.576)	0.132	0.028
114	9.50	0.67	0.160	(0.573)	0.132	0.028
115	9.58	0.70	0.168	(0.571)	0.139	0.029
116	9.67	0.70	0.168	(0.568)	0.139	0.029
117	9.75	0.70	0.168	(0.565)	0.139	0.029
118	9.83	0.73	0.176	(0.562)	0.146	0.030
119	9.92	0.73	0.176	(0.560)	0.146	0.030
120	10.00	0.73	0.176	(0.557)	0.146	0.030
121	10.08	0.50	0.120	(0.554)	0.099	0.021
122	10.17	0.50	0.120	(0.552)	0.099	0.021
123	10.25	0.50	0.120	(0.549)	0.099	0.021
124	10.33	0.50	0.120	(0.546)	0.099	0.021
125	10.42	0.50	0.120	(0.544)	0.099	0.021
126	10.50	0.50	0.120	(0.541)	0.099	0.021
127	10.58	0.67	0.160	(0.538)	0.132	0.028
128	10.67	0.67	0.160	(0.536)	0.132	0.028
129	10.75	0.67	0.160	(0.533)	0.132	0.028
130	10.83	0.67	0.160	(0.530)	0.132	0.028
131	10.92	0.67	0.160	(0.528)	0.132	0.028
132	11.00	0.67	0.160	(0.525)	0.132	0.028
133	11.08	0.63	0.152	(0.523)	0.126	0.026
134	11.17	0.63	0.152	(0.520)	0.126	0.026
135	11.25	0.63	0.152	(0.518)	0.126	0.026
136	11.33	0.63	0.152	(0.515)	0.126	0.026
137	11.42	0.63	0.152	(0.512)	0.126	0.026
138	11.50	0.63	0.152	(0.510)	0.126	0.026
139	11.58	0.57	0.136	(0.507)	0.113	0.023
140	11.67	0.57	0.136	(0.505)	0.113	0.023
141	11.75	0.57	0.136	(0.502)	0.113	0.023
142	11.83	0.60	0.144	(0.500)	0.119	0.025
143	11.92	0.60	0.144	(0.497)	0.119	0.025
144	12.00	0.60	0.144	(0.495)	0.119	0.025
145	12.08	0.83	0.200	(0.492)	0.166	0.034
146	12.17	0.83	0.200	(0.490)	0.166	0.034

147	12.25	0.83	0.200	(0.487)	0.166	0.034
148	12.33	0.87	0.208	(0.485)	0.172	0.036
149	12.42	0.87	0.208	(0.483)	0.172	0.036
150	12.50	0.87	0.208	(0.480)	0.172	0.036
151	12.58	0.93	0.224	(0.478)	0.185	0.039
152	12.67	0.93	0.224	(0.475)	0.185	0.039
153	12.75	0.93	0.224	(0.473)	0.185	0.039
154	12.83	0.97	0.232	(0.471)	0.192	0.040
155	12.92	0.97	0.232	(0.468)	0.192	0.040
156	13.00	0.97	0.232	(0.466)	0.192	0.040
157	13.08	1.13	0.272	(0.463)	0.225	0.047
158	13.17	1.13	0.272	(0.461)	0.225	0.047
159	13.25	1.13	0.272	(0.459)	0.225	0.047
160	13.33	1.13	0.272	(0.456)	0.225	0.047
161	13.42	1.13	0.272	(0.454)	0.225	0.047
162	13.50	1.13	0.272	(0.452)	0.225	0.047
163	13.58	0.77	0.184	(0.449)	0.152	0.032
164	13.67	0.77	0.184	(0.447)	0.152	0.032
165	13.75	0.77	0.184	(0.445)	0.152	0.032
166	13.83	0.77	0.184	(0.443)	0.152	0.032
167	13.92	0.77	0.184	(0.440)	0.152	0.032
168	14.00	0.77	0.184	(0.438)	0.152	0.032
169	14.08	0.90	0.216	(0.436)	0.179	0.037
170	14.17	0.90	0.216	(0.434)	0.179	0.037
171	14.25	0.90	0.216	(0.431)	0.179	0.037
172	14.33	0.87	0.208	(0.429)	0.172	0.036
173	14.42	0.87	0.208	(0.427)	0.172	0.036
174	14.50	0.87	0.208	(0.425)	0.172	0.036
175	14.58	0.87	0.208	(0.423)	0.172	0.036
176	14.67	0.87	0.208	(0.421)	0.172	0.036
177	14.75	0.87	0.208	(0.418)	0.172	0.036
178	14.83	0.83	0.200	(0.416)	0.166	0.034
179	14.92	0.83	0.200	(0.414)	0.166	0.034
180	15.00	0.83	0.200	(0.412)	0.166	0.034
181	15.08	0.80	0.192	(0.410)	0.159	0.033
182	15.17	0.80	0.192	(0.408)	0.159	0.033
183	15.25	0.80	0.192	(0.406)	0.159	0.033
184	15.33	0.77	0.184	(0.404)	0.152	0.032
185	15.42	0.77	0.184	(0.402)	0.152	0.032
186	15.50	0.77	0.184	(0.399)	0.152	0.032
187	15.58	0.63	0.152	(0.397)	0.126	0.026
188	15.67	0.63	0.152	(0.395)	0.126	0.026
189	15.75	0.63	0.152	(0.393)	0.126	0.026
190	15.83	0.63	0.152	(0.391)	0.126	0.026
191	15.92	0.63	0.152	(0.389)	0.126	0.026
192	16.00	0.63	0.152	(0.387)	0.126	0.026
193	16.08	0.13	0.032	(0.385)	0.026	0.006
194	16.17	0.13	0.032	(0.383)	0.026	0.006
195	16.25	0.13	0.032	(0.381)	0.026	0.006
196	16.33	0.13	0.032	(0.379)	0.026	0.006

197	16.42	0.13	0.032	(0.378)	0.026	0.006
198	16.50	0.13	0.032	(0.376)	0.026	0.006
199	16.58	0.10	0.024	(0.374)	0.020	0.004
200	16.67	0.10	0.024	(0.372)	0.020	0.004
201	16.75	0.10	0.024	(0.370)	0.020	0.004
202	16.83	0.10	0.024	(0.368)	0.020	0.004
203	16.92	0.10	0.024	(0.366)	0.020	0.004
204	17.00	0.10	0.024	(0.364)	0.020	0.004
205	17.08	0.17	0.040	(0.363)	0.033	0.007
206	17.17	0.17	0.040	(0.361)	0.033	0.007
207	17.25	0.17	0.040	(0.359)	0.033	0.007
208	17.33	0.17	0.040	(0.357)	0.033	0.007
209	17.42	0.17	0.040	(0.355)	0.033	0.007
210	17.50	0.17	0.040	(0.353)	0.033	0.007
211	17.58	0.17	0.040	(0.352)	0.033	0.007
212	17.67	0.17	0.040	(0.350)	0.033	0.007
213	17.75	0.17	0.040	(0.348)	0.033	0.007
214	17.83	0.13	0.032	(0.347)	0.026	0.006
215	17.92	0.13	0.032	(0.345)	0.026	0.006
216	18.00	0.13	0.032	(0.343)	0.026	0.006
217	18.08	0.13	0.032	(0.341)	0.026	0.006
218	18.17	0.13	0.032	(0.340)	0.026	0.006
219	18.25	0.13	0.032	(0.338)	0.026	0.006
220	18.33	0.13	0.032	(0.336)	0.026	0.006
221	18.42	0.13	0.032	(0.335)	0.026	0.006
222	18.50	0.13	0.032	(0.333)	0.026	0.006
223	18.58	0.10	0.024	(0.332)	0.020	0.004
224	18.67	0.10	0.024	(0.330)	0.020	0.004
225	18.75	0.10	0.024	(0.328)	0.020	0.004
226	18.83	0.07	0.016	(0.327)	0.013	0.003
227	18.92	0.07	0.016	(0.325)	0.013	0.003
228	19.00	0.07	0.016	(0.324)	0.013	0.003
229	19.08	0.10	0.024	(0.322)	0.020	0.004
230	19.17	0.10	0.024	(0.321)	0.020	0.004
231	19.25	0.10	0.024	(0.319)	0.020	0.004
232	19.33	0.13	0.032	(0.318)	0.026	0.006
233	19.42	0.13	0.032	(0.316)	0.026	0.006
234	19.50	0.13	0.032	(0.315)	0.026	0.006
235	19.58	0.10	0.024	(0.313)	0.020	0.004
236	19.67	0.10	0.024	(0.312)	0.020	0.004
237	19.75	0.10	0.024	(0.310)	0.020	0.004
238	19.83	0.07	0.016	(0.309)	0.013	0.003
239	19.92	0.07	0.016	(0.308)	0.013	0.003
240	20.00	0.07	0.016	(0.306)	0.013	0.003
241	20.08	0.10	0.024	(0.305)	0.020	0.004
242	20.17	0.10	0.024	(0.304)	0.020	0.004
243	20.25	0.10	0.024	(0.302)	0.020	0.004
244	20.33	0.10	0.024	(0.301)	0.020	0.004
245	20.42	0.10	0.024	(0.300)	0.020	0.004
246	20.50	0.10	0.024	(0.298)	0.020	0.004

247	20.58	0.10	0.024	(0.297)	0.020	0.004
248	20.67	0.10	0.024	(0.296)	0.020	0.004
249	20.75	0.10	0.024	(0.295)	0.020	0.004
250	20.83	0.07	0.016	(0.293)	0.013	0.003
251	20.92	0.07	0.016	(0.292)	0.013	0.003
252	21.00	0.07	0.016	(0.291)	0.013	0.003
253	21.08	0.10	0.024	(0.290)	0.020	0.004
254	21.17	0.10	0.024	(0.289)	0.020	0.004
255	21.25	0.10	0.024	(0.288)	0.020	0.004
256	21.33	0.07	0.016	(0.287)	0.013	0.003
257	21.42	0.07	0.016	(0.286)	0.013	0.003
258	21.50	0.07	0.016	(0.284)	0.013	0.003
259	21.58	0.10	0.024	(0.283)	0.020	0.004
260	21.67	0.10	0.024	(0.282)	0.020	0.004
261	21.75	0.10	0.024	(0.281)	0.020	0.004
262	21.83	0.07	0.016	(0.280)	0.013	0.003
263	21.92	0.07	0.016	(0.279)	0.013	0.003
264	22.00	0.07	0.016	(0.279)	0.013	0.003
265	22.08	0.10	0.024	(0.278)	0.020	0.004
266	22.17	0.10	0.024	(0.277)	0.020	0.004
267	22.25	0.10	0.024	(0.276)	0.020	0.004
268	22.33	0.07	0.016	(0.275)	0.013	0.003
269	22.42	0.07	0.016	(0.274)	0.013	0.003
270	22.50	0.07	0.016	(0.273)	0.013	0.003
271	22.58	0.07	0.016	(0.272)	0.013	0.003
272	22.67	0.07	0.016	(0.272)	0.013	0.003
273	22.75	0.07	0.016	(0.271)	0.013	0.003
274	22.83	0.07	0.016	(0.270)	0.013	0.003
275	22.92	0.07	0.016	(0.270)	0.013	0.003
276	23.00	0.07	0.016	(0.269)	0.013	0.003
277	23.08	0.07	0.016	(0.268)	0.013	0.003
278	23.17	0.07	0.016	(0.268)	0.013	0.003
279	23.25	0.07	0.016	(0.267)	0.013	0.003
280	23.33	0.07	0.016	(0.267)	0.013	0.003
281	23.42	0.07	0.016	(0.266)	0.013	0.003
282	23.50	0.07	0.016	(0.266)	0.013	0.003
283	23.58	0.07	0.016	(0.265)	0.013	0.003
284	23.67	0.07	0.016	(0.265)	0.013	0.003
285	23.75	0.07	0.016	(0.264)	0.013	0.003
286	23.83	0.07	0.016	(0.264)	0.013	0.003
287	23.92	0.07	0.016	(0.264)	0.013	0.003
288	24.00	0.07	0.016	(0.264)	0.013	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.1

Flood volume = Effective rainfall 0.34(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.66(In)
Total soil loss = 0.345(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 3121.8 Cubic Feet

Total soil loss = 15028.1 Cubic Feet

Peak flow rate of this hydrograph = 0.118(CFS)

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

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0001	0.01	Q				
0+15	0.0001	0.01	Q				
0+20	0.0002	0.01	Q				
0+25	0.0003	0.01	Q				
0+30	0.0003	0.01	Q				
0+35	0.0004	0.01	Q				
0+40	0.0005	0.01	Q				
0+45	0.0005	0.01	Q				
0+50	0.0006	0.01	Q				
0+55	0.0007	0.01	Q				
1+ 0	0.0008	0.01	Q				
1+ 5	0.0009	0.01	Q				
1+10	0.0010	0.01	Q				
1+15	0.0010	0.01	Q				
1+20	0.0011	0.01	Q				
1+25	0.0012	0.01	Q				
1+30	0.0013	0.01	Q				
1+35	0.0013	0.01	Q				
1+40	0.0014	0.01	Q				
1+45	0.0015	0.01	Q				
1+50	0.0016	0.01	Q				
1+55	0.0017	0.01	Q				
2+ 0	0.0017	0.01	Q				
2+ 5	0.0018	0.01	QV				
2+10	0.0019	0.01	QV				
2+15	0.0020	0.01	QV				
2+20	0.0021	0.01	QV				
2+25	0.0022	0.01	QV				
2+30	0.0023	0.01	QV				
2+35	0.0024	0.02	QV				
2+40	0.0025	0.02	QV				
2+45	0.0027	0.02	QV				
2+50	0.0028	0.02	QV				
2+55	0.0029	0.02	QV				
3+ 0	0.0030	0.02	QV				
3+ 5	0.0031	0.02	QV				

3+10	0.0033	0.02	QV	|	|	|	|
3+15	0.0034	0.02	QV	|	|	|	|
3+20	0.0035	0.02	QV	|	|	|	|
3+25	0.0036	0.02	Q V	|	|	|	|
3+30	0.0037	0.02	Q V	|	|	|	|
3+35	0.0039	0.02	Q V	|	|	|	|
3+40	0.0040	0.02	Q V	|	|	|	|
3+45	0.0041	0.02	Q V	|	|	|	|
3+50	0.0042	0.02	Q V	|	|	|	|
3+55	0.0044	0.02	Q V	|	|	|	|
4+ 0	0.0045	0.02	Q V	|	|	|	|
4+ 5	0.0047	0.02	Q V	|	|	|	|
4+10	0.0048	0.02	Q V	|	|	|	|
4+15	0.0050	0.02	Q V	|	|	|	|
4+20	0.0051	0.02	Q V	|	|	|	|
4+25	0.0053	0.02	Q V	|	|	|	|
4+30	0.0054	0.02	Q V	|	|	|	|
4+35	0.0056	0.02	Q V	|	|	|	|
4+40	0.0058	0.02	Q V	|	|	|	|
4+45	0.0059	0.02	Q V	|	|	|	|
4+50	0.0061	0.03	Q V	|	|	|	|
4+55	0.0063	0.03	Q V	|	|	|	|
5+ 0	0.0065	0.03	Q V	|	|	|	|
5+ 5	0.0067	0.02	Q V	|	|	|	|
5+10	0.0068	0.02	Q V	|	|	|	|
5+15	0.0070	0.02	Q V	|	|	|	|
5+20	0.0071	0.02	Q V	|	|	|	|
5+25	0.0073	0.02	Q V	|	|	|	|
5+30	0.0074	0.02	Q V	|	|	|	|
5+35	0.0076	0.03	Q V	|	|	|	|
5+40	0.0078	0.03	Q V	|	|	|	|
5+45	0.0080	0.03	Q V	|	|	|	|
5+50	0.0082	0.03	Q V	|	|	|	|
5+55	0.0084	0.03	Q V	|	|	|	|
6+ 0	0.0086	0.03	Q V	|	|	|	|
6+ 5	0.0088	0.03	Q V	|	|	|	|
6+10	0.0090	0.03	Q V	|	|	|	|
6+15	0.0092	0.03	Q V	|	|	|	|
6+20	0.0094	0.03	Q V	|	|	|	|
6+25	0.0096	0.03	Q V	|	|	|	|
6+30	0.0099	0.03	Q V	|	|	|	|
6+35	0.0101	0.03	Q V	|	|	|	|
6+40	0.0103	0.03	Q V	|	|	|	|
6+45	0.0106	0.03	Q V	|	|	|	|
6+50	0.0108	0.03	Q V	|	|	|	|
6+55	0.0110	0.03	Q V	|	|	|	|
7+ 0	0.0113	0.03	Q V	|	|	|	|
7+ 5	0.0115	0.03	Q V	|	|	|	|
7+10	0.0118	0.03	Q V	|	|	|	|
7+15	0.0120	0.03	Q V	|	|	|	|

7+20	0.0123	0.04	Q	V	|			
7+25	0.0125	0.04	Q	V	|			
7+30	0.0128	0.04	Q	V	|			
7+35	0.0131	0.04	Q	V	|			
7+40	0.0133	0.04	Q	V	|			
7+45	0.0136	0.04	Q	V	|			
7+50	0.0139	0.04	Q	V	|			
7+55	0.0142	0.04	Q	V	|			
8+ 0	0.0145	0.05	Q	V	|			
8+ 5	0.0149	0.05	Q	V	|			
8+10	0.0152	0.05	Q	V	|			
8+15	0.0156	0.05	Q	V	|			
8+20	0.0160	0.05	Q	V	|			
8+25	0.0163	0.05	Q	V	|			
8+30	0.0167	0.05	Q	V	|			
8+35	0.0170	0.05	Q	V	|			
8+40	0.0174	0.06	Q	V	|			
8+45	0.0178	0.06	Q	V	|			
8+50	0.0182	0.06	Q	V	|			
8+55	0.0186	0.06	Q	V	|			
9+ 0	0.0190	0.06	Q	V	|			
9+ 5	0.0195	0.06	Q	V	|			
9+10	0.0199	0.07	Q	V	|			
9+15	0.0204	0.07	Q	V	|			
9+20	0.0208	0.07	Q	V	|			
9+25	0.0213	0.07	Q	V	|			
9+30	0.0218	0.07	Q	V	|			
9+35	0.0223	0.07	Q	V	|			
9+40	0.0228	0.07	Q	V	|			
9+45	0.0233	0.07	Q	V	|			
9+50	0.0238	0.07	Q	V	|			
9+55	0.0243	0.08	Q	V	|			
10+ 0	0.0248	0.08	Q	V	|			
10+ 5	0.0253	0.06	Q	V	|			
10+10	0.0256	0.05	Q	V	|			
10+15	0.0260	0.05	Q	V	|			
10+20	0.0264	0.05	Q	V	|			
10+25	0.0267	0.05	Q	V	|			
10+30	0.0271	0.05	Q	V	|			
10+35	0.0275	0.06	Q	V	|			
10+40	0.0280	0.07	Q	V	|			
10+45	0.0284	0.07	Q	V	|			
10+50	0.0289	0.07	Q	V	|			
10+55	0.0294	0.07	Q	V	|			
11+ 0	0.0299	0.07	Q	V	|			
11+ 5	0.0303	0.07	Q	V	|			
11+10	0.0308	0.07	Q	V	|			
11+15	0.0313	0.07	Q	V	|			
11+20	0.0317	0.07	Q	V	|			
11+25	0.0322	0.07	Q	V	|			

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11+30       0.0326      0.07  Q         |       V |         |         |
11+35       0.0330      0.06  Q         |       V |         |         |
11+40       0.0334      0.06  Q         |       V |         |         |
11+45       0.0339      0.06  Q         |       V |         |         |
11+50       0.0343      0.06  Q         |        V|         |         |
11+55       0.0347      0.06  Q         |        V|         |         |
12+ 0       0.0351      0.06  Q         |        V|         |         |
12+ 5       0.0357      0.08  Q         |        V|         |         |
12+10       0.0362      0.09  Q         |         V         |         |
12+15       0.0368      0.09  Q         |         V         |         |
12+20       0.0375      0.09  Q         |         V         |         |
12+25       0.0381      0.09  Q         |         |V        |         |
12+30       0.0387      0.09  Q         |         |V        |         |
12+35       0.0393      0.09  Q         |         |V        |         |
12+40       0.0400      0.10  Q         |         | V       |         |
12+45       0.0407      0.10  Q         |         | V       |         |
12+50       0.0414      0.10  Q         |         |  V      |         |
12+55       0.0421      0.10  Q         |         |  V      |         |
13+ 0       0.0427      0.10  Q         |         |  V      |         |
13+ 5       0.0435      0.11  Q         |         |   V     |         |
13+10       0.0443      0.12  Q         |         |   V     |         |
13+15       0.0451      0.12  Q         |         |    V    |         |
13+20       0.0459      0.12  Q         |         |    V    |         |
13+25       0.0468      0.12  Q         |         |     V   |         |
13+30       0.0476      0.12  Q         |         |     V   |         |
13+35       0.0482      0.10  Q         |         |     V   |         |
13+40       0.0488      0.08  Q         |         |      V  |         |
13+45       0.0493      0.08  Q         |         |      V  |         |
13+50       0.0499      0.08  Q         |         |      V  |         |
13+55       0.0504      0.08  Q         |         |       V |         |
14+ 0       0.0510      0.08  Q         |         |       V |         |
14+ 5       0.0516      0.09  Q         |         |       V |         |
14+10       0.0522      0.09  Q         |         |        V|         |
14+15       0.0529      0.09  Q         |         |        V|         |
14+20       0.0535      0.09  Q         |         |        V|         |
14+25       0.0541      0.09  Q         |         |         V         |
14+30       0.0548      0.09  Q         |         |         V         |
14+35       0.0554      0.09  Q         |         |         V         |
14+40       0.0560      0.09  Q         |         |         |V        |
14+45       0.0566      0.09  Q         |         |         |V        |
14+50       0.0572      0.09  Q         |         |         |V        |
14+55       0.0578      0.09  Q         |         |         | V       |
15+ 0       0.0584      0.09  Q         |         |         | V       |
15+ 5       0.0590      0.08  Q         |         |         | V       |
15+10       0.0596      0.08  Q         |         |         |  V      |
15+15       0.0601      0.08  Q         |         |         |  V      |
15+20       0.0607      0.08  Q         |         |         |  V      |
15+25       0.0613      0.08  Q         |         |         |   V     |
15+30       0.0618      0.08  Q         |         |         |   V     |
15+35       0.0623      0.07  Q         |         |         |   V     |
```

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15+40       0.0628      0.07  Q         |          |          |    V     |
15+45       0.0632      0.07  Q         |          |          |    V     |
15+50       0.0637      0.07  Q         |          |          |    V     |
15+55       0.0641      0.07  Q         |          |          |    V     |
16+ 0       0.0646      0.07  Q         |          |          |     V    |
16+ 5       0.0648      0.04  Q         |          |          |     V    |
16+10       0.0649      0.02  Q         |          |          |     V    |
16+15       0.0650      0.01  Q         |          |          |     V    |
16+20       0.0651      0.01  Q         |          |          |     V    |
16+25       0.0652      0.01  Q         |          |          |     V    |
16+30       0.0653      0.01  Q         |          |          |     V    |
16+35       0.0654      0.01  Q         |          |          |     V    |
16+40       0.0655      0.01  Q         |          |          |     V    |
16+45       0.0655      0.01  Q         |          |          |     V    |
16+50       0.0656      0.01  Q         |          |          |     V    |
16+55       0.0657      0.01  Q         |          |          |     V    |
17+ 0       0.0658      0.01  Q         |          |          |     V    |
17+ 5       0.0659      0.01  Q         |          |          |     V    |
17+10       0.0660      0.02  Q         |          |          |     V    |
17+15       0.0661      0.02  Q         |          |          |     V    |
17+20       0.0662      0.02  Q         |          |          |     V    |
17+25       0.0663      0.02  Q         |          |          |      V   |
17+30       0.0665      0.02  Q         |          |          |      V   |
17+35       0.0666      0.02  Q         |          |          |      V   |
17+40       0.0667      0.02  Q         |          |          |      V   |
17+45       0.0668      0.02  Q         |          |          |      V   |
17+50       0.0669      0.02  Q         |          |          |      V   |
17+55       0.0670      0.01  Q         |          |          |      V   |
18+ 0       0.0671      0.01  Q         |          |          |      V   |
18+ 5       0.0672      0.01  Q         |          |          |      V   |
18+10       0.0673      0.01  Q         |          |          |      V   |
18+15       0.0674      0.01  Q         |          |          |      V   |
18+20       0.0675      0.01  Q         |          |          |      V   |
18+25       0.0676      0.01  Q         |          |          |      V   |
18+30       0.0677      0.01  Q         |          |          |      V   |
18+35       0.0678      0.01  Q         |          |          |      V   |
18+40       0.0678      0.01  Q         |          |          |      V   |
18+45       0.0679      0.01  Q         |          |          |      V   |
18+50       0.0680      0.01  Q         |          |          |      V   |
18+55       0.0680      0.01  Q         |          |          |      V   |
19+ 0       0.0681      0.01  Q         |          |          |      V   |
19+ 5       0.0681      0.01  Q         |          |          |       V  |
19+10       0.0682      0.01  Q         |          |          |       V  |
19+15       0.0683      0.01  Q         |          |          |       V  |
19+20       0.0684      0.01  Q         |          |          |       V  |
19+25       0.0684      0.01  Q         |          |          |       V  |
19+30       0.0685      0.01  Q         |          |          |       V  |
19+35       0.0686      0.01  Q         |          |          |       V  |
19+40       0.0687      0.01  Q         |          |          |       V  |
19+45       0.0688      0.01  Q         |          |          |       V  |
```

```
19+50       0.0688      0.01  Q         |         |         |        V |
19+55       0.0689      0.01  Q         |         |         |        V |
20+ 0       0.0689      0.01  Q         |         |         |        V |
20+ 5       0.0690      0.01  Q         |         |         |        V |
20+10       0.0691      0.01  Q         |         |         |        V |
20+15       0.0691      0.01  Q         |         |         |        V |
20+20       0.0692      0.01  Q         |         |         |        V |
20+25       0.0693      0.01  Q         |         |         |        V |
20+30       0.0693      0.01  Q         |         |         |        V |
20+35       0.0694      0.01  Q         |         |         |        V |
20+40       0.0695      0.01  Q         |         |         |        V |
20+45       0.0696      0.01  Q         |         |         |        V |
20+50       0.0696      0.01  Q         |         |         |        V |
20+55       0.0697      0.01  Q         |         |         |        V |
21+ 0       0.0697      0.01  Q         |         |         |        V |
21+ 5       0.0698      0.01  Q         |         |         |        V |
21+10       0.0698      0.01  Q         |         |         |        V |
21+15       0.0699      0.01  Q         |         |         |         V|
21+20       0.0700      0.01  Q         |         |         |         V|
21+25       0.0700      0.01  Q         |         |         |         V|
21+30       0.0701      0.01  Q         |         |         |         V|
21+35       0.0701      0.01  Q         |         |         |         V|
21+40       0.0702      0.01  Q         |         |         |         V|
21+45       0.0703      0.01  Q         |         |         |         V|
21+50       0.0703      0.01  Q         |         |         |         V|
21+55       0.0704      0.01  Q         |         |         |         V|
22+ 0       0.0704      0.01  Q         |         |         |         V|
22+ 5       0.0705      0.01  Q         |         |         |         V|
22+10       0.0706      0.01  Q         |         |         |         V|
22+15       0.0706      0.01  Q         |         |         |         V|
22+20       0.0707      0.01  Q         |         |         |         V|
22+25       0.0707      0.01  Q         |         |         |         V|
22+30       0.0708      0.01  Q         |         |         |         V|
22+35       0.0708      0.01  Q         |         |         |         V|
22+40       0.0709      0.01  Q         |         |         |         V|
22+45       0.0709      0.01  Q         |         |         |         V|
22+50       0.0710      0.01  Q         |         |         |         V|
22+55       0.0710      0.01  Q         |         |         |         V|
23+ 0       0.0711      0.01  Q         |         |         |         V|
23+ 5       0.0711      0.01  Q         |         |         |         V|
23+10       0.0712      0.01  Q         |         |         |         V|
23+15       0.0712      0.01  Q         |         |         |         V|
23+20       0.0713      0.01  Q         |         |         |         V|
23+25       0.0713      0.01  Q         |         |         |         V|
23+30       0.0714      0.01  Q         |         |         |         V|
23+35       0.0714      0.01  Q         |         |         |         V|
23+40       0.0715      0.01  Q         |         |         |         V|
23+45       0.0715      0.01  Q         |         |         |         V|
23+50       0.0715      0.01  Q         |         |         |         V|
23+55       0.0716      0.01  Q         |         |         |         V|
```

```
   24+ 0       0.0716      0.01  Q         |         |         |        V|
   24+ 5       0.0717      0.00  Q         |         |         |        V|
   24+10       0.0717      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 08/16/23 File: ONSITEPOSTE3110.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 10-YEAR 1-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            0.50                  1.25

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            1.30                  3.25

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
-----------------------------------------------------------------
```

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	3.30	0.328	(0.343)	0.272	0.056
2	0.17	4.20	0.418	0.343	(0.346)	0.075
3	0.25	4.40	0.438	0.343	(0.362)	0.095
4	0.33	4.80	0.478	0.343	(0.395)	0.135
5	0.42	5.20	0.517	0.343	(0.428)	0.175
6	0.50	6.20	0.617	0.343	(0.511)	0.274
7	0.58	6.80	0.677	0.343	(0.560)	0.334
8	0.67	8.80	0.876	0.343	(0.725)	0.533
9	0.75	13.90	1.383	0.343	(1.145)	1.040
10	0.83	31.40	3.124	0.343	(2.587)	2.781
11	0.92	7.20	0.716	0.343	(0.593)	0.374
12	1.00	3.80	0.378	(0.343)	0.313	0.065
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	5.9

Flood volume = Effective rainfall 0.49(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.33(In)
Total soil loss = 0.070(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 4490.9 Cubic Feet
Total soil loss = 3033.3 Cubic Feet

Peak flow rate of this hydrograph = 5.136(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	0.0006	0.08	Q	|	|	|	|
0+10	0.0017	0.16	Q	|	|	|	|
0+15	0.0032	0.22	QV	|	|	|	|
0+20	0.0052	0.30	|QV	|	|	|	|
0+25	0.0079	0.39	|Q V	|	|	|	|
0+30	0.0120	0.58	| Q V	|	|	|	|
0+35	0.0172	0.77	| Q V	|	|	|	|
0+40	0.0250	1.13	| Q V	|	|	|	|
0+45	0.0393	2.07	| Q | V	|	|	|	|
0+50	0.0746	5.14	| |	Q	V |	|	|
0+55	0.0968	3.21	| | Q	|	|	V |	|

```
    1+ 0       0.1023      0.80  |  Q      |         |         |        V|
    1+ 5       0.1030      0.11  Q         |         |         |        V|
    1+10       0.1031      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 08/16/23 File: ONSITEPOSTE3310.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 10-YEAR 3-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            0.80                  2.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.00                  5.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    1.294(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.294(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 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	0.202	(0.343)	0.167	0.035
2	0.17	1.30	0.202	(0.343)	0.167	0.035
3	0.25	1.10	0.171	(0.343)	0.141	0.029
4	0.33	1.50	0.233	(0.343)	0.193	0.040
5	0.42	1.50	0.233	(0.343)	0.193	0.040
6	0.50	1.80	0.279	(0.343)	0.231	0.048
7	0.58	1.50	0.233	(0.343)	0.193	0.040
8	0.67	1.80	0.279	(0.343)	0.231	0.048
9	0.75	1.80	0.279	(0.343)	0.231	0.048
10	0.83	1.50	0.233	(0.343)	0.193	0.040
11	0.92	1.60	0.248	(0.343)	0.206	0.043
12	1.00	1.80	0.279	(0.343)	0.231	0.048
13	1.08	2.20	0.342	(0.343)	0.283	0.059
14	1.17	2.20	0.342	(0.343)	0.283	0.059
15	1.25	2.20	0.342	(0.343)	0.283	0.059
16	1.33	2.00	0.310	(0.343)	0.257	0.053
17	1.42	2.60	0.404	(0.343)	0.334	0.069
18	1.50	2.70	0.419	0.343	(0.347)	0.077
19	1.58	2.40	0.373	(0.343)	0.308	0.064
20	1.67	2.70	0.419	0.343	(0.347)	0.077
21	1.75	3.30	0.512	0.343	(0.424)	0.170
22	1.83	3.10	0.481	0.343	(0.398)	0.139
23	1.92	2.90	0.450	0.343	(0.373)	0.108
24	2.00	3.00	0.466	0.343	(0.386)	0.123
25	2.08	3.10	0.481	0.343	(0.398)	0.139
26	2.17	4.20	0.652	0.343	(0.540)	0.309
27	2.25	5.00	0.776	0.343	(0.643)	0.434
28	2.33	3.50	0.543	0.343	(0.450)	0.201
29	2.42	6.80	1.056	0.343	(0.874)	0.713
30	2.50	7.30	1.133	0.343	(0.938)	0.791
31	2.58	8.20	1.273	0.343	(1.054)	0.930
32	2.67	5.90	0.916	0.343	(0.758)	0.573
33	2.75	2.00	0.310	(0.343)	0.257	0.053
34	2.83	1.80	0.279	(0.343)	0.231	0.048
35	2.92	1.80	0.279	(0.343)	0.231	0.048
36	3.00	0.60	0.093	(0.343)	0.077	0.016
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	5.8

Flood volume = Effective rainfall 0.48(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.81(In)
Total soil loss = 0.169(Ac.Ft)
Total rainfall = 1.29(In)
Flood volume = 4389.7 Cubic Feet
Total soil loss = 7350.4 Cubic Feet

Peak flow rate of this hydrograph = 2.190(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	0.0009	0.08	Q | | | |
0+15	0.0015	0.08	Q | | | |
0+20	0.0021	0.09	Q | | | |
0+25	0.0028	0.10	QV | | | |
0+30	0.0036	0.11	QV | | | |
0+35	0.0043	0.11	QV | | | |
0+40	0.0051	0.11	Q V | | | |
0+45	0.0059	0.12	Q V | | | |
0+50	0.0067	0.11	Q V | | | |
0+55	0.0074	0.11	Q V | | | |
1+ 0	0.0082	0.12	Q V | | | |
1+ 5	0.0091	0.14	Q V | | | |
1+10	0.0101	0.15	Q V | | | |
1+15	0.0112	0.15	Q V | | | |
1+20	0.0121	0.14	Q V | | | |
1+25	0.0132	0.16	Q V | | | |
1+30	0.0145	0.18	Q V | | | |
1+35	0.0157	0.17	Q V | | | |
1+40	0.0169	0.18	Q V | | | |
1+45	0.0192	0.33	|Q V | | | |
1+50	0.0217	0.37	|Q V | | | |
1+55	0.0239	0.31	|Q V| | | |
2+ 0	0.0259	0.30	|Q V | | |
2+ 5	0.0282	0.33	|Q |V | | |
2+10	0.0323	0.60	| Q | V | | |
2+15	0.0388	0.94	| Q | V | | |
2+20	0.0439	0.73	| Q | V | | |
2+25	0.0528	1.30	| Q | V | |
2+30	0.0655	1.84	| Q | | V | |
2+35	0.0806	2.19	| Q | | |V |
2+40	0.0930	1.80	| Q | | | V |
2+45	0.0979	0.72	| Q | | | V |
2+50	0.0993	0.20	Q | | | V|
2+55	0.1001	0.12	Q | | | V|
3+ 0	0.1006	0.07	Q | | | V|
3+ 5	0.1008	0.02	Q | | | V|
3+10	0.1008	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 08/16/23 File: ONSITEPOSTE3610.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 10-YEAR 6-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            1.20                  3.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.80                  7.00

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    1.858(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.858(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated loss
```

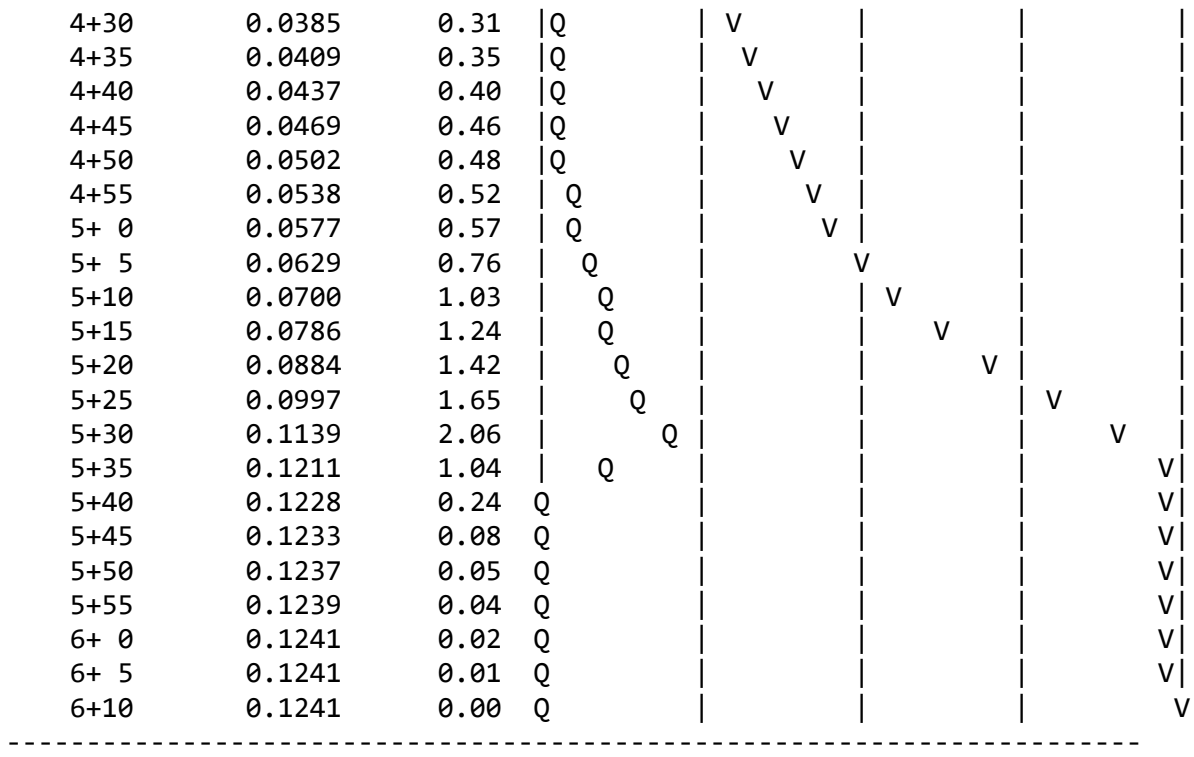
rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.111	(0.343)	0.092	0.019
2	0.17	0.60	0.134	(0.343)	0.111	0.023
3	0.25	0.60	0.134	(0.343)	0.111	0.023
4	0.33	0.60	0.134	(0.343)	0.111	0.023
5	0.42	0.60	0.134	(0.343)	0.111	0.023
6	0.50	0.70	0.156	(0.343)	0.129	0.027
7	0.58	0.70	0.156	(0.343)	0.129	0.027
8	0.67	0.70	0.156	(0.343)	0.129	0.027
9	0.75	0.70	0.156	(0.343)	0.129	0.027
10	0.83	0.70	0.156	(0.343)	0.129	0.027
11	0.92	0.70	0.156	(0.343)	0.129	0.027
12	1.00	0.80	0.178	(0.343)	0.148	0.031
13	1.08	0.80	0.178	(0.343)	0.148	0.031
14	1.17	0.80	0.178	(0.343)	0.148	0.031
15	1.25	0.80	0.178	(0.343)	0.148	0.031
16	1.33	0.80	0.178	(0.343)	0.148	0.031
17	1.42	0.80	0.178	(0.343)	0.148	0.031
18	1.50	0.80	0.178	(0.343)	0.148	0.031
19	1.58	0.80	0.178	(0.343)	0.148	0.031
20	1.67	0.80	0.178	(0.343)	0.148	0.031
21	1.75	0.80	0.178	(0.343)	0.148	0.031
22	1.83	0.80	0.178	(0.343)	0.148	0.031
23	1.92	0.80	0.178	(0.343)	0.148	0.031
24	2.00	0.90	0.201	(0.343)	0.166	0.035
25	2.08	0.80	0.178	(0.343)	0.148	0.031
26	2.17	0.90	0.201	(0.343)	0.166	0.035
27	2.25	0.90	0.201	(0.343)	0.166	0.035
28	2.33	0.90	0.201	(0.343)	0.166	0.035
29	2.42	0.90	0.201	(0.343)	0.166	0.035
30	2.50	0.90	0.201	(0.343)	0.166	0.035
31	2.58	0.90	0.201	(0.343)	0.166	0.035
32	2.67	0.90	0.201	(0.343)	0.166	0.035
33	2.75	1.00	0.223	(0.343)	0.185	0.038
34	2.83	1.00	0.223	(0.343)	0.185	0.038
35	2.92	1.00	0.223	(0.343)	0.185	0.038
36	3.00	1.00	0.223	(0.343)	0.185	0.038
37	3.08	1.00	0.223	(0.343)	0.185	0.038
38	3.17	1.10	0.245	(0.343)	0.203	0.042
39	3.25	1.10	0.245	(0.343)	0.203	0.042
40	3.33	1.10	0.245	(0.343)	0.203	0.042
41	3.42	1.20	0.268	(0.343)	0.222	0.046
42	3.50	1.30	0.290	(0.343)	0.240	0.050
43	3.58	1.40	0.312	(0.343)	0.258	0.054
44	3.67	1.40	0.312	(0.343)	0.258	0.054
45	3.75	1.50	0.334	(0.343)	0.277	0.058
46	3.83	1.50	0.334	(0.343)	0.277	0.058

```
47   3.92     1.60      0.357       (  0.343)       0.295        0.061
48   4.00     1.60      0.357       (  0.343)       0.295        0.061
49   4.08     1.70      0.379       (  0.343)       0.314        0.065
50   4.17     1.80      0.401       (  0.343)       0.332        0.069
51   4.25     1.90      0.424          0.343    (  0.351)        0.081
52   4.33     2.00      0.446          0.343    (  0.369)        0.103
53   4.42     2.10      0.468          0.343    (  0.388)        0.126
54   4.50     2.10      0.468          0.343    (  0.388)        0.126
55   4.58     2.20      0.491          0.343    (  0.406)        0.148
56   4.67     2.30      0.513          0.343    (  0.425)        0.170
57   4.75     2.40      0.535          0.343    (  0.443)        0.193
58   4.83     2.40      0.535          0.343    (  0.443)        0.193
59   4.92     2.50      0.557          0.343    (  0.462)        0.215
60   5.00     2.60      0.580          0.343    (  0.480)        0.237
61   5.08     3.10      0.691          0.343    (  0.572)        0.349
62   5.17     3.60      0.803          0.343    (  0.665)        0.460
63   5.25     3.90      0.870          0.343    (  0.720)        0.527
64   5.33     4.20      0.937          0.343    (  0.775)        0.594
65   5.42     4.70      1.048          0.343    (  0.868)        0.705
66   5.50     5.60      1.249          0.343    (  1.034)        0.906
67   5.58     1.90      0.424          0.343    (  0.351)        0.081
68   5.67     0.90      0.201       (  0.343)       0.166        0.035
69   5.75     0.60      0.134       (  0.343)       0.111        0.023
70   5.83     0.50      0.111       (  0.343)       0.092        0.019
71   5.92     0.30      0.067       (  0.343)       0.055        0.012
72   6.00     0.20      0.045       (  0.343)       0.037        0.008
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     7.2
      Flood volume = Effective rainfall      0.60(In)
       times area       2.5(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      1.26(In)
      Total soil loss =     0.263(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        5407.6 Cubic Feet
      Total soil loss =       11455.9 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.061(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       0.0006      0.05  Q         |         |         |         |
  0+15       0.0009      0.06  Q         |         |         |         |
```

```
0+20       0.0013      0.06  Q          |          |          |          |
0+25       0.0017      0.06  Q          |          |          |          |
0+30       0.0022      0.06  Q          |          |          |          |
0+35       0.0026      0.07  Q          |          |          |          |
0+40       0.0031      0.07  QV         |          |          |          |
0+45       0.0036      0.07  QV         |          |          |          |
0+50       0.0040      0.07  QV         |          |          |          |
0+55       0.0045      0.07  QV         |          |          |          |
1+ 0       0.0050      0.07  QV         |          |          |          |
1+ 5       0.0055      0.08  QV         |          |          |          |
1+10       0.0061      0.08  QV         |          |          |          |
1+15       0.0066      0.08  Q V        |          |          |          |
1+20       0.0071      0.08  Q V        |          |          |          |
1+25       0.0077      0.08  Q V        |          |          |          |
1+30       0.0082      0.08  Q V        |          |          |          |
1+35       0.0087      0.08  Q V        |          |          |          |
1+40       0.0093      0.08  Q V        |          |          |          |
1+45       0.0098      0.08  Q  V       |          |          |          |
1+50       0.0103      0.08  Q  V       |          |          |          |
1+55       0.0109      0.08  Q  V       |          |          |          |
2+ 0       0.0114      0.08  Q  V       |          |          |          |
2+ 5       0.0120      0.08  Q  V       |          |          |          |
2+10       0.0126      0.08  Q   V      |          |          |          |
2+15       0.0132      0.09  Q   V      |          |          |          |
2+20       0.0138      0.09  Q   V      |          |          |          |
2+25       0.0144      0.09  Q   V      |          |          |          |
2+30       0.0150      0.09  Q   V      |          |          |          |
2+35       0.0156      0.09  Q    V     |          |          |          |
2+40       0.0162      0.09  Q    V     |          |          |          |
2+45       0.0168      0.09  Q    V     |          |          |          |
2+50       0.0175      0.10  Q    V     |          |          |          |
2+55       0.0181      0.10  Q    V     |          |          |          |
3+ 0       0.0188      0.10  Q     V    |          |          |          |
3+ 5       0.0195      0.10  Q     V    |          |          |          |
3+10       0.0202      0.10  Q     V    |          |          |          |
3+15       0.0209      0.11  Q     V    |          |          |          |
3+20       0.0216      0.11  Q     V    |          |          |          |
3+25       0.0224      0.11  Q      V   |          |          |          |
3+30       0.0232      0.12  Q      V   |          |          |          |
3+35       0.0241      0.13  Q      V   |          |          |          |
3+40       0.0251      0.13  Q       V  |          |          |          |
3+45       0.0260      0.14  Q       V  |          |          |          |
3+50       0.0270      0.14  Q       V  |          |          |          |
3+55       0.0281      0.15  Q        V |          |          |          |
4+ 0       0.0291      0.15  Q        V |          |          |          |
4+ 5       0.0302      0.16  Q        V |          |          |          |
4+10       0.0314      0.17  Q         V          |          |          |
4+15       0.0327      0.19  Q         V          |          |          |
4+20       0.0344      0.24  Q         |V         |          |          |
4+25       0.0364      0.29  |Q        |V         |          |          |
```


4+30 0.0385 0.31
4+35 0.0409 0.35
4+40 0.0437 0.40
4+45 0.0469 0.46
4+50 0.0502 0.48
4+55 0.0538 0.52
5+ 0 0.0577 0.57
5+ 5 0.0629 0.76
5+10 0.0700 1.03
5+15 0.0786 1.24
5+20 0.0884 1.42
5+25 0.0997 1.65
5+30 0.1139 2.06
5+35 0.1211 1.04
5+40 0.1228 0.24
5+45 0.1233 0.08
5+50 0.1237 0.05
5+55 0.1239 0.04
6+ 0 0.1241 0.02
6+ 5 0.1241 0.01
6+10 0.1241 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 08/16/23 File: ONSITEPOSTE32410.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    3.399(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    3.399(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 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	(0.607)	0.023	0.005
2	0.17	0.07	0.027	(0.605)	0.023	0.005
3	0.25	0.07	0.027	(0.603)	0.023	0.005
4	0.33	0.10	0.041	(0.600)	0.034	0.007
5	0.42	0.10	0.041	(0.598)	0.034	0.007
6	0.50	0.10	0.041	(0.596)	0.034	0.007
7	0.58	0.10	0.041	(0.593)	0.034	0.007
8	0.67	0.10	0.041	(0.591)	0.034	0.007
9	0.75	0.10	0.041	(0.589)	0.034	0.007
10	0.83	0.13	0.054	(0.586)	0.045	0.009
11	0.92	0.13	0.054	(0.584)	0.045	0.009
12	1.00	0.13	0.054	(0.582)	0.045	0.009
13	1.08	0.10	0.041	(0.579)	0.034	0.007
14	1.17	0.10	0.041	(0.577)	0.034	0.007
15	1.25	0.10	0.041	(0.575)	0.034	0.007
16	1.33	0.10	0.041	(0.573)	0.034	0.007
17	1.42	0.10	0.041	(0.570)	0.034	0.007
18	1.50	0.10	0.041	(0.568)	0.034	0.007
19	1.58	0.10	0.041	(0.566)	0.034	0.007
20	1.67	0.10	0.041	(0.563)	0.034	0.007
21	1.75	0.10	0.041	(0.561)	0.034	0.007
22	1.83	0.13	0.054	(0.559)	0.045	0.009
23	1.92	0.13	0.054	(0.557)	0.045	0.009
24	2.00	0.13	0.054	(0.554)	0.045	0.009
25	2.08	0.13	0.054	(0.552)	0.045	0.009
26	2.17	0.13	0.054	(0.550)	0.045	0.009
27	2.25	0.13	0.054	(0.548)	0.045	0.009
28	2.33	0.13	0.054	(0.546)	0.045	0.009
29	2.42	0.13	0.054	(0.543)	0.045	0.009
30	2.50	0.13	0.054	(0.541)	0.045	0.009
31	2.58	0.17	0.068	(0.539)	0.056	0.012
32	2.67	0.17	0.068	(0.537)	0.056	0.012
33	2.75	0.17	0.068	(0.534)	0.056	0.012
34	2.83	0.17	0.068	(0.532)	0.056	0.012
35	2.92	0.17	0.068	(0.530)	0.056	0.012
36	3.00	0.17	0.068	(0.528)	0.056	0.012
37	3.08	0.17	0.068	(0.526)	0.056	0.012
38	3.17	0.17	0.068	(0.524)	0.056	0.012
39	3.25	0.17	0.068	(0.521)	0.056	0.012
40	3.33	0.17	0.068	(0.519)	0.056	0.012
41	3.42	0.17	0.068	(0.517)	0.056	0.012
42	3.50	0.17	0.068	(0.515)	0.056	0.012
43	3.58	0.17	0.068	(0.513)	0.056	0.012
44	3.67	0.17	0.068	(0.511)	0.056	0.012
45	3.75	0.17	0.068	(0.508)	0.056	0.012
46	3.83	0.20	0.082	(0.506)	0.068	0.014

47	3.92	0.20	0.082	(0.504)	0.068	0.014
48	4.00	0.20	0.082	(0.502)	0.068	0.014
49	4.08	0.20	0.082	(0.500)	0.068	0.014
50	4.17	0.20	0.082	(0.498)	0.068	0.014
51	4.25	0.20	0.082	(0.496)	0.068	0.014
52	4.33	0.23	0.095	(0.493)	0.079	0.016
53	4.42	0.23	0.095	(0.491)	0.079	0.016
54	4.50	0.23	0.095	(0.489)	0.079	0.016
55	4.58	0.23	0.095	(0.487)	0.079	0.016
56	4.67	0.23	0.095	(0.485)	0.079	0.016
57	4.75	0.23	0.095	(0.483)	0.079	0.016
58	4.83	0.27	0.109	(0.481)	0.090	0.019
59	4.92	0.27	0.109	(0.479)	0.090	0.019
60	5.00	0.27	0.109	(0.477)	0.090	0.019
61	5.08	0.20	0.082	(0.475)	0.068	0.014
62	5.17	0.20	0.082	(0.473)	0.068	0.014
63	5.25	0.20	0.082	(0.471)	0.068	0.014
64	5.33	0.23	0.095	(0.468)	0.079	0.016
65	5.42	0.23	0.095	(0.466)	0.079	0.016
66	5.50	0.23	0.095	(0.464)	0.079	0.016
67	5.58	0.27	0.109	(0.462)	0.090	0.019
68	5.67	0.27	0.109	(0.460)	0.090	0.019
69	5.75	0.27	0.109	(0.458)	0.090	0.019
70	5.83	0.27	0.109	(0.456)	0.090	0.019
71	5.92	0.27	0.109	(0.454)	0.090	0.019
72	6.00	0.27	0.109	(0.452)	0.090	0.019
73	6.08	0.30	0.122	(0.450)	0.101	0.021
74	6.17	0.30	0.122	(0.448)	0.101	0.021
75	6.25	0.30	0.122	(0.446)	0.101	0.021
76	6.33	0.30	0.122	(0.444)	0.101	0.021
77	6.42	0.30	0.122	(0.442)	0.101	0.021
78	6.50	0.30	0.122	(0.440)	0.101	0.021
79	6.58	0.33	0.136	(0.438)	0.113	0.023
80	6.67	0.33	0.136	(0.436)	0.113	0.023
81	6.75	0.33	0.136	(0.434)	0.113	0.023
82	6.83	0.33	0.136	(0.432)	0.113	0.023
83	6.92	0.33	0.136	(0.430)	0.113	0.023
84	7.00	0.33	0.136	(0.428)	0.113	0.023
85	7.08	0.33	0.136	(0.427)	0.113	0.023
86	7.17	0.33	0.136	(0.425)	0.113	0.023
87	7.25	0.33	0.136	(0.423)	0.113	0.023
88	7.33	0.37	0.150	(0.421)	0.124	0.026
89	7.42	0.37	0.150	(0.419)	0.124	0.026
90	7.50	0.37	0.150	(0.417)	0.124	0.026
91	7.58	0.40	0.163	(0.415)	0.135	0.028
92	7.67	0.40	0.163	(0.413)	0.135	0.028
93	7.75	0.40	0.163	(0.411)	0.135	0.028
94	7.83	0.43	0.177	(0.409)	0.146	0.030
95	7.92	0.43	0.177	(0.407)	0.146	0.030
96	8.00	0.43	0.177	(0.405)	0.146	0.030

97	8.08	0.50	0.204	(0.404)	0.169	0.035
98	8.17	0.50	0.204	(0.402)	0.169	0.035
99	8.25	0.50	0.204	(0.400)	0.169	0.035
100	8.33	0.50	0.204	(0.398)	0.169	0.035
101	8.42	0.50	0.204	(0.396)	0.169	0.035
102	8.50	0.50	0.204	(0.394)	0.169	0.035
103	8.58	0.53	0.218	(0.392)	0.180	0.037
104	8.67	0.53	0.218	(0.391)	0.180	0.037
105	8.75	0.53	0.218	(0.389)	0.180	0.037
106	8.83	0.57	0.231	(0.387)	0.191	0.040
107	8.92	0.57	0.231	(0.385)	0.191	0.040
108	9.00	0.57	0.231	(0.383)	0.191	0.040
109	9.08	0.63	0.258	(0.381)	0.214	0.044
110	9.17	0.63	0.258	(0.380)	0.214	0.044
111	9.25	0.63	0.258	(0.378)	0.214	0.044
112	9.33	0.67	0.272	(0.376)	0.225	0.047
113	9.42	0.67	0.272	(0.374)	0.225	0.047
114	9.50	0.67	0.272	(0.372)	0.225	0.047
115	9.58	0.70	0.285	(0.371)	0.236	0.049
116	9.67	0.70	0.285	(0.369)	0.236	0.049
117	9.75	0.70	0.285	(0.367)	0.236	0.049
118	9.83	0.73	0.299	(0.365)	0.248	0.051
119	9.92	0.73	0.299	(0.364)	0.248	0.051
120	10.00	0.73	0.299	(0.362)	0.248	0.051
121	10.08	0.50	0.204	(0.360)	0.169	0.035
122	10.17	0.50	0.204	(0.358)	0.169	0.035
123	10.25	0.50	0.204	(0.357)	0.169	0.035
124	10.33	0.50	0.204	(0.355)	0.169	0.035
125	10.42	0.50	0.204	(0.353)	0.169	0.035
126	10.50	0.50	0.204	(0.351)	0.169	0.035
127	10.58	0.67	0.272	(0.350)	0.225	0.047
128	10.67	0.67	0.272	(0.348)	0.225	0.047
129	10.75	0.67	0.272	(0.346)	0.225	0.047
130	10.83	0.67	0.272	(0.345)	0.225	0.047
131	10.92	0.67	0.272	(0.343)	0.225	0.047
132	11.00	0.67	0.272	(0.341)	0.225	0.047
133	11.08	0.63	0.258	(0.339)	0.214	0.044
134	11.17	0.63	0.258	(0.338)	0.214	0.044
135	11.25	0.63	0.258	(0.336)	0.214	0.044
136	11.33	0.63	0.258	(0.334)	0.214	0.044
137	11.42	0.63	0.258	(0.333)	0.214	0.044
138	11.50	0.63	0.258	(0.331)	0.214	0.044
139	11.58	0.57	0.231	(0.330)	0.191	0.040
140	11.67	0.57	0.231	(0.328)	0.191	0.040
141	11.75	0.57	0.231	(0.326)	0.191	0.040
142	11.83	0.60	0.245	(0.325)	0.203	0.042
143	11.92	0.60	0.245	(0.323)	0.203	0.042
144	12.00	0.60	0.245	(0.321)	0.203	0.042
145	12.08	0.83	0.340	(0.320)	0.281	0.058
146	12.17	0.83	0.340	(0.318)	0.281	0.058

147	12.25	0.83	0.340	(0.317)	0.281	0.058
148	12.33	0.87	0.353	(0.315)	0.293	0.061
149	12.42	0.87	0.353	(0.313)	0.293	0.061
150	12.50	0.87	0.353	(0.312)	0.293	0.061
151	12.58	0.93	0.381	0.310	(0.315)	0.070
152	12.67	0.93	0.381	0.309	(0.315)	0.072
153	12.75	0.93	0.381	0.307	(0.315)	0.073
154	12.83	0.97	0.394	0.306	(0.326)	0.089
155	12.92	0.97	0.394	0.304	(0.326)	0.090
156	13.00	0.97	0.394	0.303	(0.326)	0.092
157	13.08	1.13	0.462	0.301	(0.383)	0.161
158	13.17	1.13	0.462	0.299	(0.383)	0.163
159	13.25	1.13	0.462	0.298	(0.383)	0.164
160	13.33	1.13	0.462	0.296	(0.383)	0.166
161	13.42	1.13	0.462	0.295	(0.383)	0.167
162	13.50	1.13	0.462	0.293	(0.383)	0.169
163	13.58	0.77	0.313	(0.292)	0.259	0.054
164	13.67	0.77	0.313	(0.290)	0.259	0.054
165	13.75	0.77	0.313	(0.289)	0.259	0.054
166	13.83	0.77	0.313	(0.288)	0.259	0.054
167	13.92	0.77	0.313	(0.286)	0.259	0.054
168	14.00	0.77	0.313	(0.285)	0.259	0.054
169	14.08	0.90	0.367	0.283	(0.304)	0.084
170	14.17	0.90	0.367	0.282	(0.304)	0.085
171	14.25	0.90	0.367	0.280	(0.304)	0.087
172	14.33	0.87	0.353	0.279	(0.293)	0.075
173	14.42	0.87	0.353	0.277	(0.293)	0.076
174	14.50	0.87	0.353	0.276	(0.293)	0.078
175	14.58	0.87	0.353	0.275	(0.293)	0.079
176	14.67	0.87	0.353	0.273	(0.293)	0.080
177	14.75	0.87	0.353	0.272	(0.293)	0.082
178	14.83	0.83	0.340	0.270	(0.281)	0.070
179	14.92	0.83	0.340	0.269	(0.281)	0.071
180	15.00	0.83	0.340	0.268	(0.281)	0.072
181	15.08	0.80	0.326	0.266	(0.270)	0.060
182	15.17	0.80	0.326	0.265	(0.270)	0.061
183	15.25	0.80	0.326	0.263	(0.270)	0.063
184	15.33	0.77	0.313	(0.262)	0.259	0.054
185	15.42	0.77	0.313	(0.261)	0.259	0.054
186	15.50	0.77	0.313	(0.259)	0.259	0.054
187	15.58	0.63	0.258	(0.258)	0.214	0.044
188	15.67	0.63	0.258	(0.257)	0.214	0.044
189	15.75	0.63	0.258	(0.255)	0.214	0.044
190	15.83	0.63	0.258	(0.254)	0.214	0.044
191	15.92	0.63	0.258	(0.253)	0.214	0.044
192	16.00	0.63	0.258	(0.252)	0.214	0.044
193	16.08	0.13	0.054	(0.250)	0.045	0.009
194	16.17	0.13	0.054	(0.249)	0.045	0.009
195	16.25	0.13	0.054	(0.248)	0.045	0.009
196	16.33	0.13	0.054	(0.246)	0.045	0.009

197	16.42	0.13	0.054	(0.245)	0.045	0.009
198	16.50	0.13	0.054	(0.244)	0.045	0.009
199	16.58	0.10	0.041	(0.243)	0.034	0.007
200	16.67	0.10	0.041	(0.242)	0.034	0.007
201	16.75	0.10	0.041	(0.240)	0.034	0.007
202	16.83	0.10	0.041	(0.239)	0.034	0.007
203	16.92	0.10	0.041	(0.238)	0.034	0.007
204	17.00	0.10	0.041	(0.237)	0.034	0.007
205	17.08	0.17	0.068	(0.235)	0.056	0.012
206	17.17	0.17	0.068	(0.234)	0.056	0.012
207	17.25	0.17	0.068	(0.233)	0.056	0.012
208	17.33	0.17	0.068	(0.232)	0.056	0.012
209	17.42	0.17	0.068	(0.231)	0.056	0.012
210	17.50	0.17	0.068	(0.230)	0.056	0.012
211	17.58	0.17	0.068	(0.228)	0.056	0.012
212	17.67	0.17	0.068	(0.227)	0.056	0.012
213	17.75	0.17	0.068	(0.226)	0.056	0.012
214	17.83	0.13	0.054	(0.225)	0.045	0.009
215	17.92	0.13	0.054	(0.224)	0.045	0.009
216	18.00	0.13	0.054	(0.223)	0.045	0.009
217	18.08	0.13	0.054	(0.222)	0.045	0.009
218	18.17	0.13	0.054	(0.221)	0.045	0.009
219	18.25	0.13	0.054	(0.220)	0.045	0.009
220	18.33	0.13	0.054	(0.219)	0.045	0.009
221	18.42	0.13	0.054	(0.217)	0.045	0.009
222	18.50	0.13	0.054	(0.216)	0.045	0.009
223	18.58	0.10	0.041	(0.215)	0.034	0.007
224	18.67	0.10	0.041	(0.214)	0.034	0.007
225	18.75	0.10	0.041	(0.213)	0.034	0.007
226	18.83	0.07	0.027	(0.212)	0.023	0.005
227	18.92	0.07	0.027	(0.211)	0.023	0.005
228	19.00	0.07	0.027	(0.210)	0.023	0.005
229	19.08	0.10	0.041	(0.209)	0.034	0.007
230	19.17	0.10	0.041	(0.208)	0.034	0.007
231	19.25	0.10	0.041	(0.207)	0.034	0.007
232	19.33	0.13	0.054	(0.206)	0.045	0.009
233	19.42	0.13	0.054	(0.205)	0.045	0.009
234	19.50	0.13	0.054	(0.204)	0.045	0.009
235	19.58	0.10	0.041	(0.203)	0.034	0.007
236	19.67	0.10	0.041	(0.203)	0.034	0.007
237	19.75	0.10	0.041	(0.202)	0.034	0.007
238	19.83	0.07	0.027	(0.201)	0.023	0.005
239	19.92	0.07	0.027	(0.200)	0.023	0.005
240	20.00	0.07	0.027	(0.199)	0.023	0.005
241	20.08	0.10	0.041	(0.198)	0.034	0.007
242	20.17	0.10	0.041	(0.197)	0.034	0.007
243	20.25	0.10	0.041	(0.196)	0.034	0.007
244	20.33	0.10	0.041	(0.195)	0.034	0.007
245	20.42	0.10	0.041	(0.195)	0.034	0.007
246	20.50	0.10	0.041	(0.194)	0.034	0.007

247	20.58	0.10	0.041	(0.193)	0.034	0.007
248	20.67	0.10	0.041	(0.192)	0.034	0.007
249	20.75	0.10	0.041	(0.191)	0.034	0.007
250	20.83	0.07	0.027	(0.191)	0.023	0.005
251	20.92	0.07	0.027	(0.190)	0.023	0.005
252	21.00	0.07	0.027	(0.189)	0.023	0.005
253	21.08	0.10	0.041	(0.188)	0.034	0.007
254	21.17	0.10	0.041	(0.188)	0.034	0.007
255	21.25	0.10	0.041	(0.187)	0.034	0.007
256	21.33	0.07	0.027	(0.186)	0.023	0.005
257	21.42	0.07	0.027	(0.185)	0.023	0.005
258	21.50	0.07	0.027	(0.185)	0.023	0.005
259	21.58	0.10	0.041	(0.184)	0.034	0.007
260	21.67	0.10	0.041	(0.183)	0.034	0.007
261	21.75	0.10	0.041	(0.183)	0.034	0.007
262	21.83	0.07	0.027	(0.182)	0.023	0.005
263	21.92	0.07	0.027	(0.182)	0.023	0.005
264	22.00	0.07	0.027	(0.181)	0.023	0.005
265	22.08	0.10	0.041	(0.180)	0.034	0.007
266	22.17	0.10	0.041	(0.180)	0.034	0.007
267	22.25	0.10	0.041	(0.179)	0.034	0.007
268	22.33	0.07	0.027	(0.179)	0.023	0.005
269	22.42	0.07	0.027	(0.178)	0.023	0.005
270	22.50	0.07	0.027	(0.178)	0.023	0.005
271	22.58	0.07	0.027	(0.177)	0.023	0.005
272	22.67	0.07	0.027	(0.176)	0.023	0.005
273	22.75	0.07	0.027	(0.176)	0.023	0.005
274	22.83	0.07	0.027	(0.176)	0.023	0.005
275	22.92	0.07	0.027	(0.175)	0.023	0.005
276	23.00	0.07	0.027	(0.175)	0.023	0.005
277	23.08	0.07	0.027	(0.174)	0.023	0.005
278	23.17	0.07	0.027	(0.174)	0.023	0.005
279	23.25	0.07	0.027	(0.174)	0.023	0.005
280	23.33	0.07	0.027	(0.173)	0.023	0.005
281	23.42	0.07	0.027	(0.173)	0.023	0.005
282	23.50	0.07	0.027	(0.173)	0.023	0.005
283	23.58	0.07	0.027	(0.172)	0.023	0.005
284	23.67	0.07	0.027	(0.172)	0.023	0.005
285	23.75	0.07	0.027	(0.172)	0.023	0.005
286	23.83	0.07	0.027	(0.172)	0.023	0.005
287	23.92	0.07	0.027	(0.171)	0.023	0.005
288	24.00	0.07	0.027	(0.171)	0.023	0.005

(Loss Rate Not Used)

Sum = 100.0 Sum = 7.8

Flood volume = Effective rainfall 0.65(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 2.75(In)
Total soil loss = 0.572(Ac.Ft)
Total rainfall = 3.40(In)
Flood volume = 5928.3 Cubic Feet

Total soil loss = 24915.6 Cubic Feet

Peak flow rate of this hydrograph = 0.424(CFS)

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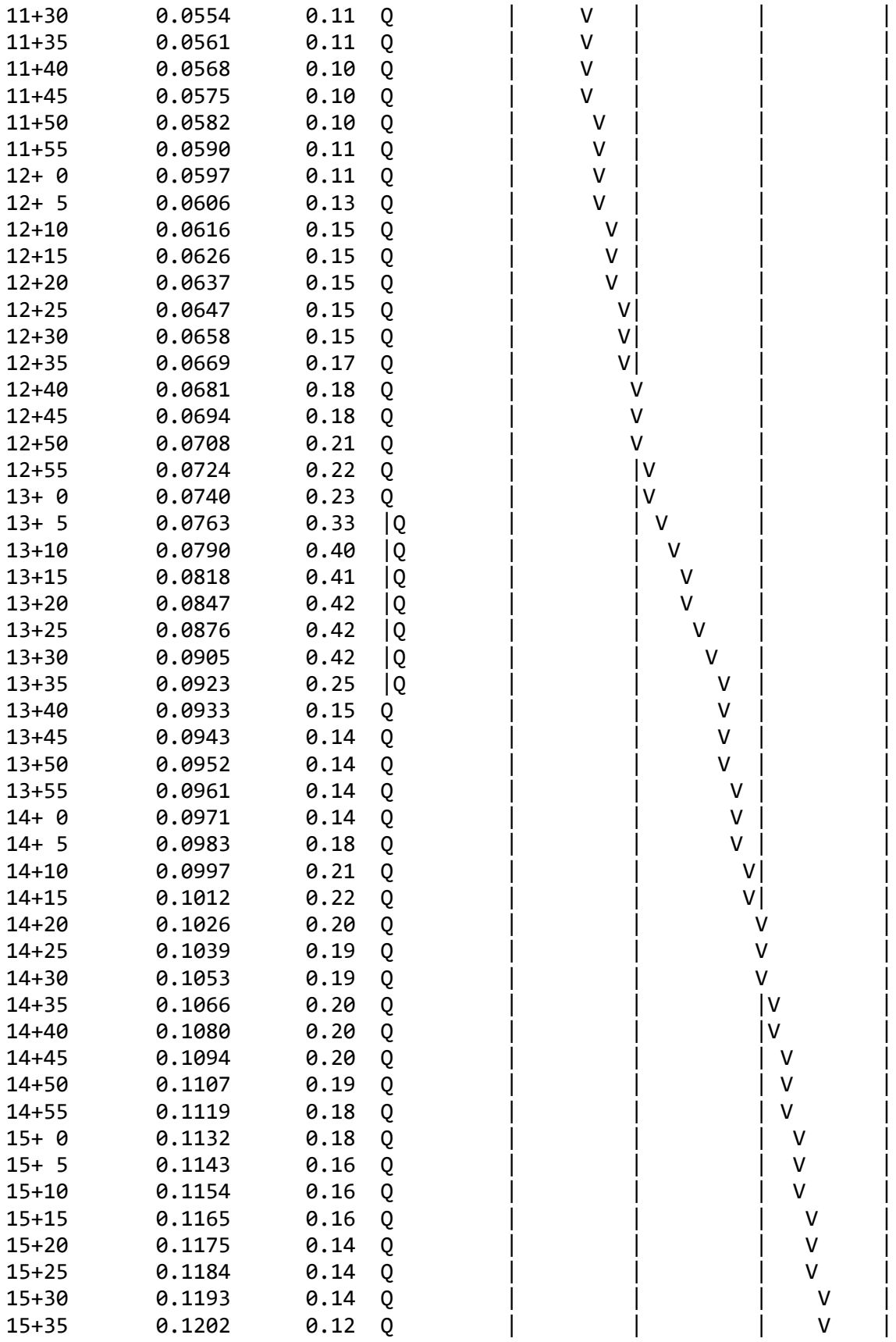
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0001	0.01	Q				
0+15	0.0002	0.01	Q				
0+20	0.0003	0.02	Q				
0+25	0.0004	0.02	Q				
0+30	0.0006	0.02	Q				
0+35	0.0007	0.02	Q				
0+40	0.0008	0.02	Q				
0+45	0.0009	0.02	Q				
0+50	0.0011	0.02	Q				
0+55	0.0012	0.02	Q				
1+ 0	0.0014	0.02	Q				
1+ 5	0.0015	0.02	Q				
1+10	0.0016	0.02	Q				
1+15	0.0018	0.02	Q				
1+20	0.0019	0.02	Q				
1+25	0.0020	0.02	Q				
1+30	0.0021	0.02	Q				
1+35	0.0023	0.02	Q				
1+40	0.0024	0.02	Q				
1+45	0.0025	0.02	Q				
1+50	0.0026	0.02	Q				
1+55	0.0028	0.02	Q				
2+ 0	0.0030	0.02	Q				
2+ 5	0.0031	0.02	Q				
2+10	0.0033	0.02	Q				
2+15	0.0035	0.02	QV				
2+20	0.0036	0.02	QV				
2+25	0.0038	0.02	QV				
2+30	0.0039	0.02	QV				
2+35	0.0041	0.03	QV				
2+40	0.0043	0.03	QV				
2+45	0.0045	0.03	QV				
2+50	0.0047	0.03	QV				
2+55	0.0049	0.03	QV				
3+ 0	0.0051	0.03	QV				
3+ 5	0.0053	0.03	QV				

3+10	0.0055	0.03	QV	|	|	|	|
3+15	0.0058	0.03	QV	|	|	|	|
3+20	0.0060	0.03	QV	|	|	|	|
3+25	0.0062	0.03	QV	|	|	|	|
3+30	0.0064	0.03	QV	|	|	|	|
3+35	0.0066	0.03	QV	|	|	|	|
3+40	0.0068	0.03	QV	|	|	|	|
3+45	0.0070	0.03	Q V	|	|	|	|
3+50	0.0072	0.03	Q V	|	|	|	|
3+55	0.0074	0.04	Q V	|	|	|	|
4+ 0	0.0077	0.04	Q V	|	|	|	|
4+ 5	0.0079	0.04	Q V	|	|	|	|
4+10	0.0082	0.04	Q V	|	|	|	|
4+15	0.0084	0.04	Q V	|	|	|	|
4+20	0.0087	0.04	Q V	|	|	|	|
4+25	0.0090	0.04	Q V	|	|	|	|
4+30	0.0092	0.04	Q V	|	|	|	|
4+35	0.0095	0.04	Q V	|	|	|	|
4+40	0.0098	0.04	Q V	|	|	|	|
4+45	0.0101	0.04	Q V	|	|	|	|
4+50	0.0104	0.04	Q V	|	|	|	|
4+55	0.0107	0.05	Q V	|	|	|	|
5+ 0	0.0111	0.05	Q V	|	|	|	|
5+ 5	0.0113	0.04	Q V	|	|	|	|
5+10	0.0116	0.04	Q V	|	|	|	|
5+15	0.0118	0.04	Q V	|	|	|	|
5+20	0.0121	0.04	Q V	|	|	|	|
5+25	0.0124	0.04	Q V	|	|	|	|
5+30	0.0127	0.04	Q V	|	|	|	|
5+35	0.0130	0.04	Q V	|	|	|	|
5+40	0.0133	0.05	Q V	|	|	|	|
5+45	0.0136	0.05	Q V	|	|	|	|
5+50	0.0139	0.05	Q V	|	|	|	|
5+55	0.0143	0.05	Q V	|	|	|	|
6+ 0	0.0146	0.05	Q V	|	|	|	|
6+ 5	0.0149	0.05	Q V	|	|	|	|
6+10	0.0153	0.05	Q V	|	|	|	|
6+15	0.0157	0.05	Q V	|	|	|	|
6+20	0.0160	0.05	Q V	|	|	|	|
6+25	0.0164	0.05	Q V	|	|	|	|
6+30	0.0168	0.05	Q V	|	|	|	|
6+35	0.0171	0.06	Q V	|	|	|	|
6+40	0.0176	0.06	Q V	|	|	|	|
6+45	0.0180	0.06	Q V	|	|	|	|
6+50	0.0184	0.06	Q V	|	|	|	|
6+55	0.0188	0.06	Q V	|	|	|	|
7+ 0	0.0192	0.06	Q V	|	|	|	|
7+ 5	0.0196	0.06	Q V	|	|	|	|
7+10	0.0200	0.06	Q V	|	|	|	|
7+15	0.0204	0.06	Q V	|	|	|	|

```
 7+20       0.0208      0.06  Q     V   |          |          |          |
 7+25       0.0213      0.06  Q     V   |          |          |          |
 7+30       0.0217      0.06  Q     V   |          |          |          |
 7+35       0.0222      0.07  Q     V   |          |          |          |
 7+40       0.0227      0.07  Q     V   |          |          |          |
 7+45       0.0232      0.07  Q     V   |          |          |          |
 7+50       0.0237      0.07  Q     V   |          |          |          |
 7+55       0.0242      0.08  Q      V  |          |          |          |
 8+ 0       0.0247      0.08  Q      V  |          |          |          |
 8+ 5       0.0253      0.08  Q      V  |          |          |          |
 8+10       0.0259      0.09  Q      V  |          |          |          |
 8+15       0.0265      0.09  Q      V  |          |          |          |
 8+20       0.0271      0.09  Q      V  |          |          |          |
 8+25       0.0277      0.09  Q       V |          |          |          |
 8+30       0.0283      0.09  Q       V |          |          |          |
 8+35       0.0290      0.09  Q       V |          |          |          |
 8+40       0.0296      0.09  Q       V |          |          |          |
 8+45       0.0303      0.09  Q       V |          |          |          |
 8+50       0.0309      0.10  Q        V|          |          |          |
 8+55       0.0316      0.10  Q        V|          |          |          |
 9+ 0       0.0323      0.10  Q        V|          |          |          |
 9+ 5       0.0331      0.11  Q        V|          |          |          |
 9+10       0.0338      0.11  Q        V|          |          |          |
 9+15       0.0346      0.11  Q         V          |          |          |
 9+20       0.0354      0.12  Q         V          |          |          |
 9+25       0.0362      0.12  Q         V          |          |          |
 9+30       0.0370      0.12  Q         V          |          |          |
 9+35       0.0378      0.12  Q         |V         |          |          |
 9+40       0.0387      0.12  Q         |V         |          |          |
 9+45       0.0396      0.12  Q         |V         |          |          |
 9+50       0.0404      0.13  Q         |V         |          |          |
 9+55       0.0413      0.13  Q         | V        |          |          |
10+ 0       0.0422      0.13  Q         | V        |          |          |
10+ 5       0.0429      0.11  Q         | V        |          |          |
10+10       0.0436      0.09  Q         | V        |          |          |
10+15       0.0442      0.09  Q         | V        |          |          |
10+20       0.0448      0.09  Q         |  V       |          |          |
10+25       0.0454      0.09  Q         |  V       |          |          |
10+30       0.0460      0.09  Q         |  V       |          |          |
10+35       0.0467      0.11  Q         |  V       |          |          |
10+40       0.0475      0.12  Q         |  V       |          |          |
10+45       0.0483      0.12  Q         |   V      |          |          |
10+50       0.0492      0.12  Q         |   V      |          |          |
10+55       0.0500      0.12  Q         |   V      |          |          |
11+ 0       0.0508      0.12  Q         |   V      |          |          |
11+ 5       0.0516      0.11  Q         |    V     |          |          |
11+10       0.0523      0.11  Q         |    V     |          |          |
11+15       0.0531      0.11  Q         |    V     |          |          |
11+20       0.0539      0.11  Q         |    V     |          |          |
11+25       0.0546      0.11  Q         |     V    |          |          |
```


11+30 0.0554 0.11 Q
11+35 0.0561 0.11 Q
11+40 0.0568 0.10 Q
11+45 0.0575 0.10 Q
11+50 0.0582 0.10 Q
11+55 0.0590 0.11 Q
12+ 0 0.0597 0.11 Q
12+ 5 0.0606 0.13 Q
12+10 0.0616 0.15 Q
12+15 0.0626 0.15 Q
12+20 0.0637 0.15 Q
12+25 0.0647 0.15 Q
12+30 0.0658 0.15 Q
12+35 0.0669 0.17 Q
12+40 0.0681 0.18 Q
12+45 0.0694 0.18 Q
12+50 0.0708 0.21 Q
12+55 0.0724 0.22 Q
13+ 0 0.0740 0.23 Q
13+ 5 0.0763 0.33 Q
13+10 0.0790 0.40 Q
13+15 0.0818 0.41 Q
13+20 0.0847 0.42 Q
13+25 0.0876 0.42 Q
13+30 0.0905 0.42 Q
13+35 0.0923 0.25 Q
13+40 0.0933 0.15 Q
13+45 0.0943 0.14 Q
13+50 0.0952 0.14 Q
13+55 0.0961 0.14 Q
14+ 0 0.0971 0.14 Q
14+ 5 0.0983 0.18 Q
14+10 0.0997 0.21 Q
14+15 0.1012 0.22 Q
14+20 0.1026 0.20 Q
14+25 0.1039 0.19 Q
14+30 0.1053 0.19 Q
14+35 0.1066 0.20 Q
14+40 0.1080 0.20 Q
14+45 0.1094 0.20 Q
14+50 0.1107 0.19 Q
14+55 0.1119 0.18 Q
15+ 0 0.1132 0.18 Q
15+ 5 0.1143 0.16 Q
15+10 0.1154 0.16 Q
15+15 0.1165 0.16 Q
15+20 0.1175 0.14 Q
15+25 0.1184 0.14 Q
15+30 0.1193 0.14 Q
15+35 0.1202 0.12 Q

15+40	0.1210	0.11	Q			V	
15+45	0.1217	0.11	Q			V	
15+50	0.1225	0.11	Q			V	
15+55	0.1233	0.11	Q			V	
16+ 0	0.1240	0.11	Q			V	
16+ 5	0.1245	0.06	Q			V	
16+10	0.1247	0.03	Q			V	
16+15	0.1248	0.02	Q			V	
16+20	0.1250	0.02	Q			V	
16+25	0.1251	0.02	Q			V	
16+30	0.1253	0.02	Q			V	
16+35	0.1254	0.02	Q			V	
16+40	0.1256	0.02	Q			V	
16+45	0.1257	0.02	Q			V	
16+50	0.1258	0.02	Q			V	
16+55	0.1259	0.02	Q			V	
17+ 0	0.1261	0.02	Q			V	
17+ 5	0.1262	0.02	Q			V	
17+10	0.1264	0.03	Q			V	
17+15	0.1266	0.03	Q			V	
17+20	0.1268	0.03	Q			V	
17+25	0.1270	0.03	Q			V	
17+30	0.1272	0.03	Q			V	
17+35	0.1274	0.03	Q			V	
17+40	0.1276	0.03	Q			V	
17+45	0.1278	0.03	Q			V	
17+50	0.1280	0.03	Q			V	
17+55	0.1282	0.02	Q			V	
18+ 0	0.1283	0.02	Q			V	
18+ 5	0.1285	0.02	Q			V	
18+10	0.1287	0.02	Q			V	
18+15	0.1288	0.02	Q			V	
18+20	0.1290	0.02	Q			V	
18+25	0.1292	0.02	Q			V	
18+30	0.1293	0.02	Q			V	
18+35	0.1295	0.02	Q			V	
18+40	0.1296	0.02	Q			V	
18+45	0.1297	0.02	Q			V	
18+50	0.1298	0.01	Q			V	
18+55	0.1299	0.01	Q			V	
19+ 0	0.1300	0.01	Q			V	
19+ 5	0.1301	0.02	Q			V	
19+10	0.1302	0.02	Q			V	
19+15	0.1303	0.02	Q			V	
19+20	0.1305	0.02	Q			V	
19+25	0.1306	0.02	Q			V	
19+30	0.1308	0.02	Q			V	
19+35	0.1309	0.02	Q			V	
19+40	0.1310	0.02	Q			V	
19+45	0.1312	0.02	Q			V	

```
19+50       0.1313      0.01  Q         |         |         |        V |
19+55       0.1313      0.01  Q         |         |         |        V |
20+ 0       0.1314      0.01  Q         |         |         |        V |
20+ 5       0.1315      0.02  Q         |         |         |        V |
20+10       0.1317      0.02  Q         |         |         |        V |
20+15       0.1318      0.02  Q         |         |         |        V |
20+20       0.1319      0.02  Q         |         |         |        V |
20+25       0.1320      0.02  Q         |         |         |        V |
20+30       0.1321      0.02  Q         |         |         |        V |
20+35       0.1323      0.02  Q         |         |         |        V |
20+40       0.1324      0.02  Q         |         |         |        V |
20+45       0.1325      0.02  Q         |         |         |        V |
20+50       0.1326      0.01  Q         |         |         |        V |
20+55       0.1327      0.01  Q         |         |         |        V |
21+ 0       0.1328      0.01  Q         |         |         |         V|
21+ 5       0.1329      0.02  Q         |         |         |         V|
21+10       0.1330      0.02  Q         |         |         |         V|
21+15       0.1331      0.02  Q         |         |         |         V|
21+20       0.1332      0.01  Q         |         |         |         V|
21+25       0.1333      0.01  Q         |         |         |         V|
21+30       0.1334      0.01  Q         |         |         |         V|
21+35       0.1335      0.02  Q         |         |         |         V|
21+40       0.1336      0.02  Q         |         |         |         V|
21+45       0.1337      0.02  Q         |         |         |         V|
21+50       0.1338      0.01  Q         |         |         |         V|
21+55       0.1339      0.01  Q         |         |         |         V|
22+ 0       0.1340      0.01  Q         |         |         |         V|
22+ 5       0.1341      0.02  Q         |         |         |         V|
22+10       0.1342      0.02  Q         |         |         |         V|
22+15       0.1343      0.02  Q         |         |         |         V|
22+20       0.1344      0.01  Q         |         |         |         V|
22+25       0.1345      0.01  Q         |         |         |         V|
22+30       0.1346      0.01  Q         |         |         |         V|
22+35       0.1347      0.01  Q         |         |         |         V|
22+40       0.1348      0.01  Q         |         |         |         V|
22+45       0.1348      0.01  Q         |         |         |         V|
22+50       0.1349      0.01  Q         |         |         |         V|
22+55       0.1350      0.01  Q         |         |         |         V|
23+ 0       0.1351      0.01  Q         |         |         |         V|
23+ 5       0.1352      0.01  Q         |         |         |         V|
23+10       0.1352      0.01  Q         |         |         |         V|
23+15       0.1353      0.01  Q         |         |         |         V|
23+20       0.1354      0.01  Q         |         |         |         V|
23+25       0.1355      0.01  Q         |         |         |         V|
23+30       0.1356      0.01  Q         |         |         |         V|
23+35       0.1357      0.01  Q         |         |         |         V|
23+40       0.1357      0.01  Q         |         |         |         V|
23+45       0.1358      0.01  Q         |         |         |         V|
23+50       0.1359      0.01  Q         |         |         |         V|
23+55       0.1360      0.01  Q         |         |         |         V|
```

```
   24+ 0       0.1361      0.01  Q         |         |         |        V|
   24+ 5       0.1361      0.00  Q         |         |         |        V|
   24+10       0.1361      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 08/16/23 File: ONSITEPOSTE31100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 100-YEAR 1-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            0.50                  1.25

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            1.30                  3.25

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

                U n i t  H y d r o g r a p h
                        VALLEY S-Curve
-----------------------------------------------------------------
                Unit Hydrograph Data
-----------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
-----------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
-----------------------------------------------------------------
```

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	3.30	0.515	0.343	(0.426)	0.172
2	0.17	4.20	0.655	0.343	(0.542)	0.313
3	0.25	4.40	0.686	0.343	(0.568)	0.344
4	0.33	4.80	0.749	0.343	(0.620)	0.406
5	0.42	5.20	0.811	0.343	(0.672)	0.469
6	0.50	6.20	0.967	0.343	(0.801)	0.625
7	0.58	6.80	1.061	0.343	(0.878)	0.718
8	0.67	8.80	1.373	0.343	(1.137)	1.030
9	0.75	13.90	2.168	0.343	(1.795)	1.826
10	0.83	31.40	4.898	0.343	(4.056)	4.556
11	0.92	7.20	1.123	0.343	(0.930)	0.781
12	1.00	3.80	0.593	0.343	(0.491)	0.250
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.5

Flood volume = Effective rainfall 0.96(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.34(In)
Total soil loss = 0.071(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 8688.1 Cubic Feet
Total soil loss = 3109.1 Cubic Feet

Peak flow rate of this hydrograph = 8.543(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	0.0018	0.26	VQ | | | |
0+10	0.0060	0.62	|VQ | | | |
0+15	0.0116	0.82	| VQ | | | |
0+20	0.0182	0.95	| Q | | | |
0+25	0.0258	1.11	| QV | | | |
0+30	0.0355	1.40	| Q V | | | |
0+35	0.0472	1.69	| Q V| | | |
0+40	0.0627	2.26	| Q| V | | |
0+45	0.0885	3.73	| | Q V | |
0+50	0.1473	8.54	| | | V| Q |
0+55	0.1854	5.53	| | | Q | V |

```
    1+ 0       0.1970      1.68  |     Q   |         |         |        V|
    1+ 5       0.1992      0.33  |Q        |         |         |        V|
    1+10       0.1995      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 08/16/23 File: ONSITEPOSTE33100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 100-YEAR 3-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            0.80                   2.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.00                   5.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 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	0.312	(0.343)	0.258	0.054
2	0.17	1.30	0.312	(0.343)	0.258	0.054
3	0.25	1.10	0.264	(0.343)	0.219	0.045
4	0.33	1.50	0.360	(0.343)	0.298	0.062
5	0.42	1.50	0.360	(0.343)	0.298	0.062
6	0.50	1.80	0.432	0.343	(0.358)	0.089
7	0.58	1.50	0.360	(0.343)	0.298	0.062
8	0.67	1.80	0.432	0.343	(0.358)	0.089
9	0.75	1.80	0.432	0.343	(0.358)	0.089
10	0.83	1.50	0.360	(0.343)	0.298	0.062
11	0.92	1.60	0.384	(0.343)	0.318	0.066
12	1.00	1.80	0.432	0.343	(0.358)	0.089
13	1.08	2.20	0.528	0.343	(0.437)	0.185
14	1.17	2.20	0.528	0.343	(0.437)	0.185
15	1.25	2.20	0.528	0.343	(0.437)	0.185
16	1.33	2.00	0.480	0.343	(0.397)	0.137
17	1.42	2.60	0.624	0.343	(0.517)	0.281
18	1.50	2.70	0.648	0.343	(0.537)	0.305
19	1.58	2.40	0.576	0.343	(0.477)	0.233
20	1.67	2.70	0.648	0.343	(0.537)	0.305
21	1.75	3.30	0.792	0.343	(0.656)	0.449
22	1.83	3.10	0.744	0.343	(0.616)	0.401
23	1.92	2.90	0.696	0.343	(0.576)	0.353
24	2.00	3.00	0.720	0.343	(0.596)	0.377
25	2.08	3.10	0.744	0.343	(0.616)	0.401
26	2.17	4.20	1.008	0.343	(0.835)	0.665
27	2.25	5.00	1.200	0.343	(0.994)	0.857
28	2.33	3.50	0.840	0.343	(0.696)	0.497
29	2.42	6.80	1.632	0.343	(1.351)	1.289
30	2.50	7.30	1.752	0.343	(1.451)	1.409
31	2.58	8.20	1.968	0.343	(1.629)	1.625
32	2.67	5.90	1.416	0.343	(1.172)	1.073
33	2.75	2.00	0.480	0.343	(0.397)	0.137
34	2.83	1.80	0.432	0.343	(0.358)	0.089
35	2.92	1.80	0.432	0.343	(0.358)	0.089
36	3.00	0.60	0.144	(0.343)	0.119	0.025
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	12.4

Flood volume = Effective rainfall 1.03(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.97(In)
Total soil loss = 0.202(Ac.Ft)
Total rainfall = 2.00(In)
Flood volume = 9365.9 Cubic Feet
Total soil loss = 8783.9 Cubic Feet

Peak flow rate of this hydrograph = 3.857(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	0.0005	0.08	Q				
0+10	0.0014	0.13	Q				
0+15	0.0023	0.12	Q				
0+20	0.0032	0.14	Q				
0+25	0.0043	0.15	Q				
0+30	0.0057	0.20	QV				
0+35	0.0069	0.18	QV				
0+40	0.0083	0.20	QV				
0+45	0.0098	0.22	QV				
0+50	0.0111	0.18	Q V				
0+55	0.0122	0.17	Q V				
1+ 0	0.0136	0.20	Q V				
1+ 5	0.0161	0.36	QV				
1+10	0.0192	0.45	Q V				
1+15	0.0225	0.47	Q V				
1+20	0.0252	0.40	Q V				
1+25	0.0291	0.57	Q V				
1+30	0.0341	0.73	Q V				
1+35	0.0386	0.66	Q V				
1+40	0.0435	0.70	Q V				
1+45	0.0502	0.97	Q V				
1+50	0.0574	1.04	Q V				
1+55	0.0639	0.95	Q V				
2+ 0	0.0703	0.93	Q V				
2+ 5	0.0771	0.98	Q V				
2+10	0.0867	1.40	Q V				
2+15	0.1000	1.93	Q V				
2+20	0.1110	1.60	Q V				
2+25	0.1281	2.47	Q V				
2+30	0.1510	3.32	Q V				
2+35	0.1775	3.86	Q V				
2+40	0.1999	3.25	Q V				
2+45	0.2095	1.39	Q V				
2+50	0.2123	0.40	Q V				
2+55	0.2139	0.23	Q V				
3+ 0	0.2148	0.13	Q V				
3+ 5	0.2150	0.03	Q V				
3+10	0.2150	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 08/16/23 File: ONSITEPOSTE36100.out

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

Program License Serial Number 4010

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 100-YEAR 6-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
Length along longest watercourse = 492.00(Ft.)
Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            1.20                  3.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            2.80                  7.00

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782              1.481
    2   0.167        642.954         35.978              0.906
    3   0.250        964.432          5.240              0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 The following loss rate calculations reflect use of the minimum calculated loss
```

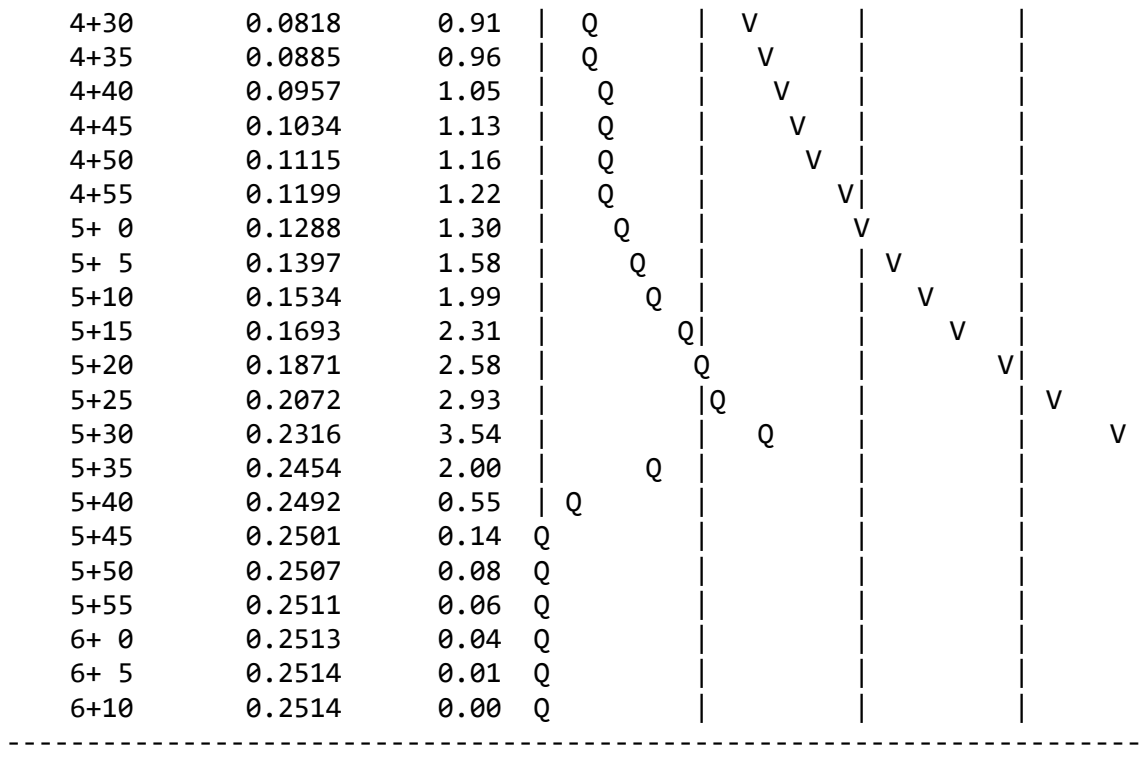
rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.168	(0.343)	0.139	0.029
2	0.17	0.60	0.202	(0.343)	0.167	0.035
3	0.25	0.60	0.202	(0.343)	0.167	0.035
4	0.33	0.60	0.202	(0.343)	0.167	0.035
5	0.42	0.60	0.202	(0.343)	0.167	0.035
6	0.50	0.70	0.235	(0.343)	0.195	0.040
7	0.58	0.70	0.235	(0.343)	0.195	0.040
8	0.67	0.70	0.235	(0.343)	0.195	0.040
9	0.75	0.70	0.235	(0.343)	0.195	0.040
10	0.83	0.70	0.235	(0.343)	0.195	0.040
11	0.92	0.70	0.235	(0.343)	0.195	0.040
12	1.00	0.80	0.269	(0.343)	0.223	0.046
13	1.08	0.80	0.269	(0.343)	0.223	0.046
14	1.17	0.80	0.269	(0.343)	0.223	0.046
15	1.25	0.80	0.269	(0.343)	0.223	0.046
16	1.33	0.80	0.269	(0.343)	0.223	0.046
17	1.42	0.80	0.269	(0.343)	0.223	0.046
18	1.50	0.80	0.269	(0.343)	0.223	0.046
19	1.58	0.80	0.269	(0.343)	0.223	0.046
20	1.67	0.80	0.269	(0.343)	0.223	0.046
21	1.75	0.80	0.269	(0.343)	0.223	0.046
22	1.83	0.80	0.269	(0.343)	0.223	0.046
23	1.92	0.80	0.269	(0.343)	0.223	0.046
24	2.00	0.90	0.302	(0.343)	0.250	0.052
25	2.08	0.80	0.269	(0.343)	0.223	0.046
26	2.17	0.90	0.302	(0.343)	0.250	0.052
27	2.25	0.90	0.302	(0.343)	0.250	0.052
28	2.33	0.90	0.302	(0.343)	0.250	0.052
29	2.42	0.90	0.302	(0.343)	0.250	0.052
30	2.50	0.90	0.302	(0.343)	0.250	0.052
31	2.58	0.90	0.302	(0.343)	0.250	0.052
32	2.67	0.90	0.302	(0.343)	0.250	0.052
33	2.75	1.00	0.336	(0.343)	0.278	0.058
34	2.83	1.00	0.336	(0.343)	0.278	0.058
35	2.92	1.00	0.336	(0.343)	0.278	0.058
36	3.00	1.00	0.336	(0.343)	0.278	0.058
37	3.08	1.00	0.336	(0.343)	0.278	0.058
38	3.17	1.10	0.370	(0.343)	0.306	0.064
39	3.25	1.10	0.370	(0.343)	0.306	0.064
40	3.33	1.10	0.370	(0.343)	0.306	0.064
41	3.42	1.20	0.403	(0.343)	0.334	0.069
42	3.50	1.30	0.437	0.343	(0.362)	0.094
43	3.58	1.40	0.470	0.343	(0.389)	0.128
44	3.67	1.40	0.470	0.343	(0.389)	0.128
45	3.75	1.50	0.504	0.343	(0.417)	0.161
46	3.83	1.50	0.504	0.343	(0.417)	0.161

```
47   3.92     1.60      0.538          0.343    (  0.445)        0.195
48   4.00     1.60      0.538          0.343    (  0.445)        0.195
49   4.08     1.70      0.571          0.343    (  0.473)        0.229
50   4.17     1.80      0.605          0.343    (  0.501)        0.262
51   4.25     1.90      0.638          0.343    (  0.529)        0.296
52   4.33     2.00      0.672          0.343    (  0.556)        0.329
53   4.42     2.10      0.706          0.343    (  0.584)        0.363
54   4.50     2.10      0.706          0.343    (  0.584)        0.363
55   4.58     2.20      0.739          0.343    (  0.612)        0.397
56   4.67     2.30      0.773          0.343    (  0.640)        0.430
57   4.75     2.40      0.806          0.343    (  0.668)        0.464
58   4.83     2.40      0.806          0.343    (  0.668)        0.464
59   4.92     2.50      0.840          0.343    (  0.696)        0.497
60   5.00     2.60      0.874          0.343    (  0.723)        0.531
61   5.08     3.10      1.042          0.343    (  0.862)        0.699
62   5.17     3.60      1.210          0.343    (  1.002)        0.867
63   5.25     3.90      1.310          0.343    (  1.085)        0.968
64   5.33     4.20      1.411          0.343    (  1.168)        1.069
65   5.42     4.70      1.579          0.343    (  1.308)        1.237
66   5.50     5.60      1.882          0.343    (  1.558)        1.539
67   5.58     1.90      0.638          0.343    (  0.529)        0.296
68   5.67     0.90      0.302       (  0.343)       0.250        0.052
69   5.75     0.60      0.202       (  0.343)       0.167        0.035
70   5.83     0.50      0.168       (  0.343)       0.139        0.029
71   5.92     0.30      0.101       (  0.343)       0.083        0.017
72   6.00     0.20      0.067       (  0.343)       0.056        0.012
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    14.5
      Flood volume = Effective rainfall      1.21(In)
       times area       2.5(Ac.)/[(In)/(Ft.)] =       0.3(Ac.Ft)
      Total soil loss =      1.59(In)
      Total soil loss =     0.332(Ac.Ft)
      Total rainfall =      2.80(In)
      Flood volume =       10951.9 Cubic Feet
      Total soil loss =       14457.9 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.543(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       0.0003      0.04  Q         |         |         |         |
  0+10       0.0008      0.08  Q         |         |         |         |
  0+15       0.0014      0.09  Q         |         |         |         |
```

```
0+20       0.0020      0.09  Q          |          |          |          |
0+25       0.0026      0.09  Q          |          |          |          |
0+30       0.0033      0.10  Q          |          |          |          |
0+35       0.0040      0.10  Q          |          |          |          |
0+40       0.0047      0.10  Q          |          |          |          |
0+45       0.0054      0.10  Q          |          |          |          |
0+50       0.0061      0.10  Q          |          |          |          |
0+55       0.0068      0.10  QV         |          |          |          |
1+ 0       0.0076      0.11  QV         |          |          |          |
1+ 5       0.0084      0.12  QV         |          |          |          |
1+10       0.0092      0.12  QV         |          |          |          |
1+15       0.0100      0.12  QV         |          |          |          |
1+20       0.0108      0.12  QV         |          |          |          |
1+25       0.0116      0.12  QV         |          |          |          |
1+30       0.0124      0.12  QV         |          |          |          |
1+35       0.0132      0.12  Q V        |          |          |          |
1+40       0.0140      0.12  Q V        |          |          |          |
1+45       0.0148      0.12  Q V        |          |          |          |
1+50       0.0156      0.12  Q V        |          |          |          |
1+55       0.0164      0.12  Q V        |          |          |          |
2+ 0       0.0172      0.13  Q V        |          |          |          |
2+ 5       0.0181      0.12  Q V        |          |          |          |
2+10       0.0189      0.13  Q  V       |          |          |          |
2+15       0.0198      0.13  Q  V       |          |          |          |
2+20       0.0208      0.13  Q  V       |          |          |          |
2+25       0.0217      0.13  Q  V       |          |          |          |
2+30       0.0226      0.13  Q  V       |          |          |          |
2+35       0.0235      0.13  Q  V       |          |          |          |
2+40       0.0244      0.13  Q  V       |          |          |          |
2+45       0.0253      0.14  Q   V      |          |          |          |
2+50       0.0263      0.14  Q   V      |          |          |          |
2+55       0.0273      0.15  Q   V      |          |          |          |
3+ 0       0.0283      0.15  Q   V      |          |          |          |
3+ 5       0.0293      0.15  Q   V      |          |          |          |
3+10       0.0304      0.15  Q   V      |          |          |          |
3+15       0.0315      0.16  Q    V     |          |          |          |
3+20       0.0326      0.16  Q    V     |          |          |          |
3+25       0.0338      0.17  Q    V     |          |          |          |
3+30       0.0352      0.21  Q    V     |          |          |          |
3+35       0.0372      0.28  |Q   V     |          |          |          |
3+40       0.0394      0.32  |Q    V    |          |          |          |
3+45       0.0419      0.37  |Q    V    |          |          |          |
3+50       0.0447      0.40  |Q     V   |          |          |          |
3+55       0.0478      0.46  |Q     V   |          |          |          |
4+ 0       0.0512      0.49  |Q      V  |          |          |          |
4+ 5       0.0549      0.54  | Q     V  |          |          |          |
4+10       0.0592      0.62  | Q      V|          |          |          |
4+15       0.0641      0.71  | Q       V          |          |          |
4+20       0.0695      0.79  |  Q      |V         |          |          |
4+25       0.0755      0.88  |  Q      | V        |          |          |
```


4+30 0.0818 0.91
4+35 0.0885 0.96
4+40 0.0957 1.05
4+45 0.1034 1.13
4+50 0.1115 1.16
4+55 0.1199 1.22
5+ 0 0.1288 1.30
5+ 5 0.1397 1.58
5+10 0.1534 1.99
5+15 0.1693 2.31
5+20 0.1871 2.58
5+25 0.2072 2.93
5+30 0.2316 3.54
5+35 0.2454 2.00
5+40 0.2492 0.55
5+45 0.2501 0.14
5+50 0.2507 0.08
5+55 0.2511 0.06
6+ 0 0.2513 0.04
6+ 5 0.2514 0.01
6+10 0.2514 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 08/16/23 File: ONSITEPOSTE324100.out

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

Program License Serial Number 4010

English (in-lb) Input Units Used
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English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-3
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE3.OUT- RSB

Drainage Area = 2.50(Ac.) = 0.004 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 2.50(Ac.) = 0.004 Sq. Mi.
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Length along longest watercourse measured to centroid = 165.00(Ft.)
Length along longest watercourse = 0.093 Mi.
Length along longest watercourse measured to centroid = 0.031 Mi.
Difference in elevation = 12.00(Ft.)
Slope along watercourse = 128.7805 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.026 Hr.
Lag time = 1.56 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]
        2.50            2.00                  5.00

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        2.50            5.40                 13.50

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    5.400(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     2.500           69.00         0.090
 Total Area Entered =      2.50(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                 Sum (F) =   0.343
Area averaged mean soil loss (F) (In/Hr) =  0.343
Minimum soil loss rate ((In/Hr)) =  0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.828
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083        321.477         58.782             1.481
    2   0.167        642.954         35.978             0.906
    3   0.250        964.432          5.240             0.132
                              Sum = 100.000   Sum=       2.520
------------------------------------------------------------------------

 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	0.043	(0.607)	0.036	0.007
2	0.17	0.07	0.043	(0.605)	0.036	0.007
3	0.25	0.07	0.043	(0.603)	0.036	0.007
4	0.33	0.10	0.065	(0.600)	0.054	0.011
5	0.42	0.10	0.065	(0.598)	0.054	0.011
6	0.50	0.10	0.065	(0.596)	0.054	0.011
7	0.58	0.10	0.065	(0.593)	0.054	0.011
8	0.67	0.10	0.065	(0.591)	0.054	0.011
9	0.75	0.10	0.065	(0.589)	0.054	0.011
10	0.83	0.13	0.086	(0.586)	0.072	0.015
11	0.92	0.13	0.086	(0.584)	0.072	0.015
12	1.00	0.13	0.086	(0.582)	0.072	0.015
13	1.08	0.10	0.065	(0.579)	0.054	0.011
14	1.17	0.10	0.065	(0.577)	0.054	0.011
15	1.25	0.10	0.065	(0.575)	0.054	0.011
16	1.33	0.10	0.065	(0.573)	0.054	0.011
17	1.42	0.10	0.065	(0.570)	0.054	0.011
18	1.50	0.10	0.065	(0.568)	0.054	0.011
19	1.58	0.10	0.065	(0.566)	0.054	0.011
20	1.67	0.10	0.065	(0.563)	0.054	0.011
21	1.75	0.10	0.065	(0.561)	0.054	0.011
22	1.83	0.13	0.086	(0.559)	0.072	0.015
23	1.92	0.13	0.086	(0.557)	0.072	0.015
24	2.00	0.13	0.086	(0.554)	0.072	0.015
25	2.08	0.13	0.086	(0.552)	0.072	0.015
26	2.17	0.13	0.086	(0.550)	0.072	0.015
27	2.25	0.13	0.086	(0.548)	0.072	0.015
28	2.33	0.13	0.086	(0.546)	0.072	0.015
29	2.42	0.13	0.086	(0.543)	0.072	0.015
30	2.50	0.13	0.086	(0.541)	0.072	0.015
31	2.58	0.17	0.108	(0.539)	0.089	0.019
32	2.67	0.17	0.108	(0.537)	0.089	0.019
33	2.75	0.17	0.108	(0.534)	0.089	0.019
34	2.83	0.17	0.108	(0.532)	0.089	0.019
35	2.92	0.17	0.108	(0.530)	0.089	0.019
36	3.00	0.17	0.108	(0.528)	0.089	0.019
37	3.08	0.17	0.108	(0.526)	0.089	0.019
38	3.17	0.17	0.108	(0.524)	0.089	0.019
39	3.25	0.17	0.108	(0.521)	0.089	0.019
40	3.33	0.17	0.108	(0.519)	0.089	0.019
41	3.42	0.17	0.108	(0.517)	0.089	0.019
42	3.50	0.17	0.108	(0.515)	0.089	0.019
43	3.58	0.17	0.108	(0.513)	0.089	0.019
44	3.67	0.17	0.108	(0.511)	0.089	0.019
45	3.75	0.17	0.108	(0.508)	0.089	0.019
46	3.83	0.20	0.130	(0.506)	0.107	0.022

47	3.92	0.20	0.130	(0.504)	0.107	0.022
48	4.00	0.20	0.130	(0.502)	0.107	0.022
49	4.08	0.20	0.130	(0.500)	0.107	0.022
50	4.17	0.20	0.130	(0.498)	0.107	0.022
51	4.25	0.20	0.130	(0.496)	0.107	0.022
52	4.33	0.23	0.151	(0.493)	0.125	0.026
53	4.42	0.23	0.151	(0.491)	0.125	0.026
54	4.50	0.23	0.151	(0.489)	0.125	0.026
55	4.58	0.23	0.151	(0.487)	0.125	0.026
56	4.67	0.23	0.151	(0.485)	0.125	0.026
57	4.75	0.23	0.151	(0.483)	0.125	0.026
58	4.83	0.27	0.173	(0.481)	0.143	0.030
59	4.92	0.27	0.173	(0.479)	0.143	0.030
60	5.00	0.27	0.173	(0.477)	0.143	0.030
61	5.08	0.20	0.130	(0.475)	0.107	0.022
62	5.17	0.20	0.130	(0.473)	0.107	0.022
63	5.25	0.20	0.130	(0.471)	0.107	0.022
64	5.33	0.23	0.151	(0.468)	0.125	0.026
65	5.42	0.23	0.151	(0.466)	0.125	0.026
66	5.50	0.23	0.151	(0.464)	0.125	0.026
67	5.58	0.27	0.173	(0.462)	0.143	0.030
68	5.67	0.27	0.173	(0.460)	0.143	0.030
69	5.75	0.27	0.173	(0.458)	0.143	0.030
70	5.83	0.27	0.173	(0.456)	0.143	0.030
71	5.92	0.27	0.173	(0.454)	0.143	0.030
72	6.00	0.27	0.173	(0.452)	0.143	0.030
73	6.08	0.30	0.194	(0.450)	0.161	0.033
74	6.17	0.30	0.194	(0.448)	0.161	0.033
75	6.25	0.30	0.194	(0.446)	0.161	0.033
76	6.33	0.30	0.194	(0.444)	0.161	0.033
77	6.42	0.30	0.194	(0.442)	0.161	0.033
78	6.50	0.30	0.194	(0.440)	0.161	0.033
79	6.58	0.33	0.216	(0.438)	0.179	0.037
80	6.67	0.33	0.216	(0.436)	0.179	0.037
81	6.75	0.33	0.216	(0.434)	0.179	0.037
82	6.83	0.33	0.216	(0.432)	0.179	0.037
83	6.92	0.33	0.216	(0.430)	0.179	0.037
84	7.00	0.33	0.216	(0.428)	0.179	0.037
85	7.08	0.33	0.216	(0.427)	0.179	0.037
86	7.17	0.33	0.216	(0.425)	0.179	0.037
87	7.25	0.33	0.216	(0.423)	0.179	0.037
88	7.33	0.37	0.238	(0.421)	0.197	0.041
89	7.42	0.37	0.238	(0.419)	0.197	0.041
90	7.50	0.37	0.238	(0.417)	0.197	0.041
91	7.58	0.40	0.259	(0.415)	0.215	0.045
92	7.67	0.40	0.259	(0.413)	0.215	0.045
93	7.75	0.40	0.259	(0.411)	0.215	0.045
94	7.83	0.43	0.281	(0.409)	0.233	0.048
95	7.92	0.43	0.281	(0.407)	0.233	0.048
96	8.00	0.43	0.281	(0.405)	0.233	0.048

97	8.08	0.50	0.324	(	0.404)	0.268		0.056
98	8.17	0.50	0.324	(	0.402)	0.268		0.056
99	8.25	0.50	0.324	(	0.400)	0.268		0.056
100	8.33	0.50	0.324	(	0.398)	0.268		0.056
101	8.42	0.50	0.324	(	0.396)	0.268		0.056
102	8.50	0.50	0.324	(	0.394)	0.268		0.056
103	8.58	0.53	0.346	(	0.392)	0.286		0.059
104	8.67	0.53	0.346	(	0.391)	0.286		0.059
105	8.75	0.53	0.346	(	0.389)	0.286		0.059
106	8.83	0.57	0.367	(	0.387)	0.304		0.063
107	8.92	0.57	0.367	(	0.385)	0.304		0.063
108	9.00	0.57	0.367	(	0.383)	0.304		0.063
109	9.08	0.63	0.410	(	0.381)	0.340		0.071
110	9.17	0.63	0.410	(	0.380)	0.340		0.071
111	9.25	0.63	0.410	(	0.378)	0.340		0.071
112	9.33	0.67	0.432	(	0.376)	0.358		0.074
113	9.42	0.67	0.432	(	0.374)	0.358		0.074
114	9.50	0.67	0.432	(	0.372)	0.358		0.074
115	9.58	0.70	0.454		0.371	(	0.376)	0.083
116	9.67	0.70	0.454		0.369	(	0.376)	0.085
117	9.75	0.70	0.454		0.367	(	0.376)	0.087
118	9.83	0.73	0.475		0.365	(	0.393)	0.110
119	9.92	0.73	0.475		0.364	(	0.393)	0.112
120	10.00	0.73	0.475		0.362	(	0.393)	0.113
121	10.08	0.50	0.324	(	0.360)	0.268		0.056
122	10.17	0.50	0.324	(	0.358)	0.268		0.056
123	10.25	0.50	0.324	(	0.357)	0.268		0.056
124	10.33	0.50	0.324	(	0.355)	0.268		0.056
125	10.42	0.50	0.324	(	0.353)	0.268		0.056
126	10.50	0.50	0.324	(	0.351)	0.268		0.056
127	10.58	0.67	0.432		0.350	(	0.358)	0.082
128	10.67	0.67	0.432		0.348	(	0.358)	0.084
129	10.75	0.67	0.432		0.346	(	0.358)	0.086
130	10.83	0.67	0.432		0.345	(	0.358)	0.087
131	10.92	0.67	0.432		0.343	(	0.358)	0.089
132	11.00	0.67	0.432		0.341	(	0.358)	0.091
133	11.08	0.63	0.410		0.339	(	0.340)	0.071
134	11.17	0.63	0.410		0.338	(	0.340)	0.073
135	11.25	0.63	0.410		0.336	(	0.340)	0.074
136	11.33	0.63	0.410		0.334	(	0.340)	0.076
137	11.42	0.63	0.410		0.333	(	0.340)	0.078
138	11.50	0.63	0.410		0.331	(	0.340)	0.079
139	11.58	0.57	0.367	(	0.330)	0.304		0.063
140	11.67	0.57	0.367	(	0.328)	0.304		0.063
141	11.75	0.57	0.367	(	0.326)	0.304		0.063
142	11.83	0.60	0.389	(	0.325)	0.322		0.067
143	11.92	0.60	0.389	(	0.323)	0.322		0.067
144	12.00	0.60	0.389		0.321	(	0.322)	0.067
145	12.08	0.83	0.540		0.320	(	0.447)	0.220
146	12.17	0.83	0.540		0.318	(	0.447)	0.222

147	12.25	0.83	0.540	0.317	(0.447)	0.223
148	12.33	0.87	0.562	0.315	(0.465)	0.247
149	12.42	0.87	0.562	0.313	(0.465)	0.248
150	12.50	0.87	0.562	0.312	(0.465)	0.250
151	12.58	0.93	0.605	0.310	(0.501)	0.294
152	12.67	0.93	0.605	0.309	(0.501)	0.296
153	12.75	0.93	0.605	0.307	(0.501)	0.298
154	12.83	0.97	0.626	0.306	(0.519)	0.321
155	12.92	0.97	0.626	0.304	(0.519)	0.322
156	13.00	0.97	0.626	0.303	(0.519)	0.324
157	13.08	1.13	0.734	0.301	(0.608)	0.433
158	13.17	1.13	0.734	0.299	(0.608)	0.435
159	13.25	1.13	0.734	0.298	(0.608)	0.436
160	13.33	1.13	0.734	0.296	(0.608)	0.438
161	13.42	1.13	0.734	0.295	(0.608)	0.439
162	13.50	1.13	0.734	0.293	(0.608)	0.441
163	13.58	0.77	0.497	0.292	(0.411)	0.205
164	13.67	0.77	0.497	0.290	(0.411)	0.206
165	13.75	0.77	0.497	0.289	(0.411)	0.208
166	13.83	0.77	0.497	0.288	(0.411)	0.209
167	13.92	0.77	0.497	0.286	(0.411)	0.211
168	14.00	0.77	0.497	0.285	(0.411)	0.212
169	14.08	0.90	0.583	0.283	(0.483)	0.300
170	14.17	0.90	0.583	0.282	(0.483)	0.302
171	14.25	0.90	0.583	0.280	(0.483)	0.303
172	14.33	0.87	0.562	0.279	(0.465)	0.283
173	14.42	0.87	0.562	0.277	(0.465)	0.284
174	14.50	0.87	0.562	0.276	(0.465)	0.286
175	14.58	0.87	0.562	0.275	(0.465)	0.287
176	14.67	0.87	0.562	0.273	(0.465)	0.288
177	14.75	0.87	0.562	0.272	(0.465)	0.290
178	14.83	0.83	0.540	0.270	(0.447)	0.270
179	14.92	0.83	0.540	0.269	(0.447)	0.271
180	15.00	0.83	0.540	0.268	(0.447)	0.272
181	15.08	0.80	0.518	0.266	(0.429)	0.252
182	15.17	0.80	0.518	0.265	(0.429)	0.254
183	15.25	0.80	0.518	0.263	(0.429)	0.255
184	15.33	0.77	0.497	0.262	(0.411)	0.235
185	15.42	0.77	0.497	0.261	(0.411)	0.236
186	15.50	0.77	0.497	0.259	(0.411)	0.237
187	15.58	0.63	0.410	0.258	(0.340)	0.152
188	15.67	0.63	0.410	0.257	(0.340)	0.154
189	15.75	0.63	0.410	0.255	(0.340)	0.155
190	15.83	0.63	0.410	0.254	(0.340)	0.156
191	15.92	0.63	0.410	0.253	(0.340)	0.158
192	16.00	0.63	0.410	0.252	(0.340)	0.159
193	16.08	0.13	0.086	(0.250)	0.072	0.015
194	16.17	0.13	0.086	(0.249)	0.072	0.015
195	16.25	0.13	0.086	(0.248)	0.072	0.015
196	16.33	0.13	0.086	(0.246)	0.072	0.015

197	16.42	0.13	0.086	(0.245)	0.072	0.015
198	16.50	0.13	0.086	(0.244)	0.072	0.015
199	16.58	0.10	0.065	(0.243)	0.054	0.011
200	16.67	0.10	0.065	(0.242)	0.054	0.011
201	16.75	0.10	0.065	(0.240)	0.054	0.011
202	16.83	0.10	0.065	(0.239)	0.054	0.011
203	16.92	0.10	0.065	(0.238)	0.054	0.011
204	17.00	0.10	0.065	(0.237)	0.054	0.011
205	17.08	0.17	0.108	(0.235)	0.089	0.019
206	17.17	0.17	0.108	(0.234)	0.089	0.019
207	17.25	0.17	0.108	(0.233)	0.089	0.019
208	17.33	0.17	0.108	(0.232)	0.089	0.019
209	17.42	0.17	0.108	(0.231)	0.089	0.019
210	17.50	0.17	0.108	(0.230)	0.089	0.019
211	17.58	0.17	0.108	(0.228)	0.089	0.019
212	17.67	0.17	0.108	(0.227)	0.089	0.019
213	17.75	0.17	0.108	(0.226)	0.089	0.019
214	17.83	0.13	0.086	(0.225)	0.072	0.015
215	17.92	0.13	0.086	(0.224)	0.072	0.015
216	18.00	0.13	0.086	(0.223)	0.072	0.015
217	18.08	0.13	0.086	(0.222)	0.072	0.015
218	18.17	0.13	0.086	(0.221)	0.072	0.015
219	18.25	0.13	0.086	(0.220)	0.072	0.015
220	18.33	0.13	0.086	(0.219)	0.072	0.015
221	18.42	0.13	0.086	(0.217)	0.072	0.015
222	18.50	0.13	0.086	(0.216)	0.072	0.015
223	18.58	0.10	0.065	(0.215)	0.054	0.011
224	18.67	0.10	0.065	(0.214)	0.054	0.011
225	18.75	0.10	0.065	(0.213)	0.054	0.011
226	18.83	0.07	0.043	(0.212)	0.036	0.007
227	18.92	0.07	0.043	(0.211)	0.036	0.007
228	19.00	0.07	0.043	(0.210)	0.036	0.007
229	19.08	0.10	0.065	(0.209)	0.054	0.011
230	19.17	0.10	0.065	(0.208)	0.054	0.011
231	19.25	0.10	0.065	(0.207)	0.054	0.011
232	19.33	0.13	0.086	(0.206)	0.072	0.015
233	19.42	0.13	0.086	(0.205)	0.072	0.015
234	19.50	0.13	0.086	(0.204)	0.072	0.015
235	19.58	0.10	0.065	(0.203)	0.054	0.011
236	19.67	0.10	0.065	(0.203)	0.054	0.011
237	19.75	0.10	0.065	(0.202)	0.054	0.011
238	19.83	0.07	0.043	(0.201)	0.036	0.007
239	19.92	0.07	0.043	(0.200)	0.036	0.007
240	20.00	0.07	0.043	(0.199)	0.036	0.007
241	20.08	0.10	0.065	(0.198)	0.054	0.011
242	20.17	0.10	0.065	(0.197)	0.054	0.011
243	20.25	0.10	0.065	(0.196)	0.054	0.011
244	20.33	0.10	0.065	(0.195)	0.054	0.011
245	20.42	0.10	0.065	(0.195)	0.054	0.011
246	20.50	0.10	0.065	(0.194)	0.054	0.011

247	20.58	0.10	0.065	(0.193)	0.054	0.011
248	20.67	0.10	0.065	(0.192)	0.054	0.011
249	20.75	0.10	0.065	(0.191)	0.054	0.011
250	20.83	0.07	0.043	(0.191)	0.036	0.007
251	20.92	0.07	0.043	(0.190)	0.036	0.007
252	21.00	0.07	0.043	(0.189)	0.036	0.007
253	21.08	0.10	0.065	(0.188)	0.054	0.011
254	21.17	0.10	0.065	(0.188)	0.054	0.011
255	21.25	0.10	0.065	(0.187)	0.054	0.011
256	21.33	0.07	0.043	(0.186)	0.036	0.007
257	21.42	0.07	0.043	(0.185)	0.036	0.007
258	21.50	0.07	0.043	(0.185)	0.036	0.007
259	21.58	0.10	0.065	(0.184)	0.054	0.011
260	21.67	0.10	0.065	(0.183)	0.054	0.011
261	21.75	0.10	0.065	(0.183)	0.054	0.011
262	21.83	0.07	0.043	(0.182)	0.036	0.007
263	21.92	0.07	0.043	(0.182)	0.036	0.007
264	22.00	0.07	0.043	(0.181)	0.036	0.007
265	22.08	0.10	0.065	(0.180)	0.054	0.011
266	22.17	0.10	0.065	(0.180)	0.054	0.011
267	22.25	0.10	0.065	(0.179)	0.054	0.011
268	22.33	0.07	0.043	(0.179)	0.036	0.007
269	22.42	0.07	0.043	(0.178)	0.036	0.007
270	22.50	0.07	0.043	(0.178)	0.036	0.007
271	22.58	0.07	0.043	(0.177)	0.036	0.007
272	22.67	0.07	0.043	(0.176)	0.036	0.007
273	22.75	0.07	0.043	(0.176)	0.036	0.007
274	22.83	0.07	0.043	(0.176)	0.036	0.007
275	22.92	0.07	0.043	(0.175)	0.036	0.007
276	23.00	0.07	0.043	(0.175)	0.036	0.007
277	23.08	0.07	0.043	(0.174)	0.036	0.007
278	23.17	0.07	0.043	(0.174)	0.036	0.007
279	23.25	0.07	0.043	(0.174)	0.036	0.007
280	23.33	0.07	0.043	(0.173)	0.036	0.007
281	23.42	0.07	0.043	(0.173)	0.036	0.007
282	23.50	0.07	0.043	(0.173)	0.036	0.007
283	23.58	0.07	0.043	(0.172)	0.036	0.007
284	23.67	0.07	0.043	(0.172)	0.036	0.007
285	23.75	0.07	0.043	(0.172)	0.036	0.007
286	23.83	0.07	0.043	(0.172)	0.036	0.007
287	23.92	0.07	0.043	(0.171)	0.036	0.007
288	24.00	0.07	0.043	(0.171)	0.036	0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 19.8

Flood volume = Effective rainfall 1.65(In)
times area 2.5(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 3.75(In)
Total soil loss = 0.782(Ac.Ft)
Total rainfall = 5.40(In)
Flood volume = 14937.8 Cubic Feet

Total soil loss = 34066.9 Cubic Feet

Peak flow rate of this hydrograph = 1.110(CFS)

++

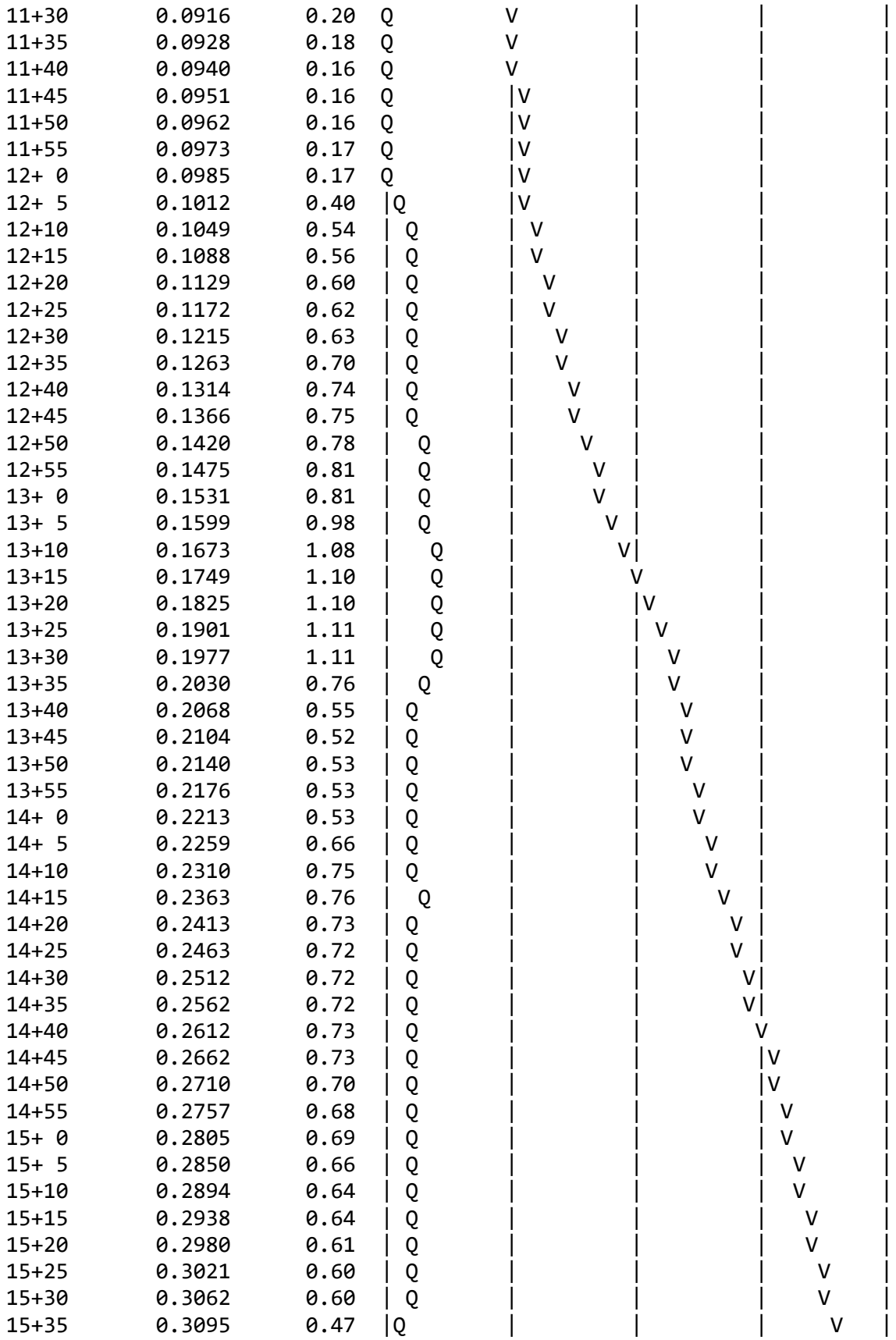
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q				
0+10	0.0002	0.02	Q				
0+15	0.0003	0.02	Q				
0+20	0.0005	0.02	Q				
0+25	0.0007	0.03	Q				
0+30	0.0009	0.03	Q				
0+35	0.0011	0.03	Q				
0+40	0.0013	0.03	Q				
0+45	0.0015	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	0.0024	0.03	Q				
1+10	0.0026	0.03	Q				
1+15	0.0028	0.03	Q				
1+20	0.0030	0.03	Q				
1+25	0.0032	0.03	Q				
1+30	0.0034	0.03	Q				
1+35	0.0036	0.03	Q				
1+40	0.0038	0.03	Q				
1+45	0.0040	0.03	Q				
1+50	0.0042	0.03	Q				
1+55	0.0045	0.04	Q				
2+ 0	0.0047	0.04	Q				
2+ 5	0.0050	0.04	Q				
2+10	0.0052	0.04	Q				
2+15	0.0055	0.04	Q				
2+20	0.0057	0.04	Q				
2+25	0.0060	0.04	Q				
2+30	0.0063	0.04	Q				
2+35	0.0066	0.04	Q				
2+40	0.0069	0.05	Q				
2+45	0.0072	0.05	Q				
2+50	0.0075	0.05	Q				
2+55	0.0078	0.05	Q				
3+ 0	0.0082	0.05	Q				
3+ 5	0.0085	0.05	Q				

3+10	0.0088	0.05	QV				
3+15	0.0091	0.05	QV				
3+20	0.0095	0.05	QV				
3+25	0.0098	0.05	QV				
3+30	0.0101	0.05	QV				
3+35	0.0104	0.05	QV				
3+40	0.0108	0.05	QV				
3+45	0.0111	0.05	QV				
3+50	0.0114	0.05	QV				
3+55	0.0118	0.06	QV				
4+ 0	0.0122	0.06	QV				
4+ 5	0.0126	0.06	QV				
4+10	0.0130	0.06	QV				
4+15	0.0134	0.06	QV				
4+20	0.0138	0.06	QV				
4+25	0.0142	0.07	QV				
4+30	0.0147	0.07	QV				
4+35	0.0151	0.07	QV				
4+40	0.0156	0.07	QV				
4+45	0.0160	0.07	QV				
4+50	0.0165	0.07	QV				
4+55	0.0170	0.07	QV				
5+ 0	0.0176	0.07	Q V				
5+ 5	0.0180	0.06	Q V				
5+10	0.0184	0.06	Q V				
5+15	0.0188	0.06	Q V				
5+20	0.0192	0.06	Q V				
5+25	0.0197	0.07	Q V				
5+30	0.0201	0.07	Q V				
5+35	0.0206	0.07	Q V				
5+40	0.0211	0.07	Q V				
5+45	0.0216	0.07	Q V				
5+50	0.0221	0.07	Q V				
5+55	0.0227	0.07	Q V				
6+ 0	0.0232	0.07	Q V				
6+ 5	0.0237	0.08	Q V				
6+10	0.0243	0.08	Q V				
6+15	0.0249	0.08	Q V				
6+20	0.0255	0.08	Q V				
6+25	0.0260	0.08	Q V				
6+30	0.0266	0.08	Q V				
6+35	0.0272	0.09	Q V				
6+40	0.0279	0.09	Q V				
6+45	0.0285	0.09	Q V				
6+50	0.0292	0.09	Q V				
6+55	0.0298	0.09	Q V				
7+ 0	0.0305	0.09	Q V				
7+ 5	0.0311	0.09	Q V				
7+10	0.0318	0.09	Q V				
7+15	0.0324	0.09	Q V				

7+20	0.0331	0.10	Q	V	|	|	|	|
7+25	0.0338	0.10	Q	V	|	|	|	|
7+30	0.0345	0.10	Q	V	|	|	|	|
7+35	0.0352	0.11	Q	V	|	|	|	|
7+40	0.0360	0.11	Q	V	|	|	|	|
7+45	0.0368	0.11	Q	V	|	|	|	|
7+50	0.0376	0.12	Q	V	|	|	|	|
7+55	0.0384	0.12	Q	V	|	|	|	|
8+ 0	0.0393	0.12	Q	V	|	|	|	|
8+ 5	0.0402	0.13	Q	V	|	|	|	|
8+10	0.0412	0.14	Q	V	|	|	|	|
8+15	0.0421	0.14	Q	V	|	|	|	|
8+20	0.0431	0.14	Q	V	|	|	|	|
8+25	0.0441	0.14	Q	V	|	|	|	|
8+30	0.0450	0.14	Q	V	|	|	|	|
8+35	0.0460	0.15	Q	V	|	|	|	|
8+40	0.0471	0.15	Q	V	|	|	|	|
8+45	0.0481	0.15	Q	V	|	|	|	|
8+50	0.0492	0.16	Q	V	|	|	|	|
8+55	0.0503	0.16	Q	V	|	|	|	|
9+ 0	0.0513	0.16	Q	V	|	|	|	|
9+ 5	0.0525	0.17	Q	V	|	|	|	|
9+10	0.0537	0.18	Q	V	|	|	|	|
9+15	0.0550	0.18	Q	V	|	|	|	|
9+20	0.0562	0.18	Q	V	|	|	|	|
9+25	0.0575	0.19	Q	V	|	|	|	|
9+30	0.0588	0.19	Q	V	|	|	|	|
9+35	0.0602	0.20	Q	V	|	|	|	|
9+40	0.0616	0.21	Q	V	|	|	|	|
9+45	0.0631	0.22	Q	V	|	|	|	|
9+50	0.0649	0.25	|Q	V	|	|	|	|
9+55	0.0668	0.28	|Q	V	|	|	|	|
10+ 0	0.0687	0.28	|Q	V	|	|	|	|
10+ 5	0.0701	0.20	Q	V	|	|	|	|
10+10	0.0711	0.15	Q	V	|	|	|	|
10+15	0.0721	0.14	Q	V	|	|	|	|
10+20	0.0731	0.14	Q	V	|	|	|	|
10+25	0.0740	0.14	Q	V	|	|	|	|
10+30	0.0750	0.14	Q	V	|	|	|	|
10+35	0.0762	0.18	Q	V	|	|	|	|
10+40	0.0777	0.21	Q	V	|	|	|	|
10+45	0.0791	0.21	Q	V	|	|	|	|
10+50	0.0806	0.22	Q	V	|	|	|	|
10+55	0.0822	0.22	Q	V	|	|	|	|
11+ 0	0.0837	0.23	Q	V	|	|	|	|
11+ 5	0.0851	0.20	Q	V	|	|	|	|
11+10	0.0864	0.18	Q	V	|	|	|	|
11+15	0.0876	0.19	Q	V	|	|	|	|
11+20	0.0889	0.19	Q	V	|	|	|	|
11+25	0.0903	0.19	Q	V	|	|	|	|



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15+40       0.3122      0.40  |Q        |         |         |     V   |
15+45       0.3149      0.39  |Q        |         |         |     V   |
15+50       0.3176      0.39  |Q        |         |         |      V  |
15+55       0.3203      0.40  |Q        |         |         |      V  |
16+ 0       0.3231      0.40  |Q        |         |         |      V  |
16+ 5       0.3244      0.19  Q         |         |         |      V  |
16+10       0.3247      0.06  Q         |         |         |      V  |
16+15       0.3250      0.04  Q         |         |         |      V  |
16+20       0.3253      0.04  Q         |         |         |      V  |
16+25       0.3255      0.04  Q         |         |         |      V  |
16+30       0.3258      0.04  Q         |         |         |      V  |
16+35       0.3260      0.03  Q         |         |         |       V |
16+40       0.3262      0.03  Q         |         |         |       V |
16+45       0.3264      0.03  Q         |         |         |       V |
16+50       0.3266      0.03  Q         |         |         |       V |
16+55       0.3268      0.03  Q         |         |         |       V |
17+ 0       0.3270      0.03  Q         |         |         |       V |
17+ 5       0.3272      0.04  Q         |         |         |       V |
17+10       0.3276      0.05  Q         |         |         |       V |
17+15       0.3279      0.05  Q         |         |         |       V |
17+20       0.3282      0.05  Q         |         |         |       V |
17+25       0.3285      0.05  Q         |         |         |       V |
17+30       0.3288      0.05  Q         |         |         |       V |
17+35       0.3292      0.05  Q         |         |         |       V |
17+40       0.3295      0.05  Q         |         |         |       V |
17+45       0.3298      0.05  Q         |         |         |       V |
17+50       0.3301      0.04  Q         |         |         |       V |
17+55       0.3304      0.04  Q         |         |         |       V |
18+ 0       0.3306      0.04  Q         |         |         |       V |
18+ 5       0.3309      0.04  Q         |         |         |       V |
18+10       0.3311      0.04  Q         |         |         |       V |
18+15       0.3314      0.04  Q         |         |         |       V |
18+20       0.3316      0.04  Q         |         |         |       V |
18+25       0.3319      0.04  Q         |         |         |       V |
18+30       0.3322      0.04  Q         |         |         |       V |
18+35       0.3324      0.03  Q         |         |         |       V |
18+40       0.3326      0.03  Q         |         |         |       V |
18+45       0.3328      0.03  Q         |         |         |       V |
18+50       0.3329      0.02  Q         |         |         |       V |
18+55       0.3331      0.02  Q         |         |         |       V |
19+ 0       0.3332      0.02  Q         |         |         |       V |
19+ 5       0.3334      0.02  Q         |         |         |       V |
19+10       0.3335      0.03  Q         |         |         |       V |
19+15       0.3337      0.03  Q         |         |         |       V |
19+20       0.3340      0.03  Q         |         |         |       V |
19+25       0.3342      0.04  Q         |         |         |       V |
19+30       0.3345      0.04  Q         |         |         |        V|
19+35       0.3347      0.03  Q         |         |         |        V|
19+40       0.3349      0.03  Q         |         |         |        V|
19+45       0.3351      0.03  Q         |         |         |        V|
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19+50	0.3353	0.02	Q	|	|	|	V|
19+55	0.3354	0.02	Q	|	|	|	V|
20+ 0	0.3355	0.02	Q	|	|	|	V|
20+ 5	0.3357	0.02	Q	|	|	|	V|
20+10	0.3359	0.03	Q	|	|	|	V|
20+15	0.3361	0.03	Q	|	|	|	V|
20+20	0.3363	0.03	Q	|	|	|	V|
20+25	0.3365	0.03	Q	|	|	|	V|
20+30	0.3366	0.03	Q	|	|	|	V|
20+35	0.3368	0.03	Q	|	|	|	V|
20+40	0.3370	0.03	Q	|	|	|	V|
20+45	0.3372	0.03	Q	|	|	|	V|
20+50	0.3374	0.02	Q	|	|	|	V|
20+55	0.3375	0.02	Q	|	|	|	V|
21+ 0	0.3376	0.02	Q	|	|	|	V|
21+ 5	0.3378	0.02	Q	|	|	|	V|
21+10	0.3380	0.03	Q	|	|	|	V|
21+15	0.3382	0.03	Q	|	|	|	V|
21+20	0.3383	0.02	Q	|	|	|	V|
21+25	0.3385	0.02	Q	|	|	|	V|
21+30	0.3386	0.02	Q	|	|	|	V|
21+35	0.3388	0.02	Q	|	|	|	V|
21+40	0.3390	0.03	Q	|	|	|	V|
21+45	0.3392	0.03	Q	|	|	|	V|
21+50	0.3393	0.02	Q	|	|	|	V|
21+55	0.3394	0.02	Q	|	|	|	V|
22+ 0	0.3396	0.02	Q	|	|	|	V|
22+ 5	0.3397	0.02	Q	|	|	|	V|
22+10	0.3399	0.03	Q	|	|	|	V|
22+15	0.3401	0.03	Q	|	|	|	V|
22+20	0.3403	0.02	Q	|	|	|	V|
22+25	0.3404	0.02	Q	|	|	|	V|
22+30	0.3405	0.02	Q	|	|	|	V|
22+35	0.3407	0.02	Q	|	|	|	V|
22+40	0.3408	0.02	Q	|	|	|	V|
22+45	0.3409	0.02	Q	|	|	|	V|
22+50	0.3411	0.02	Q	|	|	|	V|
22+55	0.3412	0.02	Q	|	|	|	V|
23+ 0	0.3413	0.02	Q	|	|	|	V|
23+ 5	0.3414	0.02	Q	|	|	|	V|
23+10	0.3416	0.02	Q	|	|	|	V|
23+15	0.3417	0.02	Q	|	|	|	V|
23+20	0.3418	0.02	Q	|	|	|	V|
23+25	0.3420	0.02	Q	|	|	|	V|
23+30	0.3421	0.02	Q	|	|	|	V|
23+35	0.3422	0.02	Q	|	|	|	V|
23+40	0.3423	0.02	Q	|	|	|	V|
23+45	0.3425	0.02	Q	|	|	|	V|
23+50	0.3426	0.02	Q	|	|	|	V|
23+55	0.3427	0.02	Q	|	|	|	V|

```
   24+ 0       0.3429      0.02  Q         |         |         |        V|
   24+ 5       0.3429      0.01  Q         |         |         |        V|
   24+10       0.3429      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 - 2018, Version 9.0
Study date 03/12/24 File: ONSITEPOSTE4242.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 2-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

69.0	49.8	0.574	0.090	0.527	1.000	0.527
					Sum (F) =	0.527

Area averaged mean soil loss (F) (In/Hr) = 0.527
Minimum soil loss rate ((In/Hr)) = 0.264
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.828

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	256.307	51.705	0.313
2	0.167	512.614	39.667	0.240
3	0.250	768.921	6.818	0.041
4	0.333	1025.227	1.810	0.011
			Sum = 100.000	Sum= 0.605

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	0.016	(0.935)	0.013	0.003
2	0.17	0.07	0.016	(0.931)	0.013	0.003
3	0.25	0.07	0.016	(0.928)	0.013	0.003
4	0.33	0.10	0.024	(0.924)	0.020	0.004
5	0.42	0.10	0.024	(0.921)	0.020	0.004
6	0.50	0.10	0.024	(0.917)	0.020	0.004
7	0.58	0.10	0.024	(0.913)	0.020	0.004
8	0.67	0.10	0.024	(0.910)	0.020	0.004
9	0.75	0.10	0.024	(0.906)	0.020	0.004
10	0.83	0.13	0.032	(0.903)	0.026	0.006
11	0.92	0.13	0.032	(0.899)	0.026	0.006
12	1.00	0.13	0.032	(0.896)	0.026	0.006
13	1.08	0.10	0.024	(0.892)	0.020	0.004
14	1.17	0.10	0.024	(0.889)	0.020	0.004
15	1.25	0.10	0.024	(0.885)	0.020	0.004
16	1.33	0.10	0.024	(0.882)	0.020	0.004
17	1.42	0.10	0.024	(0.878)	0.020	0.004
18	1.50	0.10	0.024	(0.875)	0.020	0.004
19	1.58	0.10	0.024	(0.871)	0.020	0.004
20	1.67	0.10	0.024	(0.868)	0.020	0.004
21	1.75	0.10	0.024	(0.864)	0.020	0.004
22	1.83	0.13	0.032	(0.861)	0.026	0.006
23	1.92	0.13	0.032	(0.857)	0.026	0.006
24	2.00	0.13	0.032	(0.854)	0.026	0.006
25	2.08	0.13	0.032	(0.850)	0.026	0.006
26	2.17	0.13	0.032	(0.847)	0.026	0.006
27	2.25	0.13	0.032	(0.843)	0.026	0.006
28	2.33	0.13	0.032	(0.840)	0.026	0.006
29	2.42	0.13	0.032	(0.836)	0.026	0.006
30	2.50	0.13	0.032	(0.833)	0.026	0.006
31	2.58	0.17	0.040	(0.830)	0.033	0.007
32	2.67	0.17	0.040	(0.826)	0.033	0.007
33	2.75	0.17	0.040	(0.823)	0.033	0.007
34	2.83	0.17	0.040	(0.819)	0.033	0.007
35	2.92	0.17	0.040	(0.816)	0.033	0.007
36	3.00	0.17	0.040	(0.813)	0.033	0.007
37	3.08	0.17	0.040	(0.809)	0.033	0.007
38	3.17	0.17	0.040	(0.806)	0.033	0.007
39	3.25	0.17	0.040	(0.803)	0.033	0.007
40	3.33	0.17	0.040	(0.799)	0.033	0.007
41	3.42	0.17	0.040	(0.796)	0.033	0.007
42	3.50	0.17	0.040	(0.793)	0.033	0.007
43	3.58	0.17	0.040	(0.789)	0.033	0.007
44	3.67	0.17	0.040	(0.786)	0.033	0.007
45	3.75	0.17	0.040	(0.783)	0.033	0.007
46	3.83	0.20	0.048	(0.779)	0.040	0.008

47	3.92	0.20	0.048	(0.776)	0.040	0.008
48	4.00	0.20	0.048	(0.773)	0.040	0.008
49	4.08	0.20	0.048	(0.770)	0.040	0.008
50	4.17	0.20	0.048	(0.766)	0.040	0.008
51	4.25	0.20	0.048	(0.763)	0.040	0.008
52	4.33	0.23	0.056	(0.760)	0.046	0.010
53	4.42	0.23	0.056	(0.756)	0.046	0.010
54	4.50	0.23	0.056	(0.753)	0.046	0.010
55	4.58	0.23	0.056	(0.750)	0.046	0.010
56	4.67	0.23	0.056	(0.747)	0.046	0.010
57	4.75	0.23	0.056	(0.744)	0.046	0.010
58	4.83	0.27	0.064	(0.740)	0.053	0.011
59	4.92	0.27	0.064	(0.737)	0.053	0.011
60	5.00	0.27	0.064	(0.734)	0.053	0.011
61	5.08	0.20	0.048	(0.731)	0.040	0.008
62	5.17	0.20	0.048	(0.728)	0.040	0.008
63	5.25	0.20	0.048	(0.724)	0.040	0.008
64	5.33	0.23	0.056	(0.721)	0.046	0.010
65	5.42	0.23	0.056	(0.718)	0.046	0.010
66	5.50	0.23	0.056	(0.715)	0.046	0.010
67	5.58	0.27	0.064	(0.712)	0.053	0.011
68	5.67	0.27	0.064	(0.709)	0.053	0.011
69	5.75	0.27	0.064	(0.706)	0.053	0.011
70	5.83	0.27	0.064	(0.702)	0.053	0.011
71	5.92	0.27	0.064	(0.699)	0.053	0.011
72	6.00	0.27	0.064	(0.696)	0.053	0.011
73	6.08	0.30	0.072	(0.693)	0.060	0.012
74	6.17	0.30	0.072	(0.690)	0.060	0.012
75	6.25	0.30	0.072	(0.687)	0.060	0.012
76	6.33	0.30	0.072	(0.684)	0.060	0.012
77	6.42	0.30	0.072	(0.681)	0.060	0.012
78	6.50	0.30	0.072	(0.678)	0.060	0.012
79	6.58	0.33	0.080	(0.675)	0.066	0.014
80	6.67	0.33	0.080	(0.672)	0.066	0.014
81	6.75	0.33	0.080	(0.669)	0.066	0.014
82	6.83	0.33	0.080	(0.666)	0.066	0.014
83	6.92	0.33	0.080	(0.663)	0.066	0.014
84	7.00	0.33	0.080	(0.660)	0.066	0.014
85	7.08	0.33	0.080	(0.657)	0.066	0.014
86	7.17	0.33	0.080	(0.654)	0.066	0.014
87	7.25	0.33	0.080	(0.651)	0.066	0.014
88	7.33	0.37	0.088	(0.648)	0.073	0.015
89	7.42	0.37	0.088	(0.645)	0.073	0.015
90	7.50	0.37	0.088	(0.642)	0.073	0.015
91	7.58	0.40	0.096	(0.639)	0.079	0.017
92	7.67	0.40	0.096	(0.636)	0.079	0.017
93	7.75	0.40	0.096	(0.633)	0.079	0.017
94	7.83	0.43	0.104	(0.630)	0.086	0.018
95	7.92	0.43	0.104	(0.627)	0.086	0.018
96	8.00	0.43	0.104	(0.624)	0.086	0.018
97	8.08	0.50	0.120	(0.621)	0.099	0.021
98	8.17	0.50	0.120	(0.618)	0.099	0.021
99	8.25	0.50	0.120	(0.616)	0.099	0.021
100	8.33	0.50	0.120	(0.613)	0.099	0.021
101	8.42	0.50	0.120	(0.610)	0.099	0.021
102	8.50	0.50	0.120	(0.607)	0.099	0.021
103	8.58	0.53	0.128	(0.604)	0.106	0.022
104	8.67	0.53	0.128	(0.601)	0.106	0.022
105	8.75	0.53	0.128	(0.598)	0.106	0.022
106	8.83	0.57	0.136	(0.596)	0.113	0.023
107	8.92	0.57	0.136	(0.593)	0.113	0.023
108	9.00	0.57	0.136	(0.590)	0.113	0.023
109	9.08	0.63	0.152	(0.587)	0.126	0.026
110	9.17	0.63	0.152	(0.584)	0.126	0.026
111	9.25	0.63	0.152	(0.582)	0.126	0.026
112	9.33	0.67	0.160	(0.579)	0.132	0.028
113	9.42	0.67	0.160	(0.576)	0.132	0.028
114	9.50	0.67	0.160	(0.573)	0.132	0.028
115	9.58	0.70	0.168	(0.571)	0.139	0.029
116	9.67	0.70	0.168	(0.568)	0.139	0.029
117	9.75	0.70	0.168	(0.565)	0.139	0.029
118	9.83	0.73	0.176	(0.562)	0.146	0.030
119	9.92	0.73	0.176	(0.560)	0.146	0.030
120	10.00	0.73	0.176	(0.557)	0.146	0.030
121	10.08	0.50	0.120	(0.554)	0.099	0.021

122	10.17	0.50	0.120	(0.552)	0.099	0.021
123	10.25	0.50	0.120	(0.549)	0.099	0.021
124	10.33	0.50	0.120	(0.546)	0.099	0.021
125	10.42	0.50	0.120	(0.544)	0.099	0.021
126	10.50	0.50	0.120	(0.541)	0.099	0.021
127	10.58	0.67	0.160	(0.538)	0.132	0.028
128	10.67	0.67	0.160	(0.536)	0.132	0.028
129	10.75	0.67	0.160	(0.533)	0.132	0.028
130	10.83	0.67	0.160	(0.530)	0.132	0.028
131	10.92	0.67	0.160	(0.528)	0.132	0.028
132	11.00	0.67	0.160	(0.525)	0.132	0.028
133	11.08	0.63	0.152	(0.523)	0.126	0.026
134	11.17	0.63	0.152	(0.520)	0.126	0.026
135	11.25	0.63	0.152	(0.518)	0.126	0.026
136	11.33	0.63	0.152	(0.515)	0.126	0.026
137	11.42	0.63	0.152	(0.512)	0.126	0.026
138	11.50	0.63	0.152	(0.510)	0.126	0.026
139	11.58	0.57	0.136	(0.507)	0.113	0.023
140	11.67	0.57	0.136	(0.505)	0.113	0.023
141	11.75	0.57	0.136	(0.502)	0.113	0.023
142	11.83	0.60	0.144	(0.500)	0.119	0.025
143	11.92	0.60	0.144	(0.497)	0.119	0.025
144	12.00	0.60	0.144	(0.495)	0.119	0.025
145	12.08	0.83	0.200	(0.492)	0.166	0.034
146	12.17	0.83	0.200	(0.490)	0.166	0.034
147	12.25	0.83	0.200	(0.487)	0.166	0.034
148	12.33	0.87	0.208	(0.485)	0.172	0.036
149	12.42	0.87	0.208	(0.483)	0.172	0.036
150	12.50	0.87	0.208	(0.480)	0.172	0.036
151	12.58	0.93	0.224	(0.478)	0.185	0.039
152	12.67	0.93	0.224	(0.475)	0.185	0.039
153	12.75	0.93	0.224	(0.473)	0.185	0.039
154	12.83	0.97	0.232	(0.471)	0.192	0.040
155	12.92	0.97	0.232	(0.468)	0.192	0.040
156	13.00	0.97	0.232	(0.466)	0.192	0.040
157	13.08	1.13	0.272	(0.463)	0.225	0.047
158	13.17	1.13	0.272	(0.461)	0.225	0.047
159	13.25	1.13	0.272	(0.459)	0.225	0.047
160	13.33	1.13	0.272	(0.456)	0.225	0.047
161	13.42	1.13	0.272	(0.454)	0.225	0.047
162	13.50	1.13	0.272	(0.452)	0.225	0.047
163	13.58	0.77	0.184	(0.449)	0.152	0.032
164	13.67	0.77	0.184	(0.447)	0.152	0.032
165	13.75	0.77	0.184	(0.445)	0.152	0.032
166	13.83	0.77	0.184	(0.443)	0.152	0.032
167	13.92	0.77	0.184	(0.440)	0.152	0.032
168	14.00	0.77	0.184	(0.438)	0.152	0.032
169	14.08	0.90	0.216	(0.436)	0.179	0.037
170	14.17	0.90	0.216	(0.434)	0.179	0.037
171	14.25	0.90	0.216	(0.431)	0.179	0.037
172	14.33	0.87	0.208	(0.429)	0.172	0.036
173	14.42	0.87	0.208	(0.427)	0.172	0.036
174	14.50	0.87	0.208	(0.425)	0.172	0.036
175	14.58	0.87	0.208	(0.423)	0.172	0.036
176	14.67	0.87	0.208	(0.421)	0.172	0.036
177	14.75	0.87	0.208	(0.418)	0.172	0.036
178	14.83	0.83	0.200	(0.416)	0.166	0.034
179	14.92	0.83	0.200	(0.414)	0.166	0.034
180	15.00	0.83	0.200	(0.412)	0.166	0.034
181	15.08	0.80	0.192	(0.410)	0.159	0.033
182	15.17	0.80	0.192	(0.408)	0.159	0.033
183	15.25	0.80	0.192	(0.406)	0.159	0.033
184	15.33	0.77	0.184	(0.404)	0.152	0.032
185	15.42	0.77	0.184	(0.402)	0.152	0.032
186	15.50	0.77	0.184	(0.399)	0.152	0.032
187	15.58	0.63	0.152	(0.397)	0.126	0.026
188	15.67	0.63	0.152	(0.395)	0.126	0.026
189	15.75	0.63	0.152	(0.393)	0.126	0.026
190	15.83	0.63	0.152	(0.391)	0.126	0.026
191	15.92	0.63	0.152	(0.389)	0.126	0.026
192	16.00	0.63	0.152	(0.387)	0.126	0.026
193	16.08	0.13	0.032	(0.385)	0.026	0.006
194	16.17	0.13	0.032	(0.383)	0.026	0.006
195	16.25	0.13	0.032	(0.381)	0.026	0.006
196	16.33	0.13	0.032	(0.379)	0.026	0.006

197	16.42	0.13	0.032	(0.378)	0.026	0.006
198	16.50	0.13	0.032	(0.376)	0.026	0.006
199	16.58	0.10	0.024	(0.374)	0.020	0.004
200	16.67	0.10	0.024	(0.372)	0.020	0.004
201	16.75	0.10	0.024	(0.370)	0.020	0.004
202	16.83	0.10	0.024	(0.368)	0.020	0.004
203	16.92	0.10	0.024	(0.366)	0.020	0.004
204	17.00	0.10	0.024	(0.364)	0.020	0.004
205	17.08	0.17	0.040	(0.363)	0.033	0.007
206	17.17	0.17	0.040	(0.361)	0.033	0.007
207	17.25	0.17	0.040	(0.359)	0.033	0.007
208	17.33	0.17	0.040	(0.357)	0.033	0.007
209	17.42	0.17	0.040	(0.355)	0.033	0.007
210	17.50	0.17	0.040	(0.353)	0.033	0.007
211	17.58	0.17	0.040	(0.352)	0.033	0.007
212	17.67	0.17	0.040	(0.350)	0.033	0.007
213	17.75	0.17	0.040	(0.348)	0.033	0.007
214	17.83	0.13	0.032	(0.347)	0.026	0.006
215	17.92	0.13	0.032	(0.345)	0.026	0.006
216	18.00	0.13	0.032	(0.343)	0.026	0.006
217	18.08	0.13	0.032	(0.341)	0.026	0.006
218	18.17	0.13	0.032	(0.340)	0.026	0.006
219	18.25	0.13	0.032	(0.338)	0.026	0.006
220	18.33	0.13	0.032	(0.336)	0.026	0.006
221	18.42	0.13	0.032	(0.335)	0.026	0.006
222	18.50	0.13	0.032	(0.333)	0.026	0.006
223	18.58	0.10	0.024	(0.332)	0.020	0.004
224	18.67	0.10	0.024	(0.330)	0.020	0.004
225	18.75	0.10	0.024	(0.328)	0.020	0.004
226	18.83	0.07	0.016	(0.327)	0.013	0.003
227	18.92	0.07	0.016	(0.325)	0.013	0.003
228	19.00	0.07	0.016	(0.324)	0.013	0.003
229	19.08	0.10	0.024	(0.322)	0.020	0.004
230	19.17	0.10	0.024	(0.321)	0.020	0.004
231	19.25	0.10	0.024	(0.319)	0.020	0.004
232	19.33	0.13	0.032	(0.318)	0.026	0.006
233	19.42	0.13	0.032	(0.316)	0.026	0.006
234	19.50	0.13	0.032	(0.315)	0.026	0.006
235	19.58	0.10	0.024	(0.313)	0.020	0.004
236	19.67	0.10	0.024	(0.312)	0.020	0.004
237	19.75	0.10	0.024	(0.310)	0.020	0.004
238	19.83	0.07	0.016	(0.309)	0.013	0.003
239	19.92	0.07	0.016	(0.308)	0.013	0.003
240	20.00	0.07	0.016	(0.306)	0.013	0.003
241	20.08	0.10	0.024	(0.305)	0.020	0.004
242	20.17	0.10	0.024	(0.304)	0.020	0.004
243	20.25	0.10	0.024	(0.302)	0.020	0.004
244	20.33	0.10	0.024	(0.301)	0.020	0.004
245	20.42	0.10	0.024	(0.300)	0.020	0.004
246	20.50	0.10	0.024	(0.298)	0.020	0.004
247	20.58	0.10	0.024	(0.297)	0.020	0.004
248	20.67	0.10	0.024	(0.296)	0.020	0.004
249	20.75	0.10	0.024	(0.295)	0.020	0.004
250	20.83	0.07	0.016	(0.293)	0.013	0.003
251	20.92	0.07	0.016	(0.292)	0.013	0.003
252	21.00	0.07	0.016	(0.291)	0.013	0.003
253	21.08	0.10	0.024	(0.290)	0.020	0.004
254	21.17	0.10	0.024	(0.289)	0.020	0.004
255	21.25	0.10	0.024	(0.288)	0.020	0.004
256	21.33	0.07	0.016	(0.287)	0.013	0.003
257	21.42	0.07	0.016	(0.286)	0.013	0.003
258	21.50	0.07	0.016	(0.284)	0.013	0.003
259	21.58	0.10	0.024	(0.283)	0.020	0.004
260	21.67	0.10	0.024	(0.282)	0.020	0.004
261	21.75	0.10	0.024	(0.281)	0.020	0.004
262	21.83	0.07	0.016	(0.280)	0.013	0.003
263	21.92	0.07	0.016	(0.279)	0.013	0.003
264	22.00	0.07	0.016	(0.279)	0.013	0.003
265	22.08	0.10	0.024	(0.278)	0.020	0.004
266	22.17	0.10	0.024	(0.277)	0.020	0.004
267	22.25	0.10	0.024	(0.276)	0.020	0.004
268	22.33	0.07	0.016	(0.275)	0.013	0.003
269	22.42	0.07	0.016	(0.274)	0.013	0.003
270	22.50	0.07	0.016	(0.273)	0.013	0.003
271	22.58	0.07	0.016	(0.272)	0.013	0.003

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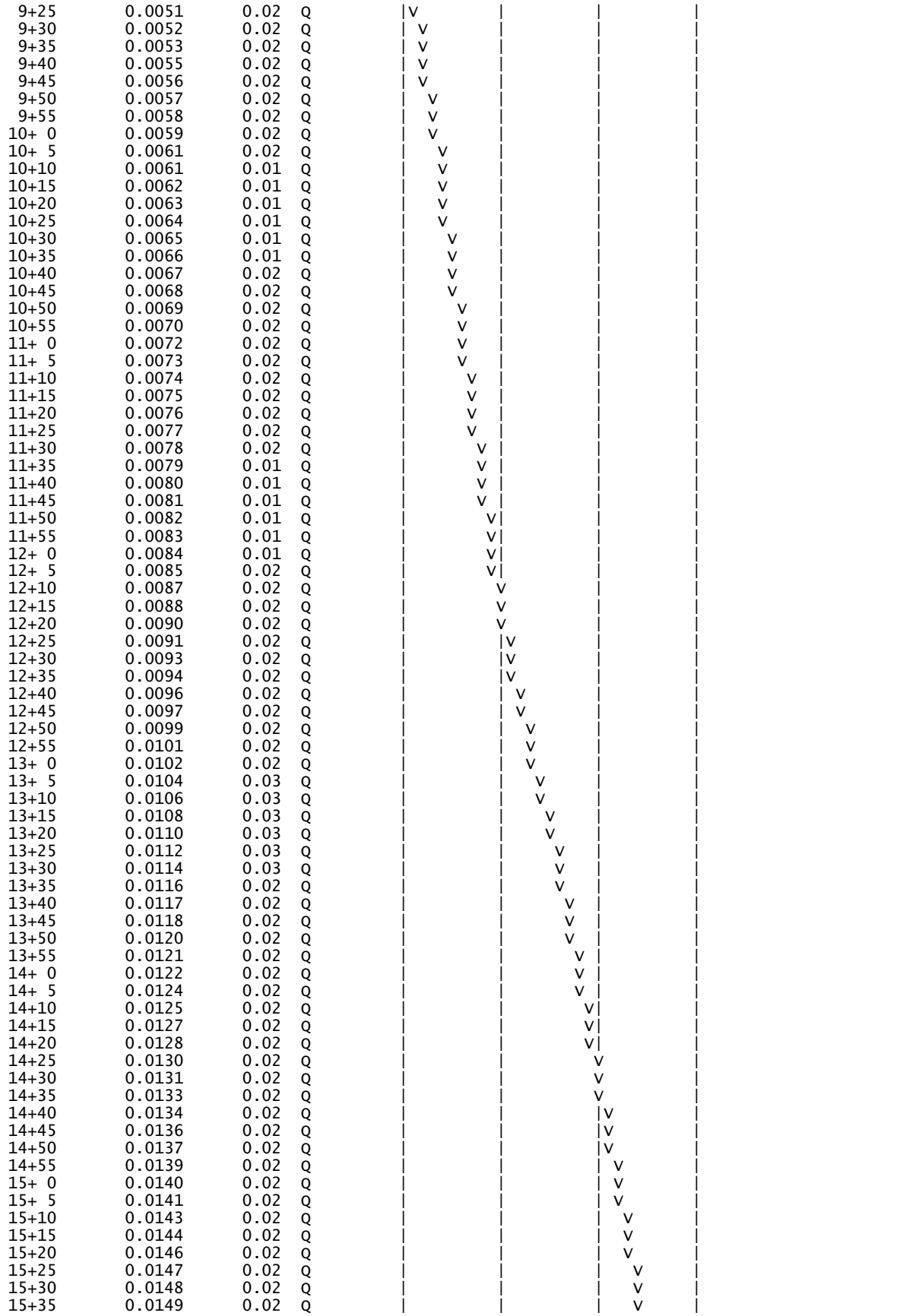
272  22.67     0.07      0.016       (  0.272)       0.013        0.003
273  22.75     0.07      0.016       (  0.271)       0.013        0.003
274  22.83     0.07      0.016       (  0.270)       0.013        0.003
275  22.92     0.07      0.016       (  0.270)       0.013        0.003
276  23.00     0.07      0.016       (  0.269)       0.013        0.003
277  23.08     0.07      0.016       (  0.268)       0.013        0.003
278  23.17     0.07      0.016       (  0.268)       0.013        0.003
279  23.25     0.07      0.016       (  0.267)       0.013        0.003
280  23.33     0.07      0.016       (  0.267)       0.013        0.003
281  23.42     0.07      0.016       (  0.266)       0.013        0.003
282  23.50     0.07      0.016       (  0.266)       0.013        0.003
283  23.58     0.07      0.016       (  0.265)       0.013        0.003
284  23.67     0.07      0.016       (  0.265)       0.013        0.003
285  23.75     0.07      0.016       (  0.264)       0.013        0.003
286  23.83     0.07      0.016       (  0.264)       0.013        0.003
287  23.92     0.07      0.016       (  0.264)       0.013        0.003
288  24.00     0.07      0.016       (  0.264)       0.013        0.003
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     4.1
      Flood volume = Effective rainfall      0.34(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
      Total soil loss =      1.66(In)
      Total soil loss =     0.083(Ac.Ft)
      Total rainfall =      2.00(In)
      Flood volume =         749.2 Cubic Feet
      Total soil loss =        3606.8 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.028(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q          |         |         |         |
   0+10       0.0000      0.00  Q          |         |         |         |
   0+15       0.0000      0.00  Q          |         |         |         |
   0+20       0.0000      0.00  Q          |         |         |         |
   0+25       0.0001      0.00  Q          |         |         |         |
   0+30       0.0001      0.00  Q          |         |         |         |
   0+35       0.0001      0.00  Q          |         |         |         |
   0+40       0.0001      0.00  Q          |         |         |         |
   0+45       0.0001      0.00  Q          |         |         |         |
   0+50       0.0001      0.00  Q          |         |         |         |
   0+55       0.0002      0.00  Q          |         |         |         |
   1+ 0       0.0002      0.00  Q          |         |         |         |
   1+ 5       0.0002      0.00  Q          |         |         |         |
   1+10       0.0002      0.00  Q          |         |         |         |
   1+15       0.0002      0.00  Q          |         |         |         |
   1+20       0.0003      0.00  Q          |         |         |         |
   1+25       0.0003      0.00  Q          |         |         |         |
   1+30       0.0003      0.00  Q          |         |         |         |
   1+35       0.0003      0.00  Q          |         |         |         |
   1+40       0.0003      0.00  Q          |         |         |         |
   1+45       0.0004      0.00  Q          |         |         |         |
   1+50       0.0004      0.00  Q          |         |         |         |
   1+55       0.0004      0.00  Q          |         |         |         |
   2+ 0       0.0004      0.00  Q          |         |         |         |
   2+ 5       0.0004      0.00  QV         |         |         |         |
   2+10       0.0005      0.00  QV         |         |         |         |
   2+15       0.0005      0.00  QV         |         |         |         |
   2+20       0.0005      0.00  QV         |         |         |         |
   2+25       0.0005      0.00  QV         |         |         |         |
   2+30       0.0006      0.00  QV         |         |         |         |
   2+35       0.0006      0.00  QV         |         |         |         |
   2+40       0.0006      0.00  QV         |         |         |         |
   2+45       0.0006      0.00  QV         |         |         |         |
   2+50       0.0007      0.00  QV         |         |         |         |
   2+55       0.0007      0.00  QV         |         |         |         |
   3+ 0       0.0007      0.00  QV         |         |         |         |
   3+ 5       0.0008      0.00  QV         |         |         |         |
```

```
3+10       0.0008      0.00  QV        |         |         |         |
3+15       0.0008      0.00  QV        |         |         |         |
3+20       0.0008      0.00  QV        |         |         |         |
3+25       0.0009      0.00  Q V       |         |         |         |
3+30       0.0009      0.00  Q V       |         |         |         |
3+35       0.0009      0.00  Q V       |         |         |         |
3+40       0.0010      0.00  Q V       |         |         |         |
3+45       0.0010      0.00  Q V       |         |         |         |
3+50       0.0010      0.00  Q V       |         |         |         |
3+55       0.0010      0.00  Q V       |         |         |         |
4+ 0       0.0011      0.00  Q V       |         |         |         |
4+ 5       0.0011      0.00  Q V       |         |         |         |
4+10       0.0011      0.00  Q V       |         |         |         |
4+15       0.0012      0.00  Q V       |         |         |         |
4+20       0.0012      0.01  Q V       |         |         |         |
4+25       0.0013      0.01  Q V       |         |         |         |
4+30       0.0013      0.01  Q  V      |         |         |         |
4+35       0.0013      0.01  Q  V      |         |         |         |
4+40       0.0014      0.01  Q  V      |         |         |         |
4+45       0.0014      0.01  Q  V      |         |         |         |
4+50       0.0015      0.01  Q  V      |         |         |         |
4+55       0.0015      0.01  Q  V      |         |         |         |
5+ 0       0.0016      0.01  Q  V      |         |         |         |
5+ 5       0.0016      0.01  Q  V      |         |         |         |
5+10       0.0016      0.01  Q  V      |         |         |         |
5+15       0.0017      0.01  Q  V      |         |         |         |
5+20       0.0017      0.01  Q  V      |         |         |         |
5+25       0.0017      0.01  Q   V     |         |         |         |
5+30       0.0018      0.01  Q   V     |         |         |         |
5+35       0.0018      0.01  Q   V     |         |         |         |
5+40       0.0019      0.01  Q   V     |         |         |         |
5+45       0.0019      0.01  Q   V     |         |         |         |
5+50       0.0020      0.01  Q   V     |         |         |         |
5+55       0.0020      0.01  Q   V     |         |         |         |
6+ 0       0.0021      0.01  Q   V     |         |         |         |
6+ 5       0.0021      0.01  Q   V     |         |         |         |
6+10       0.0022      0.01  Q    V    |         |         |         |
6+15       0.0022      0.01  Q    V    |         |         |         |
6+20       0.0023      0.01  Q    V    |         |         |         |
6+25       0.0023      0.01  Q    V    |         |         |         |
6+30       0.0024      0.01  Q    V    |         |         |         |
6+35       0.0024      0.01  Q    V    |         |         |         |
6+40       0.0025      0.01  Q    V    |         |         |         |
6+45       0.0025      0.01  Q    V    |         |         |         |
6+50       0.0026      0.01  Q     V   |         |         |         |
6+55       0.0026      0.01  Q     V   |         |         |         |
7+ 0       0.0027      0.01  Q     V   |         |         |         |
7+ 5       0.0028      0.01  Q     V   |         |         |         |
7+10       0.0028      0.01  Q     V   |         |         |         |
7+15       0.0029      0.01  Q     V   |         |         |         |
7+20       0.0029      0.01  Q     V   |         |         |         |
7+25       0.0030      0.01  Q     V   |         |         |         |
7+30       0.0031      0.01  Q      V  |         |         |         |
7+35       0.0031      0.01  Q      V  |         |         |         |
7+40       0.0032      0.01  Q      V  |         |         |         |
7+45       0.0033      0.01  Q      V  |         |         |         |
7+50       0.0033      0.01  Q      V  |         |         |         |
7+55       0.0034      0.01  Q      V  |         |         |         |
8+ 0       0.0035      0.01  Q       V |         |         |         |
8+ 5       0.0036      0.01  Q       V |         |         |         |
8+10       0.0036      0.01  Q       V |         |         |         |
8+15       0.0037      0.01  Q       V |         |         |         |
8+20       0.0038      0.01  Q       V |         |         |         |
8+25       0.0039      0.01  Q        V|         |         |         |
8+30       0.0040      0.01  Q        V|         |         |         |
8+35       0.0041      0.01  Q        V|         |         |         |
8+40       0.0042      0.01  Q        V|         |         |         |
8+45       0.0043      0.01  Q        V|         |         |         |
8+50       0.0044      0.01  Q         V         |         |         |
8+55       0.0045      0.01  Q         V         |         |         |
9+ 0       0.0046      0.01  Q         V         |         |         |
9+ 5       0.0047      0.02  Q         V         |         |         |
9+10       0.0048      0.02  Q         |V        |         |         |
9+15       0.0049      0.02  Q         |V        |         |         |
9+20       0.0050      0.02  Q         |V        |         |         |
```



```
15+40       0.0150      0.02  Q          |          |          |   V      |
15+45       0.0152      0.02  Q          |          |          |    V     |
15+50       0.0153      0.02  Q          |          |          |    V     |
15+55       0.0154      0.02  Q          |          |          |    V     |
16+ 0       0.0155      0.02  Q          |          |          |     V    |
16+ 5       0.0155      0.01  Q          |          |          |     V    |
16+10       0.0156      0.00  Q          |          |          |     V    |
16+15       0.0156      0.00  Q          |          |          |     V    |
16+20       0.0156      0.00  Q          |          |          |     V    |
16+25       0.0156      0.00  Q          |          |          |     V    |
16+30       0.0157      0.00  Q          |          |          |     V    |
16+35       0.0157      0.00  Q          |          |          |     V    |
16+40       0.0157      0.00  Q          |          |          |     V    |
16+45       0.0157      0.00  Q          |          |          |     V    |
16+50       0.0157      0.00  Q          |          |          |     V    |
16+55       0.0158      0.00  Q          |          |          |     V    |
17+ 0       0.0158      0.00  Q          |          |          |     V    |
17+ 5       0.0158      0.00  Q          |          |          |     V    |
17+10       0.0158      0.00  Q          |          |          |     V    |
17+15       0.0159      0.00  Q          |          |          |     V    |
17+20       0.0159      0.00  Q          |          |          |     V    |
17+25       0.0159      0.00  Q          |          |          |      V   |
17+30       0.0159      0.00  Q          |          |          |      V   |
17+35       0.0160      0.00  Q          |          |          |      V   |
17+40       0.0160      0.00  Q          |          |          |      V   |
17+45       0.0160      0.00  Q          |          |          |      V   |
17+50       0.0161      0.00  Q          |          |          |      V   |
17+55       0.0161      0.00  Q          |          |          |      V   |
18+ 0       0.0161      0.00  Q          |          |          |      V   |
18+ 5       0.0161      0.00  Q          |          |          |      V   |
18+10       0.0161      0.00  Q          |          |          |      V   |
18+15       0.0162      0.00  Q          |          |          |      V   |
18+20       0.0162      0.00  Q          |          |          |      V   |
18+25       0.0162      0.00  Q          |          |          |      V   |
18+30       0.0162      0.00  Q          |          |          |      V   |
18+35       0.0163      0.00  Q          |          |          |      V   |
18+40       0.0163      0.00  Q          |          |          |      V   |
18+45       0.0163      0.00  Q          |          |          |      V   |
18+50       0.0163      0.00  Q          |          |          |      V   |
18+55       0.0163      0.00  Q          |          |          |      V   |
19+ 0       0.0163      0.00  Q          |          |          |      V   |
19+ 5       0.0163      0.00  Q          |          |          |       V  |
19+10       0.0164      0.00  Q          |          |          |       V  |
19+15       0.0164      0.00  Q          |          |          |       V  |
19+20       0.0164      0.00  Q          |          |          |       V  |
19+25       0.0164      0.00  Q          |          |          |       V  |
19+30       0.0164      0.00  Q          |          |          |       V  |
19+35       0.0165      0.00  Q          |          |          |       V  |
19+40       0.0165      0.00  Q          |          |          |       V  |
19+45       0.0165      0.00  Q          |          |          |       V  |
19+50       0.0165      0.00  Q          |          |          |       V  |
19+55       0.0165      0.00  Q          |          |          |       V  |
20+ 0       0.0165      0.00  Q          |          |          |       V  |
20+ 5       0.0166      0.00  Q          |          |          |       V  |
20+10       0.0166      0.00  Q          |          |          |       V  |
20+15       0.0166      0.00  Q          |          |          |       V  |
20+20       0.0166      0.00  Q          |          |          |       V  |
20+25       0.0166      0.00  Q          |          |          |       V  |
20+30       0.0166      0.00  Q          |          |          |       V  |
20+35       0.0167      0.00  Q          |          |          |       V  |
20+40       0.0167      0.00  Q          |          |          |       V  |
20+45       0.0167      0.00  Q          |          |          |       V  |
20+50       0.0167      0.00  Q          |          |          |       V  |
20+55       0.0167      0.00  Q          |          |          |       V  |
21+ 0       0.0167      0.00  Q          |          |          |       V  |
21+ 5       0.0167      0.00  Q          |          |          |       V  |
21+10       0.0168      0.00  Q          |          |          |       V  |
21+15       0.0168      0.00  Q          |          |          |        V |
21+20       0.0168      0.00  Q          |          |          |        V |
21+25       0.0168      0.00  Q          |          |          |        V |
21+30       0.0168      0.00  Q          |          |          |        V |
21+35       0.0168      0.00  Q          |          |          |        V |
21+40       0.0168      0.00  Q          |          |          |        V |
21+45       0.0169      0.00  Q          |          |          |        V |
21+50       0.0169      0.00  Q          |          |          |        V |
```

```
  21+55       0.0169      0.00  Q          |          |          |         v|
  22+ 0       0.0169      0.00  Q          |          |          |         v|
  22+ 5       0.0169      0.00  Q          |          |          |         v|
  22+10       0.0169      0.00  Q          |          |          |         v|
  22+15       0.0169      0.00  Q          |          |          |         v|
  22+20       0.0170      0.00  Q          |          |          |         v|
  22+25       0.0170      0.00  Q          |          |          |         v|
  22+30       0.0170      0.00  Q          |          |          |         v|
  22+35       0.0170      0.00  Q          |          |          |         v|
  22+40       0.0170      0.00  Q          |          |          |         v|
  22+45       0.0170      0.00  Q          |          |          |         v|
  22+50       0.0170      0.00  Q          |          |          |         v|
  22+55       0.0170      0.00  Q          |          |          |         v|
  23+ 0       0.0171      0.00  Q          |          |          |         v|
  23+ 5       0.0171      0.00  Q          |          |          |         v|
  23+10       0.0171      0.00  Q          |          |          |         v|
  23+15       0.0171      0.00  Q          |          |          |         v|
  23+20       0.0171      0.00  Q          |          |          |         v|
  23+25       0.0171      0.00  Q          |          |          |         v|
  23+30       0.0171      0.00  Q          |          |          |         v|
  23+35       0.0171      0.00  Q          |          |          |         v|
  23+40       0.0171      0.00  Q          |          |          |         v|
  23+45       0.0172      0.00  Q          |          |          |         v|
  23+50       0.0172      0.00  Q          |          |          |         v|
  23+55       0.0172      0.00  Q          |          |          |         v|
  24+ 0       0.0172      0.00  Q          |          |          |         v|
  24+ 5       0.0172      0.00  Q          |          |          |         v|
  24+10       0.0172      0.00  Q          |          |          |         v|
  24+15       0.0172      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

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2018, Version 9.0
Study date 03/12/24 File: ONSITEPOSTE4110.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	0.50	0.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	1.30	0.78

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 0.829(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 0.829(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                        Sum (F) =   0.343
      Area averaged mean soil loss (F) (In/Hr) =  0.343
      Minimum soil loss rate ((In/Hr)) =  0.171
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.828
      ------------------------------------------------------------------------
      Slope of intensity-duration curve for a 1 hour storm =0.5500
      ------------------------------------------------------------------------

                  U n i t  H y d r o g r a p h
                         VALLEY S-Curve
      ------------------------------------------------------------------------
                  Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083        256.307         51.705             0.313
          2   0.167        512.614         39.667             0.240
          3   0.250        768.921          6.818             0.041
          4   0.333       1025.227          1.810             0.011
                                  Sum = 100.000   Sum=        0.605
------------------------------------------------------------------------

 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   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
   1   0.08     3.30      0.328       (  0.343)       0.272        0.056
   2   0.17     4.20      0.418          0.343    (  0.346)        0.075
   3   0.25     4.40      0.438          0.343    (  0.362)        0.095
   4   0.33     4.80      0.478          0.343    (  0.395)        0.135
   5   0.42     5.20      0.517          0.343    (  0.428)        0.175
   6   0.50     6.20      0.617          0.343    (  0.511)        0.274
   7   0.58     6.80      0.677          0.343    (  0.560)        0.334
   8   0.67     8.80      0.876          0.343    (  0.725)        0.533
   9   0.75    13.90      1.383          0.343    (  1.145)        1.040
  10   0.83    31.40      3.124          0.343    (  2.587)        2.782
  11   0.92     7.20      0.716          0.343    (  0.593)        0.374
  12   1.00     3.80      0.378       (  0.343)       0.313        0.065
             (Loss Rate Not Used)
     Sum =     100.0                                  Sum =     5.9
        Flood volume = Effective rainfall      0.49(In)
         times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
        Total soil loss =      0.33(In)
        Total soil loss =     0.017(Ac.Ft)
        Total rainfall =      0.83(In)
        Flood volume =        1077.8 Cubic Feet
        Total soil loss =         728.0 Cubic Feet
        ------------------------------------------------------------------------
         Peak flow rate of this hydrograph =      1.145(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       0.0001      0.02  Q          |         |         |         |
    0+10       0.0004      0.04  Q          |         |         |         |
    0+15       0.0007      0.05  QV         |         |         |         |
    0+20       0.0012      0.07  QV         |         |         |         |
    0+25       0.0018      0.09  Q V        |         |         |         |
    0+30       0.0028      0.13  Q   V      |         |         |         |
    0+35       0.0040      0.18  Q     V    |         |         |         |
    0+40       0.0058      0.26  |Q       V|         |         |         |
    0+45       0.0090      0.47  |Q        |   V     |         |         |
    0+50       0.0169      1.15  |   Q     |         |      V  |         |
    0+55       0.0226      0.83  |  Q      |         |         |     V   |
```

```
    1+ 0       0.0243      0.24  Q         |         |         |        V|
    1+ 5       0.0247      0.06  Q         |         |         |        V|
    1+10       0.0247      0.01  Q         |         |         |        V|
    1+15       0.0247      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 03/12/24 File: ONSITEPOSTE4310.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	0.80	0.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.00	1.20

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.800(In)
Area Averaged 100-Year Rainfall = 2.000(In)

Point rain (area averaged) = 1.294(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.294(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                        Sum (F) =   0.343
      Area averaged mean soil loss (F) (In/Hr) =  0.343
      Minimum soil loss rate ((In/Hr)) =  0.171
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.828
      ------------------------------------------------------------------------

                  U n i t  H y d r o g r a p h
                         VALLEY S-Curve
      ------------------------------------------------------------------------
                  Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083        256.307         51.705             0.313
          2   0.167        512.614         39.667             0.240
          3   0.250        768.921          6.818             0.041
          4   0.333       1025.227          1.810             0.011
                                  Sum = 100.000   Sum=       0.605
------------------------------------------------------------------------

 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   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
    1   0.08     1.30      0.202       (  0.343)       0.167        0.035
    2   0.17     1.30      0.202       (  0.343)       0.167        0.035
    3   0.25     1.10      0.171       (  0.343)       0.141        0.029
    4   0.33     1.50      0.233       (  0.343)       0.193        0.040
    5   0.42     1.50      0.233       (  0.343)       0.193        0.040
    6   0.50     1.80      0.279       (  0.343)       0.231        0.048
    7   0.58     1.50      0.233       (  0.343)       0.193        0.040
    8   0.67     1.80      0.279       (  0.343)       0.231        0.048
    9   0.75     1.80      0.279       (  0.343)       0.231        0.048
   10   0.83     1.50      0.233       (  0.343)       0.193        0.040
   11   0.92     1.60      0.248       (  0.343)       0.206        0.043
   12   1.00     1.80      0.279       (  0.343)       0.231        0.048
   13   1.08     2.20      0.342       (  0.343)       0.283        0.059
   14   1.17     2.20      0.342       (  0.343)       0.283        0.059
   15   1.25     2.20      0.342       (  0.343)       0.283        0.059
   16   1.33     2.00      0.310       (  0.343)       0.257        0.053
   17   1.42     2.60      0.404       (  0.343)       0.334        0.069
   18   1.50     2.70      0.419          0.343    (  0.347)        0.077
   19   1.58     2.40      0.373       (  0.343)       0.308        0.064
   20   1.67     2.70      0.419          0.343    (  0.347)        0.077
   21   1.75     3.30      0.512          0.343    (  0.424)        0.170
   22   1.83     3.10      0.481          0.343    (  0.398)        0.139
   23   1.92     2.90      0.450          0.343    (  0.373)        0.108
   24   2.00     3.00      0.466          0.343    (  0.386)        0.123
   25   2.08     3.10      0.481          0.343    (  0.398)        0.139
   26   2.17     4.20      0.652          0.343    (  0.540)        0.309
   27   2.25     5.00      0.776          0.343    (  0.643)        0.434
   28   2.33     3.50      0.543          0.343    (  0.450)        0.201
   29   2.42     6.80      1.056          0.343    (  0.874)        0.713
   30   2.50     7.30      1.133          0.343    (  0.938)        0.791
   31   2.58     8.20      1.273          0.343    (  1.054)        0.930
   32   2.67     5.90      0.916          0.343    (  0.758)        0.573
   33   2.75     2.00      0.310       (  0.343)       0.257        0.053
   34   2.83     1.80      0.279       (  0.343)       0.231        0.048
   35   2.92     1.80      0.279       (  0.343)       0.231        0.048
   36   3.00     0.60      0.093       (  0.343)       0.077        0.016
              (Loss Rate Not Used)
     Sum =     100.0                                   Sum =     5.8
       Flood volume = Effective rainfall      0.48(In)
        times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
       Total soil loss =      0.81(In)
       Total soil loss =     0.040(Ac.Ft)
       Total rainfall =      1.29(In)
       Flood volume =        1053.6 Cubic Feet
       Total soil loss =        1764.1 Cubic Feet
       ------------------------------------------------------------------------
```

Peak flow rate of this hydrograph = 0.512(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	0.0001	0.01	Q				
0+10	0.0002	0.02	Q				
0+15	0.0003	0.02	Q				
0+20	0.0005	0.02	Q				
0+25	0.0006	0.02	QV				
0+30	0.0008	0.03	QV				
0+35	0.0010	0.03	QV				
0+40	0.0012	0.03	QV				
0+45	0.0014	0.03	Q V				
0+50	0.0016	0.03	Q V				
0+55	0.0018	0.03	Q V				
1+ 0	0.0019	0.03	Q V				
1+ 5	0.0022	0.03	Q V				
1+10	0.0024	0.03	Q V				
1+15	0.0026	0.04	Q V				
1+20	0.0029	0.03	Q V				
1+25	0.0031	0.04	Q V				
1+30	0.0034	0.04	Q V				
1+35	0.0037	0.04	Q V				
1+40	0.0040	0.04	Q V				
1+45	0.0045	0.07	Q V				
1+50	0.0051	0.09	Q V				
1+55	0.0057	0.07	Q V				
2+ 0	0.0062	0.07	Q V				
2+ 5	0.0067	0.08	Q V				
2+10	0.0076	0.14	Q V				
2+15	0.0091	0.22	Q V				
2+20	0.0104	0.18	Q V				
2+25	0.0124	0.29	Q V				
2+30	0.0154	0.43	Q V				
2+35	0.0189	0.51	Q V				
2+40	0.0219	0.44	Q V				
2+45	0.0233	0.20	Q V				
2+50	0.0238	0.06	Q V				
2+55	0.0240	0.04	Q V				
3+ 0	0.0241	0.02	Q V				
3+ 5	0.0242	0.01	Q V				
3+10	0.0242	0.00	Q V				
3+15	0.0242	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 03/12/24 File: ONSITEPOSTE4610.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	1.20	0.72

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.80	1.68

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.200(In)
Area Averaged 100-Year Rainfall = 2.800(In)

Point rain (area averaged) = 1.858(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.858(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

69.0	69.0	0.373	0.090	0.343	1.000	0.343
					Sum (F) =	0.343

Area averaged mean soil loss (F) (In/Hr) = 0.343
Minimum soil loss rate ((In/Hr)) = 0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.828

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

Unit Hydrograph Data

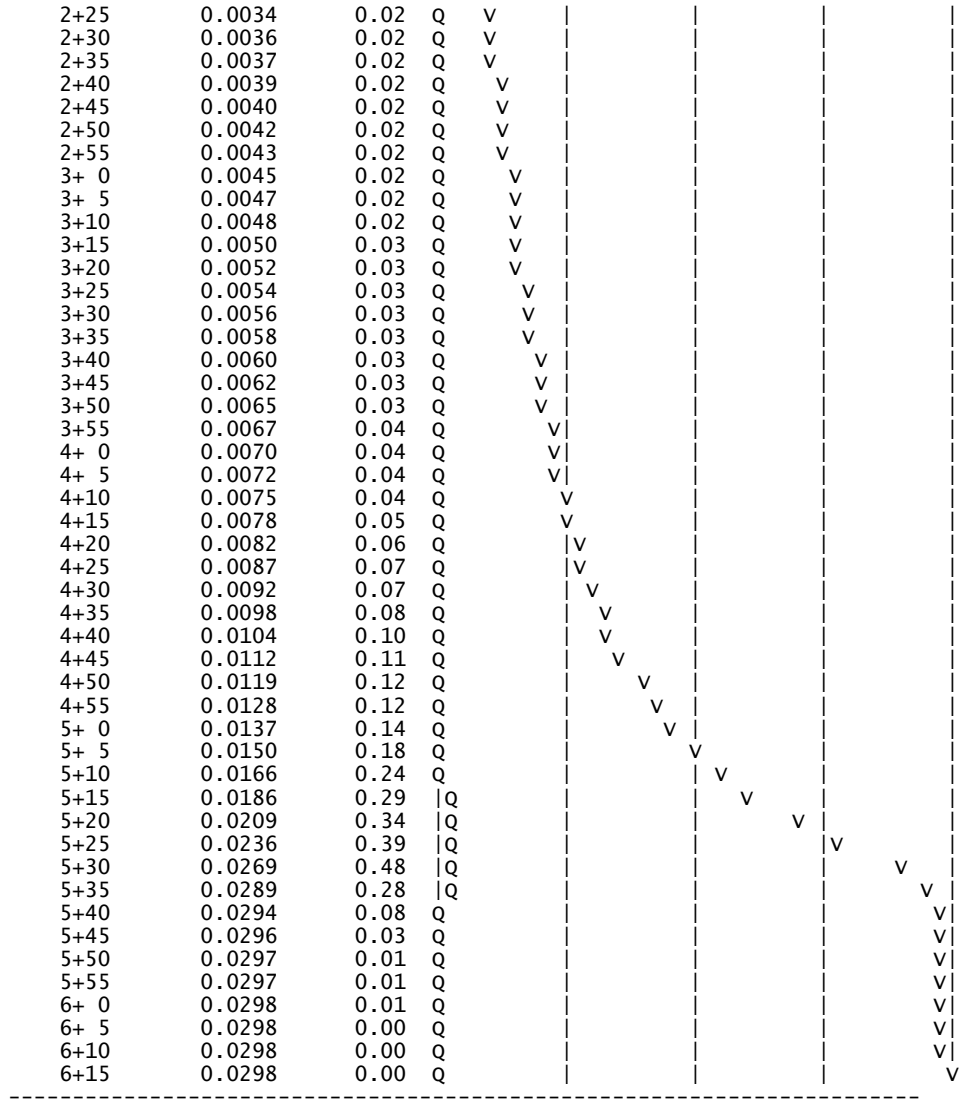
Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	256.307	51.705	0.313
2	0.167	512.614	39.667	0.240
3	0.250	768.921	6.818	0.041
4	0.333	1025.227	1.810	0.011
			Sum = 100.000 Sum=	0.605

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	0.111	(0.343)	0.092	0.019
2	0.17	0.60	0.134	(0.343)	0.111	0.023
3	0.25	0.60	0.134	(0.343)	0.111	0.023
4	0.33	0.60	0.134	(0.343)	0.111	0.023
5	0.42	0.60	0.134	(0.343)	0.111	0.023
6	0.50	0.70	0.156	(0.343)	0.129	0.027
7	0.58	0.70	0.156	(0.343)	0.129	0.027
8	0.67	0.70	0.156	(0.343)	0.129	0.027
9	0.75	0.70	0.156	(0.343)	0.129	0.027
10	0.83	0.70	0.156	(0.343)	0.129	0.027
11	0.92	0.70	0.156	(0.343)	0.129	0.027
12	1.00	0.80	0.178	(0.343)	0.148	0.031
13	1.08	0.80	0.178	(0.343)	0.148	0.031
14	1.17	0.80	0.178	(0.343)	0.148	0.031
15	1.25	0.80	0.178	(0.343)	0.148	0.031
16	1.33	0.80	0.178	(0.343)	0.148	0.031
17	1.42	0.80	0.178	(0.343)	0.148	0.031
18	1.50	0.80	0.178	(0.343)	0.148	0.031
19	1.58	0.80	0.178	(0.343)	0.148	0.031
20	1.67	0.80	0.178	(0.343)	0.148	0.031
21	1.75	0.80	0.178	(0.343)	0.148	0.031
22	1.83	0.80	0.178	(0.343)	0.148	0.031
23	1.92	0.80	0.178	(0.343)	0.148	0.031
24	2.00	0.90	0.201	(0.343)	0.166	0.035
25	2.08	0.80	0.178	(0.343)	0.148	0.031
26	2.17	0.90	0.201	(0.343)	0.166	0.035
27	2.25	0.90	0.201	(0.343)	0.166	0.035
28	2.33	0.90	0.201	(0.343)	0.166	0.035
29	2.42	0.90	0.201	(0.343)	0.166	0.035
30	2.50	0.90	0.201	(0.343)	0.166	0.035
31	2.58	0.90	0.201	(0.343)	0.166	0.035
32	2.67	0.90	0.201	(0.343)	0.166	0.035
33	2.75	1.00	0.223	(0.343)	0.185	0.038
34	2.83	1.00	0.223	(0.343)	0.185	0.038
35	2.92	1.00	0.223	(0.343)	0.185	0.038
36	3.00	1.00	0.223	(0.343)	0.185	0.038
37	3.08	1.00	0.223	(0.343)	0.185	0.038
38	3.17	1.10	0.245	(0.343)	0.203	0.042
39	3.25	1.10	0.245	(0.343)	0.203	0.042
40	3.33	1.10	0.245	(0.343)	0.203	0.042
41	3.42	1.20	0.268	(0.343)	0.222	0.046
42	3.50	1.30	0.290	(0.343)	0.240	0.050
43	3.58	1.40	0.312	(0.343)	0.258	0.054
44	3.67	1.40	0.312	(0.343)	0.258	0.054
45	3.75	1.50	0.334	(0.343)	0.277	0.058
46	3.83	1.50	0.334	(0.343)	0.277	0.058

```
47   3.92     1.60      0.357       (  0.343)       0.295        0.061
48   4.00     1.60      0.357       (  0.343)       0.295        0.061
49   4.08     1.70      0.379       (  0.343)       0.314        0.065
50   4.17     1.80      0.401       (  0.343)       0.332        0.069
51   4.25     1.90      0.424          0.343    (  0.351)        0.081
52   4.33     2.00      0.446          0.343    (  0.369)        0.103
53   4.42     2.10      0.468          0.343    (  0.388)        0.126
54   4.50     2.10      0.468          0.343    (  0.388)        0.126
55   4.58     2.20      0.491          0.343    (  0.406)        0.148
56   4.67     2.30      0.513          0.343    (  0.425)        0.170
57   4.75     2.40      0.535          0.343    (  0.443)        0.193
58   4.83     2.40      0.535          0.343    (  0.443)        0.193
59   4.92     2.50      0.557          0.343    (  0.462)        0.215
60   5.00     2.60      0.580          0.343    (  0.480)        0.237
61   5.08     3.10      0.691          0.343    (  0.572)        0.349
62   5.17     3.60      0.803          0.343    (  0.665)        0.460
63   5.25     3.90      0.870          0.343    (  0.720)        0.527
64   5.33     4.20      0.937          0.343    (  0.775)        0.594
65   5.42     4.70      1.048          0.343    (  0.868)        0.705
66   5.50     5.60      1.249          0.343    (  1.034)        0.906
67   5.58     1.90      0.424          0.343    (  0.351)        0.081
68   5.67     0.90      0.201       (  0.343)       0.166        0.035
69   5.75     0.60      0.134       (  0.343)       0.111        0.023
70   5.83     0.50      0.111       (  0.343)       0.092        0.019
71   5.92     0.30      0.067       (  0.343)       0.055        0.012
72   6.00     0.20      0.045       (  0.343)       0.037        0.008
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =     7.2
      Flood volume = Effective rainfall      0.60(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
      Total soil loss =      1.26(In)
      Total soil loss =     0.063(Ac.Ft)
      Total rainfall =      1.86(In)
      Flood volume =        1297.8 Cubic Feet
      Total soil loss =        2749.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.483(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       0.0000      0.01  Q          |         |         |         |
  0+10       0.0001      0.01  Q          |         |         |         |
  0+15       0.0002      0.01  Q          |         |         |         |
  0+20       0.0003      0.01  Q          |         |         |         |
  0+25       0.0004      0.01  Q          |         |         |         |
  0+30       0.0005      0.02  Q          |         |         |         |
  0+35       0.0006      0.02  Q          |         |         |         |
  0+40       0.0007      0.02  Q          |         |         |         |
  0+45       0.0008      0.02  QV         |         |         |         |
  0+50       0.0010      0.02  QV         |         |         |         |
  0+55       0.0011      0.02  QV         |         |         |         |
  1+ 0       0.0012      0.02  QV         |         |         |         |
  1+ 5       0.0013      0.02  QV         |         |         |         |
  1+10       0.0014      0.02  QV         |         |         |         |
  1+15       0.0016      0.02  Q V        |         |         |         |
  1+20       0.0017      0.02  Q V        |         |         |         |
  1+25       0.0018      0.02  Q V        |         |         |         |
  1+30       0.0020      0.02  Q V        |         |         |         |
  1+35       0.0021      0.02  Q V        |         |         |         |
  1+40       0.0022      0.02  Q V        |         |         |         |
  1+45       0.0023      0.02  Q  V       |         |         |         |
  1+50       0.0025      0.02  Q  V       |         |         |         |
  1+55       0.0026      0.02  Q  V       |         |         |         |
  2+ 0       0.0027      0.02  Q  V       |         |         |         |
  2+ 5       0.0029      0.02  Q  V       |         |         |         |
  2+10       0.0030      0.02  Q   V      |         |         |         |
  2+15       0.0031      0.02  Q   V      |         |         |         |
  2+20       0.0033      0.02  Q   V      |         |         |         |
```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2+30 0.0036 0.02
2+35 0.0037 0.02
2+40 0.0039 0.02
2+45 0.0040 0.02
2+50 0.0042 0.02
2+55 0.0043 0.02
3+ 0 0.0045 0.02
3+ 5 0.0047 0.02
3+10 0.0048 0.02
3+15 0.0050 0.03
3+20 0.0052 0.03
3+25 0.0054 0.03
3+30 0.0056 0.03
3+35 0.0058 0.03
3+40 0.0060 0.03
3+45 0.0062 0.03
3+50 0.0065 0.03
3+55 0.0067 0.04
4+ 0 0.0070 0.04
4+ 5 0.0072 0.04
4+10 0.0075 0.04
4+15 0.0078 0.05
4+20 0.0082 0.06
4+25 0.0087 0.07
4+30 0.0092 0.07
4+35 0.0098 0.08
4+40 0.0104 0.10
4+45 0.0112 0.11
4+50 0.0119 0.12
4+55 0.0128 0.12
5+ 0 0.0137 0.14
5+ 5 0.0150 0.18
5+10 0.0166 0.24
5+15 0.0186 0.29
5+20 0.0209 0.34
5+25 0.0236 0.39
5+30 0.0269 0.48
5+35 0.0289 0.28
5+40 0.0294 0.08
5+45 0.0296 0.03
5+50 0.0297 0.01
5+55 0.0297 0.01
6+ 0 0.0298 0.01
6+ 5 0.0298 0.00
6+10 0.0298 0.00
6+15 0.0298 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 03/12/24 File: ONSITEPOSTE42410.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 10-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 3.399(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.399(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

69.0	69.0	0.373	0.090	0.343	1.000	0.343
					Sum (F) =	0.343

Area averaged mean soil loss (F) (In/Hr) = 0.343
Minimum soil loss rate ((In/Hr)) = 0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.828

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	256.307	51.705	0.313
2	0.167	512.614	39.667	0.240
3	0.250	768.921	6.818	0.041
4	0.333	1025.227	1.810	0.011
			Sum = 100.000 Sum=	0.605

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	(0.607)	0.023	0.005
2	0.17	0.07	0.027	(0.605)	0.023	0.005
3	0.25	0.07	0.027	(0.603)	0.023	0.005
4	0.33	0.10	0.041	(0.600)	0.034	0.007
5	0.42	0.10	0.041	(0.598)	0.034	0.007
6	0.50	0.10	0.041	(0.596)	0.034	0.007
7	0.58	0.10	0.041	(0.593)	0.034	0.007
8	0.67	0.10	0.041	(0.591)	0.034	0.007
9	0.75	0.10	0.041	(0.589)	0.034	0.007
10	0.83	0.13	0.054	(0.586)	0.045	0.009
11	0.92	0.13	0.054	(0.584)	0.045	0.009
12	1.00	0.13	0.054	(0.582)	0.045	0.009
13	1.08	0.10	0.041	(0.579)	0.034	0.007
14	1.17	0.10	0.041	(0.577)	0.034	0.007
15	1.25	0.10	0.041	(0.575)	0.034	0.007
16	1.33	0.10	0.041	(0.573)	0.034	0.007
17	1.42	0.10	0.041	(0.570)	0.034	0.007
18	1.50	0.10	0.041	(0.568)	0.034	0.007
19	1.58	0.10	0.041	(0.566)	0.034	0.007
20	1.67	0.10	0.041	(0.563)	0.034	0.007
21	1.75	0.10	0.041	(0.561)	0.034	0.007
22	1.83	0.13	0.054	(0.559)	0.045	0.009
23	1.92	0.13	0.054	(0.557)	0.045	0.009
24	2.00	0.13	0.054	(0.554)	0.045	0.009
25	2.08	0.13	0.054	(0.552)	0.045	0.009
26	2.17	0.13	0.054	(0.550)	0.045	0.009
27	2.25	0.13	0.054	(0.548)	0.045	0.009
28	2.33	0.13	0.054	(0.546)	0.045	0.009
29	2.42	0.13	0.054	(0.543)	0.045	0.009
30	2.50	0.13	0.054	(0.541)	0.045	0.009
31	2.58	0.17	0.068	(0.539)	0.056	0.012
32	2.67	0.17	0.068	(0.537)	0.056	0.012
33	2.75	0.17	0.068	(0.534)	0.056	0.012
34	2.83	0.17	0.068	(0.532)	0.056	0.012
35	2.92	0.17	0.068	(0.530)	0.056	0.012
36	3.00	0.17	0.068	(0.528)	0.056	0.012
37	3.08	0.17	0.068	(0.526)	0.056	0.012
38	3.17	0.17	0.068	(0.524)	0.056	0.012
39	3.25	0.17	0.068	(0.521)	0.056	0.012
40	3.33	0.17	0.068	(0.519)	0.056	0.012
41	3.42	0.17	0.068	(0.517)	0.056	0.012
42	3.50	0.17	0.068	(0.515)	0.056	0.012
43	3.58	0.17	0.068	(0.513)	0.056	0.012
44	3.67	0.17	0.068	(0.511)	0.056	0.012
45	3.75	0.17	0.068	(0.508)	0.056	0.012
46	3.83	0.20	0.082	(0.506)	0.068	0.014

47	3.92	0.20	0.082	(0.504)	0.068	0.014
48	4.00	0.20	0.082	(0.502)	0.068	0.014
49	4.08	0.20	0.082	(0.500)	0.068	0.014
50	4.17	0.20	0.082	(0.498)	0.068	0.014
51	4.25	0.20	0.082	(0.496)	0.068	0.014
52	4.33	0.23	0.095	(0.493)	0.079	0.016
53	4.42	0.23	0.095	(0.491)	0.079	0.016
54	4.50	0.23	0.095	(0.489)	0.079	0.016
55	4.58	0.23	0.095	(0.487)	0.079	0.016
56	4.67	0.23	0.095	(0.485)	0.079	0.016
57	4.75	0.23	0.095	(0.483)	0.079	0.016
58	4.83	0.27	0.109	(0.481)	0.090	0.019
59	4.92	0.27	0.109	(0.479)	0.090	0.019
60	5.00	0.27	0.109	(0.477)	0.090	0.019
61	5.08	0.20	0.082	(0.475)	0.068	0.014
62	5.17	0.20	0.082	(0.473)	0.068	0.014
63	5.25	0.20	0.082	(0.471)	0.068	0.014
64	5.33	0.23	0.095	(0.468)	0.079	0.016
65	5.42	0.23	0.095	(0.466)	0.079	0.016
66	5.50	0.23	0.095	(0.464)	0.079	0.016
67	5.58	0.27	0.109	(0.462)	0.090	0.019
68	5.67	0.27	0.109	(0.460)	0.090	0.019
69	5.75	0.27	0.109	(0.458)	0.090	0.019
70	5.83	0.27	0.109	(0.456)	0.090	0.019
71	5.92	0.27	0.109	(0.454)	0.090	0.019
72	6.00	0.27	0.109	(0.452)	0.090	0.019
73	6.08	0.30	0.122	(0.450)	0.101	0.021
74	6.17	0.30	0.122	(0.448)	0.101	0.021
75	6.25	0.30	0.122	(0.446)	0.101	0.021
76	6.33	0.30	0.122	(0.444)	0.101	0.021
77	6.42	0.30	0.122	(0.442)	0.101	0.021
78	6.50	0.30	0.122	(0.440)	0.101	0.021
79	6.58	0.33	0.136	(0.438)	0.113	0.023
80	6.67	0.33	0.136	(0.436)	0.113	0.023
81	6.75	0.33	0.136	(0.434)	0.113	0.023
82	6.83	0.33	0.136	(0.432)	0.113	0.023
83	6.92	0.33	0.136	(0.430)	0.113	0.023
84	7.00	0.33	0.136	(0.428)	0.113	0.023
85	7.08	0.33	0.136	(0.427)	0.113	0.023
86	7.17	0.33	0.136	(0.425)	0.113	0.023
87	7.25	0.33	0.136	(0.423)	0.113	0.023
88	7.33	0.37	0.150	(0.421)	0.124	0.026
89	7.42	0.37	0.150	(0.419)	0.124	0.026
90	7.50	0.37	0.150	(0.417)	0.124	0.026
91	7.58	0.40	0.163	(0.415)	0.135	0.028
92	7.67	0.40	0.163	(0.413)	0.135	0.028
93	7.75	0.40	0.163	(0.411)	0.135	0.028
94	7.83	0.43	0.177	(0.409)	0.146	0.030
95	7.92	0.43	0.177	(0.407)	0.146	0.030
96	8.00	0.43	0.177	(0.405)	0.146	0.030
97	8.08	0.50	0.204	(0.404)	0.169	0.035
98	8.17	0.50	0.204	(0.402)	0.169	0.035
99	8.25	0.50	0.204	(0.400)	0.169	0.035
100	8.33	0.50	0.204	(0.398)	0.169	0.035
101	8.42	0.50	0.204	(0.396)	0.169	0.035
102	8.50	0.50	0.204	(0.394)	0.169	0.035
103	8.58	0.53	0.218	(0.392)	0.180	0.037
104	8.67	0.53	0.218	(0.391)	0.180	0.037
105	8.75	0.53	0.218	(0.389)	0.180	0.037
106	8.83	0.57	0.231	(0.387)	0.191	0.040
107	8.92	0.57	0.231	(0.385)	0.191	0.040
108	9.00	0.57	0.231	(0.383)	0.191	0.040
109	9.08	0.63	0.258	(0.381)	0.214	0.044
110	9.17	0.63	0.258	(0.380)	0.214	0.044
111	9.25	0.63	0.258	(0.378)	0.214	0.044
112	9.33	0.67	0.272	(0.376)	0.225	0.047
113	9.42	0.67	0.272	(0.374)	0.225	0.047
114	9.50	0.67	0.272	(0.372)	0.225	0.047
115	9.58	0.70	0.285	(0.371)	0.236	0.049
116	9.67	0.70	0.285	(0.369)	0.236	0.049
117	9.75	0.70	0.285	(0.367)	0.236	0.049
118	9.83	0.73	0.299	(0.365)	0.248	0.051
119	9.92	0.73	0.299	(0.364)	0.248	0.051
120	10.00	0.73	0.299	(0.362)	0.248	0.051
121	10.08	0.50	0.204	(0.360)	0.169	0.035

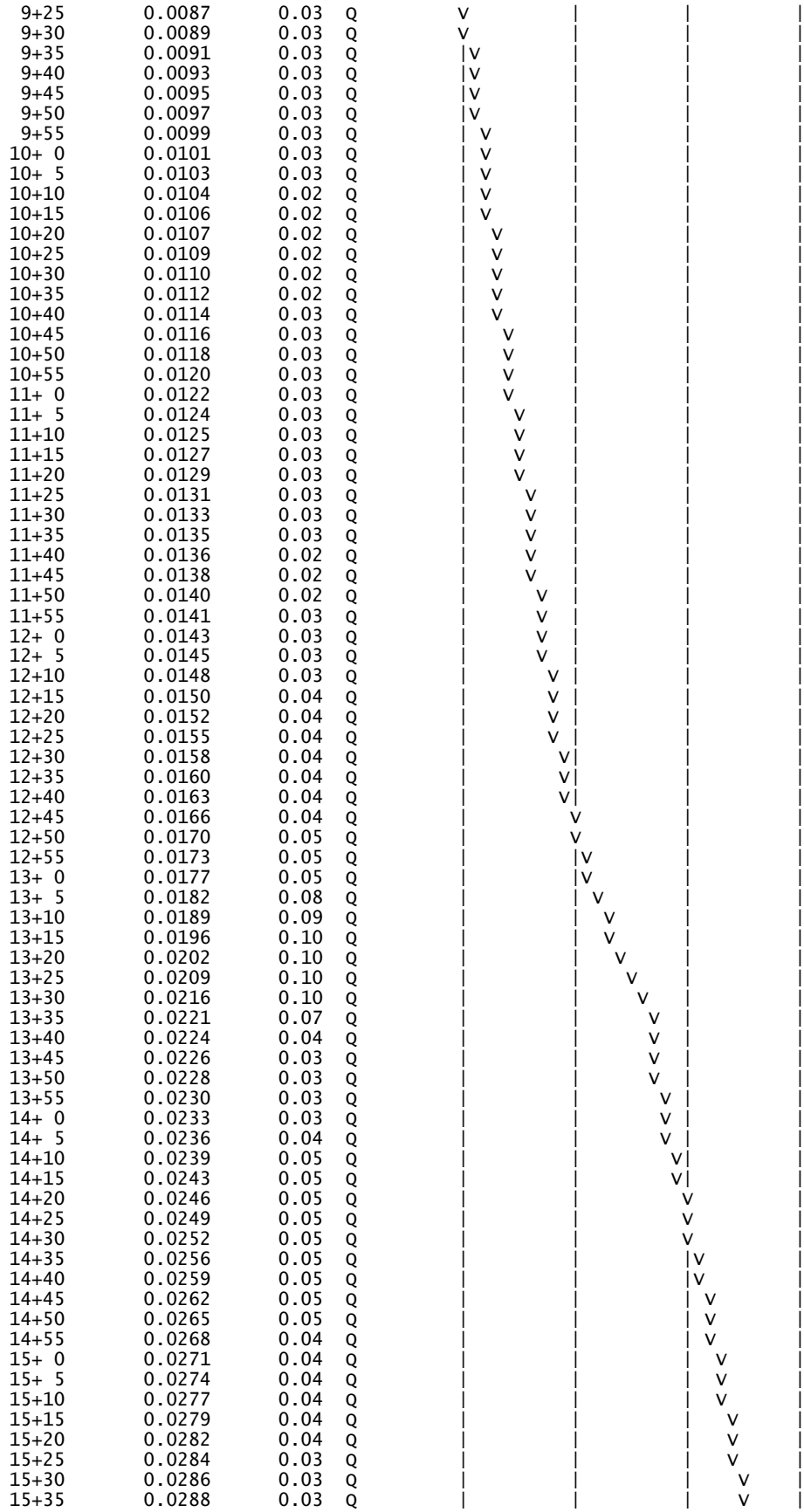
122	10.17	0.50	0.204	(0.358)	0.169	0.035
123	10.25	0.50	0.204	(0.357)	0.169	0.035
124	10.33	0.50	0.204	(0.355)	0.169	0.035
125	10.42	0.50	0.204	(0.353)	0.169	0.035
126	10.50	0.50	0.204	(0.351)	0.169	0.035
127	10.58	0.67	0.272	(0.350)	0.225	0.047
128	10.67	0.67	0.272	(0.348)	0.225	0.047
129	10.75	0.67	0.272	(0.346)	0.225	0.047
130	10.83	0.67	0.272	(0.345)	0.225	0.047
131	10.92	0.67	0.272	(0.343)	0.225	0.047
132	11.00	0.67	0.272	(0.341)	0.225	0.047
133	11.08	0.63	0.258	(0.339)	0.214	0.044
134	11.17	0.63	0.258	(0.338)	0.214	0.044
135	11.25	0.63	0.258	(0.336)	0.214	0.044
136	11.33	0.63	0.258	(0.334)	0.214	0.044
137	11.42	0.63	0.258	(0.333)	0.214	0.044
138	11.50	0.63	0.258	(0.331)	0.214	0.044
139	11.58	0.57	0.231	(0.330)	0.191	0.040
140	11.67	0.57	0.231	(0.328)	0.191	0.040
141	11.75	0.57	0.231	(0.326)	0.191	0.040
142	11.83	0.60	0.245	(0.325)	0.203	0.042
143	11.92	0.60	0.245	(0.323)	0.203	0.042
144	12.00	0.60	0.245	(0.321)	0.203	0.042
145	12.08	0.83	0.340	(0.320)	0.281	0.058
146	12.17	0.83	0.340	(0.318)	0.281	0.058
147	12.25	0.83	0.340	(0.317)	0.281	0.058
148	12.33	0.87	0.353	(0.315)	0.293	0.061
149	12.42	0.87	0.353	(0.313)	0.293	0.061
150	12.50	0.87	0.353	(0.312)	0.293	0.061
151	12.58	0.93	0.381	0.310	(0.315)	0.070
152	12.67	0.93	0.381	0.309	(0.315)	0.072
153	12.75	0.93	0.381	0.307	(0.315)	0.073
154	12.83	0.97	0.394	0.306	(0.326)	0.089
155	12.92	0.97	0.394	0.304	(0.326)	0.090
156	13.00	0.97	0.394	0.303	(0.326)	0.092
157	13.08	1.13	0.462	0.301	(0.383)	0.161
158	13.17	1.13	0.462	0.299	(0.383)	0.163
159	13.25	1.13	0.462	0.298	(0.383)	0.164
160	13.33	1.13	0.462	0.296	(0.383)	0.166
161	13.42	1.13	0.462	0.295	(0.383)	0.167
162	13.50	1.13	0.462	0.293	(0.383)	0.169
163	13.58	0.77	0.313	(0.292)	0.259	0.054
164	13.67	0.77	0.313	(0.290)	0.259	0.054
165	13.75	0.77	0.313	(0.289)	0.259	0.054
166	13.83	0.77	0.313	(0.288)	0.259	0.054
167	13.92	0.77	0.313	(0.286)	0.259	0.054
168	14.00	0.77	0.313	(0.285)	0.259	0.054
169	14.08	0.90	0.367	0.283	(0.304)	0.084
170	14.17	0.90	0.367	0.282	(0.304)	0.085
171	14.25	0.90	0.367	0.280	(0.304)	0.087
172	14.33	0.87	0.353	0.279	(0.293)	0.075
173	14.42	0.87	0.353	0.277	(0.293)	0.076
174	14.50	0.87	0.353	0.276	(0.293)	0.078
175	14.58	0.87	0.353	0.275	(0.293)	0.079
176	14.67	0.87	0.353	0.273	(0.293)	0.080
177	14.75	0.87	0.353	0.272	(0.293)	0.082
178	14.83	0.83	0.340	0.270	(0.281)	0.070
179	14.92	0.83	0.340	0.269	(0.281)	0.071
180	15.00	0.83	0.340	0.268	(0.281)	0.072
181	15.08	0.80	0.326	0.266	(0.270)	0.060
182	15.17	0.80	0.326	0.265	(0.270)	0.061
183	15.25	0.80	0.326	0.263	(0.270)	0.063
184	15.33	0.77	0.313	(0.262)	0.259	0.054
185	15.42	0.77	0.313	(0.261)	0.259	0.054
186	15.50	0.77	0.313	(0.259)	0.259	0.054
187	15.58	0.63	0.258	(0.258)	0.214	0.044
188	15.67	0.63	0.258	(0.257)	0.214	0.044
189	15.75	0.63	0.258	(0.255)	0.214	0.044
190	15.83	0.63	0.258	(0.254)	0.214	0.044
191	15.92	0.63	0.258	(0.253)	0.214	0.044
192	16.00	0.63	0.258	(0.252)	0.214	0.044
193	16.08	0.13	0.054	(0.250)	0.045	0.009
194	16.17	0.13	0.054	(0.249)	0.045	0.009
195	16.25	0.13	0.054	(0.248)	0.045	0.009
196	16.33	0.13	0.054	(0.246)	0.045	0.009

197	16.42	0.13	0.054	(0.245)	0.045	0.009
198	16.50	0.13	0.054	(0.244)	0.045	0.009
199	16.58	0.10	0.041	(0.243)	0.034	0.007
200	16.67	0.10	0.041	(0.242)	0.034	0.007
201	16.75	0.10	0.041	(0.240)	0.034	0.007
202	16.83	0.10	0.041	(0.239)	0.034	0.007
203	16.92	0.10	0.041	(0.238)	0.034	0.007
204	17.00	0.10	0.041	(0.237)	0.034	0.007
205	17.08	0.17	0.068	(0.235)	0.056	0.012
206	17.17	0.17	0.068	(0.234)	0.056	0.012
207	17.25	0.17	0.068	(0.233)	0.056	0.012
208	17.33	0.17	0.068	(0.232)	0.056	0.012
209	17.42	0.17	0.068	(0.231)	0.056	0.012
210	17.50	0.17	0.068	(0.230)	0.056	0.012
211	17.58	0.17	0.068	(0.228)	0.056	0.012
212	17.67	0.17	0.068	(0.227)	0.056	0.012
213	17.75	0.17	0.068	(0.226)	0.056	0.012
214	17.83	0.13	0.054	(0.225)	0.045	0.009
215	17.92	0.13	0.054	(0.224)	0.045	0.009
216	18.00	0.13	0.054	(0.223)	0.045	0.009
217	18.08	0.13	0.054	(0.222)	0.045	0.009
218	18.17	0.13	0.054	(0.221)	0.045	0.009
219	18.25	0.13	0.054	(0.220)	0.045	0.009
220	18.33	0.13	0.054	(0.219)	0.045	0.009
221	18.42	0.13	0.054	(0.217)	0.045	0.009
222	18.50	0.13	0.054	(0.216)	0.045	0.009
223	18.58	0.10	0.041	(0.215)	0.034	0.007
224	18.67	0.10	0.041	(0.214)	0.034	0.007
225	18.75	0.10	0.041	(0.213)	0.034	0.007
226	18.83	0.07	0.027	(0.212)	0.023	0.005
227	18.92	0.07	0.027	(0.211)	0.023	0.005
228	19.00	0.07	0.027	(0.210)	0.023	0.005
229	19.08	0.10	0.041	(0.209)	0.034	0.007
230	19.17	0.10	0.041	(0.208)	0.034	0.007
231	19.25	0.10	0.041	(0.207)	0.034	0.007
232	19.33	0.13	0.054	(0.206)	0.045	0.009
233	19.42	0.13	0.054	(0.205)	0.045	0.009
234	19.50	0.13	0.054	(0.204)	0.045	0.009
235	19.58	0.10	0.041	(0.203)	0.034	0.007
236	19.67	0.10	0.041	(0.203)	0.034	0.007
237	19.75	0.10	0.041	(0.202)	0.034	0.007
238	19.83	0.07	0.027	(0.201)	0.023	0.005
239	19.92	0.07	0.027	(0.200)	0.023	0.005
240	20.00	0.07	0.027	(0.199)	0.023	0.005
241	20.08	0.10	0.041	(0.198)	0.034	0.007
242	20.17	0.10	0.041	(0.197)	0.034	0.007
243	20.25	0.10	0.041	(0.196)	0.034	0.007
244	20.33	0.10	0.041	(0.195)	0.034	0.007
245	20.42	0.10	0.041	(0.195)	0.034	0.007
246	20.50	0.10	0.041	(0.194)	0.034	0.007
247	20.58	0.10	0.041	(0.193)	0.034	0.007
248	20.67	0.10	0.041	(0.192)	0.034	0.007
249	20.75	0.10	0.041	(0.191)	0.034	0.007
250	20.83	0.07	0.027	(0.191)	0.023	0.005
251	20.92	0.07	0.027	(0.190)	0.023	0.005
252	21.00	0.07	0.027	(0.189)	0.023	0.005
253	21.08	0.10	0.041	(0.188)	0.034	0.007
254	21.17	0.10	0.041	(0.188)	0.034	0.007
255	21.25	0.10	0.041	(0.187)	0.034	0.007
256	21.33	0.07	0.027	(0.186)	0.023	0.005
257	21.42	0.07	0.027	(0.185)	0.023	0.005
258	21.50	0.07	0.027	(0.185)	0.023	0.005
259	21.58	0.10	0.041	(0.184)	0.034	0.007
260	21.67	0.10	0.041	(0.183)	0.034	0.007
261	21.75	0.10	0.041	(0.183)	0.034	0.007
262	21.83	0.07	0.027	(0.182)	0.023	0.005
263	21.92	0.07	0.027	(0.182)	0.023	0.005
264	22.00	0.07	0.027	(0.181)	0.023	0.005
265	22.08	0.10	0.041	(0.180)	0.034	0.007
266	22.17	0.10	0.041	(0.180)	0.034	0.007
267	22.25	0.10	0.041	(0.179)	0.034	0.007
268	22.33	0.07	0.027	(0.179)	0.023	0.005
269	22.42	0.07	0.027	(0.178)	0.023	0.005
270	22.50	0.07	0.027	(0.178)	0.023	0.005
271	22.58	0.07	0.027	(0.177)	0.023	0.005

```
272  22.67     0.07      0.027       (  0.176)       0.023        0.005
273  22.75     0.07      0.027       (  0.176)       0.023        0.005
274  22.83     0.07      0.027       (  0.176)       0.023        0.005
275  22.92     0.07      0.027       (  0.175)       0.023        0.005
276  23.00     0.07      0.027       (  0.175)       0.023        0.005
277  23.08     0.07      0.027       (  0.174)       0.023        0.005
278  23.17     0.07      0.027       (  0.174)       0.023        0.005
279  23.25     0.07      0.027       (  0.174)       0.023        0.005
280  23.33     0.07      0.027       (  0.173)       0.023        0.005
281  23.42     0.07      0.027       (  0.173)       0.023        0.005
282  23.50     0.07      0.027       (  0.173)       0.023        0.005
283  23.58     0.07      0.027       (  0.172)       0.023        0.005
284  23.67     0.07      0.027       (  0.172)       0.023        0.005
285  23.75     0.07      0.027       (  0.172)       0.023        0.005
286  23.83     0.07      0.027       (  0.172)       0.023        0.005
287  23.92     0.07      0.027       (  0.171)       0.023        0.005
288  24.00     0.07      0.027       (  0.171)       0.023        0.005
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     7.8
      Flood volume = Effective rainfall      0.65(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
      Total soil loss =      2.75(In)
      Total soil loss =     0.137(Ac.Ft)
      Total rainfall =      3.40(In)
      Flood volume =        1422.8 Cubic Feet
      Total soil loss =        5979.8 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.102(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q          |         |         |         |
   0+10       0.0000      0.00  Q          |         |         |         |
   0+15       0.0000      0.00  Q          |         |         |         |
   0+20       0.0001      0.00  Q          |         |         |         |
   0+25       0.0001      0.00  Q          |         |         |         |
   0+30       0.0001      0.00  Q          |         |         |         |
   0+35       0.0002      0.00  Q          |         |         |         |
   0+40       0.0002      0.00  Q          |         |         |         |
   0+45       0.0002      0.00  Q          |         |         |         |
   0+50       0.0003      0.00  Q          |         |         |         |
   0+55       0.0003      0.01  Q          |         |         |         |
   1+ 0       0.0003      0.01  Q          |         |         |         |
   1+ 5       0.0004      0.00  Q          |         |         |         |
   1+10       0.0004      0.00  Q          |         |         |         |
   1+15       0.0004      0.00  Q          |         |         |         |
   1+20       0.0005      0.00  Q          |         |         |         |
   1+25       0.0005      0.00  Q          |         |         |         |
   1+30       0.0005      0.00  Q          |         |         |         |
   1+35       0.0005      0.00  Q          |         |         |         |
   1+40       0.0006      0.00  Q          |         |         |         |
   1+45       0.0006      0.00  Q          |         |         |         |
   1+50       0.0006      0.00  Q          |         |         |         |
   1+55       0.0007      0.01  Q          |         |         |         |
   2+ 0       0.0007      0.01  Q          |         |         |         |
   2+ 5       0.0007      0.01  Q          |         |         |         |
   2+10       0.0008      0.01  Q          |         |         |         |
   2+15       0.0008      0.01  QV         |         |         |         |
   2+20       0.0009      0.01  QV         |         |         |         |
   2+25       0.0009      0.01  QV         |         |         |         |
   2+30       0.0009      0.01  QV         |         |         |         |
   2+35       0.0010      0.01  QV         |         |         |         |
   2+40       0.0010      0.01  QV         |         |         |         |
   2+45       0.0011      0.01  QV         |         |         |         |
   2+50       0.0011      0.01  QV         |         |         |         |
   2+55       0.0012      0.01  QV         |         |         |         |
   3+ 0       0.0012      0.01  QV         |         |         |         |
   3+ 5       0.0013      0.01  QV         |         |         |         |
```

```
3+10       0.0013      0.01  QV        |         |         |         |
3+15       0.0014      0.01  QV        |         |         |         |
3+20       0.0014      0.01  QV        |         |         |         |
3+25       0.0015      0.01  QV        |         |         |         |
3+30       0.0015      0.01  QV        |         |         |         |
3+35       0.0016      0.01  QV        |         |         |         |
3+40       0.0016      0.01  QV        |         |         |         |
3+45       0.0017      0.01  Q V       |         |         |         |
3+50       0.0017      0.01  Q V       |         |         |         |
3+55       0.0018      0.01  Q V       |         |         |         |
4+ 0       0.0018      0.01  Q V       |         |         |         |
4+ 5       0.0019      0.01  Q V       |         |         |         |
4+10       0.0020      0.01  Q V       |         |         |         |
4+15       0.0020      0.01  Q V       |         |         |         |
4+20       0.0021      0.01  Q V       |         |         |         |
4+25       0.0021      0.01  Q V       |         |         |         |
4+30       0.0022      0.01  Q V       |         |         |         |
4+35       0.0023      0.01  Q V       |         |         |         |
4+40       0.0023      0.01  Q V       |         |         |         |
4+45       0.0024      0.01  Q V       |         |         |         |
4+50       0.0025      0.01  Q  V      |         |         |         |
4+55       0.0026      0.01  Q  V      |         |         |         |
5+ 0       0.0026      0.01  Q  V      |         |         |         |
5+ 5       0.0027      0.01  Q  V      |         |         |         |
5+10       0.0028      0.01  Q  V      |         |         |         |
5+15       0.0028      0.01  Q  V      |         |         |         |
5+20       0.0029      0.01  Q  V      |         |         |         |
5+25       0.0030      0.01  Q  V      |         |         |         |
5+30       0.0030      0.01  Q  V      |         |         |         |
5+35       0.0031      0.01  Q  V      |         |         |         |
5+40       0.0032      0.01  Q  V      |         |         |         |
5+45       0.0033      0.01  Q  V      |         |         |         |
5+50       0.0033      0.01  Q   V     |         |         |         |
5+55       0.0034      0.01  Q   V     |         |         |         |
6+ 0       0.0035      0.01  Q   V     |         |         |         |
6+ 5       0.0036      0.01  Q   V     |         |         |         |
6+10       0.0037      0.01  Q   V     |         |         |         |
6+15       0.0037      0.01  Q   V     |         |         |         |
6+20       0.0038      0.01  Q   V     |         |         |         |
6+25       0.0039      0.01  Q   V     |         |         |         |
6+30       0.0040      0.01  Q   V     |         |         |         |
6+35       0.0041      0.01  Q    V    |         |         |         |
6+40       0.0042      0.01  Q    V    |         |         |         |
6+45       0.0043      0.01  Q    V    |         |         |         |
6+50       0.0044      0.01  Q    V    |         |         |         |
6+55       0.0045      0.01  Q    V    |         |         |         |
7+ 0       0.0046      0.01  Q    V    |         |         |         |
7+ 5       0.0047      0.01  Q    V    |         |         |         |
7+10       0.0048      0.01  Q    V    |         |         |         |
7+15       0.0049      0.01  Q    V    |         |         |         |
7+20       0.0050      0.01  Q     V   |         |         |         |
7+25       0.0051      0.02  Q     V   |         |         |         |
7+30       0.0052      0.02  Q     V   |         |         |         |
7+35       0.0053      0.02  Q     V   |         |         |         |
7+40       0.0054      0.02  Q     V   |         |         |         |
7+45       0.0055      0.02  Q     V   |         |         |         |
7+50       0.0057      0.02  Q     V   |         |         |         |
7+55       0.0058      0.02  Q      V  |         |         |         |
8+ 0       0.0059      0.02  Q      V  |         |         |         |
8+ 5       0.0061      0.02  Q      V  |         |         |         |
8+10       0.0062      0.02  Q      V  |         |         |         |
8+15       0.0063      0.02  Q      V  |         |         |         |
8+20       0.0065      0.02  Q      V  |         |         |         |
8+25       0.0066      0.02  Q       V |         |         |         |
8+30       0.0068      0.02  Q       V |         |         |         |
8+35       0.0069      0.02  Q       V |         |         |         |
8+40       0.0071      0.02  Q       V |         |         |         |
8+45       0.0072      0.02  Q       V |         |         |         |
8+50       0.0074      0.02  Q        V|         |         |         |
8+55       0.0076      0.02  Q        V|         |         |         |
9+ 0       0.0077      0.02  Q        V|         |         |         |
9+ 5       0.0079      0.03  Q        V|         |         |         |
9+10       0.0081      0.03  Q        V|         |         |         |
9+15       0.0083      0.03  Q         V        |         |         |
9+20       0.0085      0.03  Q         V        |         |         |
```



15+40	0.0290	0.03	Q	|	|	|	V |
15+45	0.0292	0.03	Q	|	|	|	V |
15+50	0.0294	0.03	Q	|	|	|	V |
15+55	0.0296	0.03	Q	|	|	|	V |
16+ 0	0.0297	0.03	Q	|	|	|	V |
16+ 5	0.0299	0.02	Q	|	|	|	V |
16+10	0.0299	0.01	Q	|	|	|	V |
16+15	0.0300	0.01	Q	|	|	|	V |
16+20	0.0300	0.01	Q	|	|	|	V |
16+25	0.0300	0.01	Q	|	|	|	V |
16+30	0.0301	0.01	Q	|	|	|	V |
16+35	0.0301	0.00	Q	|	|	|	V |
16+40	0.0301	0.00	Q	|	|	|	V |
16+45	0.0302	0.00	Q	|	|	|	V |
16+50	0.0302	0.00	Q	|	|	|	V |
16+55	0.0302	0.00	Q	|	|	|	V |
17+ 0	0.0302	0.00	Q	|	|	|	V |
17+ 5	0.0303	0.01	Q	|	|	|	V |
17+10	0.0303	0.01	Q	|	|	|	V |
17+15	0.0304	0.01	Q	|	|	|	V |
17+20	0.0304	0.01	Q	|	|	|	V |
17+25	0.0305	0.01	Q	|	|	|	V |
17+30	0.0305	0.01	Q	|	|	|	V |
17+35	0.0306	0.01	Q	|	|	|	V |
17+40	0.0306	0.01	Q	|	|	|	V |
17+45	0.0307	0.01	Q	|	|	|	V |
17+50	0.0307	0.01	Q	|	|	|	V |
17+55	0.0308	0.01	Q	|	|	|	V |
18+ 0	0.0308	0.01	Q	|	|	|	V |
18+ 5	0.0308	0.01	Q	|	|	|	V |
18+10	0.0309	0.01	Q	|	|	|	V |
18+15	0.0309	0.01	Q	|	|	|	V |
18+20	0.0310	0.01	Q	|	|	|	V |
18+25	0.0310	0.01	Q	|	|	|	V |
18+30	0.0310	0.01	Q	|	|	|	V |
18+35	0.0311	0.00	Q	|	|	|	V |
18+40	0.0311	0.00	Q	|	|	|	V |
18+45	0.0311	0.00	Q	|	|	|	V |
18+50	0.0312	0.00	Q	|	|	|	V |
18+55	0.0312	0.00	Q	|	|	|	V |
19+ 0	0.0312	0.00	Q	|	|	|	V |
19+ 5	0.0312	0.00	Q	|	|	|	V |
19+10	0.0312	0.00	Q	|	|	|	V |
19+15	0.0313	0.00	Q	|	|	|	V |
19+20	0.0313	0.00	Q	|	|	|	V |
19+25	0.0313	0.01	Q	|	|	|	V |
19+30	0.0314	0.01	Q	|	|	|	V |
19+35	0.0314	0.00	Q	|	|	|	V |
19+40	0.0314	0.00	Q	|	|	|	V |
19+45	0.0315	0.00	Q	|	|	|	V |
19+50	0.0315	0.00	Q	|	|	|	V |
19+55	0.0315	0.00	Q	|	|	|	V |
20+ 0	0.0315	0.00	Q	|	|	|	V |
20+ 5	0.0316	0.00	Q	|	|	|	V |
20+10	0.0316	0.00	Q	|	|	|	V |
20+15	0.0316	0.00	Q	|	|	|	V |
20+20	0.0317	0.00	Q	|	|	|	V |
20+25	0.0317	0.00	Q	|	|	|	V |
20+30	0.0317	0.00	Q	|	|	|	V |
20+35	0.0317	0.00	Q	|	|	|	V |
20+40	0.0318	0.00	Q	|	|	|	V |
20+45	0.0318	0.00	Q	|	|	|	V |
20+50	0.0318	0.00	Q	|	|	|	V |
20+55	0.0318	0.00	Q	|	|	|	V |
21+ 0	0.0319	0.00	Q	|	|	|	V|
21+ 5	0.0319	0.00	Q	|	|	|	V|
21+10	0.0319	0.00	Q	|	|	|	V|
21+15	0.0319	0.00	Q	|	|	|	V|
21+20	0.0320	0.00	Q	|	|	|	V|
21+25	0.0320	0.00	Q	|	|	|	V|
21+30	0.0320	0.00	Q	|	|	|	V|
21+35	0.0320	0.00	Q	|	|	|	V|
21+40	0.0321	0.00	Q	|	|	|	V|
21+45	0.0321	0.00	Q	|	|	|	V|
21+50	0.0321	0.00	Q	|	|	|	V|

21+55	0.0321	0.00	Q	|	|	|	v|
22+ 0	0.0322	0.00	Q	|	|	|	v|
22+ 5	0.0322	0.00	Q	|	|	|	v|
22+10	0.0322	0.00	Q	|	|	|	v|
22+15	0.0322	0.00	Q	|	|	|	v|
22+20	0.0323	0.00	Q	|	|	|	v|
22+25	0.0323	0.00	Q	|	|	|	v|
22+30	0.0323	0.00	Q	|	|	|	v|
22+35	0.0323	0.00	Q	|	|	|	v|
22+40	0.0323	0.00	Q	|	|	|	v|
22+45	0.0324	0.00	Q	|	|	|	v|
22+50	0.0324	0.00	Q	|	|	|	v|
22+55	0.0324	0.00	Q	|	|	|	v|
23+ 0	0.0324	0.00	Q	|	|	|	v|
23+ 5	0.0324	0.00	Q	|	|	|	v|
23+10	0.0325	0.00	Q	|	|	|	v|
23+15	0.0325	0.00	Q	|	|	|	v|
23+20	0.0325	0.00	Q	|	|	|	v|
23+25	0.0325	0.00	Q	|	|	|	v|
23+30	0.0325	0.00	Q	|	|	|	v|
23+35	0.0326	0.00	Q	|	|	|	v|
23+40	0.0326	0.00	Q	|	|	|	v|
23+45	0.0326	0.00	Q	|	|	|	v|
23+50	0.0326	0.00	Q	|	|	|	v|
23+55	0.0326	0.00	Q	|	|	|	v|
24+ 0	0.0327	0.00	Q	|	|	|	v|
24+ 5	0.0327	0.00	Q	|	|	|	v|
24+10	0.0327	0.00	Q	|	|	|	v|
24+15	0.0327	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 03/12/24 File: ONSITEPOSTE41100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	0.50	0.30

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	1.30	0.78

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 1.300(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.300(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                        Sum (F) =   0.343
      Area averaged mean soil loss (F) (In/Hr) =  0.343
      Minimum soil loss rate ((In/Hr)) =  0.171
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.828
      ------------------------------------------------------------------------
      Slope of intensity-duration curve for a 1 hour storm =0.5500
      ------------------------------------------------------------------------

                  U n i t  H y d r o g r a p h
                         VALLEY S-Curve
      ------------------------------------------------------------------------
                  Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083        256.307         51.705              0.313
          2   0.167        512.614         39.667              0.240
          3   0.250        768.921          6.818              0.041
          4   0.333       1025.227          1.810              0.011
                                  Sum = 100.000   Sum=         0.605
-------------------------------------------------------------------------

 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   Pattern   Storm Rain     Loss rate(In./Hr)      Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low         (In/Hr)
   1   0.08     3.30      0.515          0.343    (  0.426)        0.172
   2   0.17     4.20      0.655          0.343    (  0.543)        0.313
   3   0.25     4.40      0.686          0.343    (  0.568)        0.344
   4   0.33     4.80      0.749          0.343    (  0.620)        0.406
   5   0.42     5.20      0.811          0.343    (  0.672)        0.469
   6   0.50     6.20      0.967          0.343    (  0.801)        0.625
   7   0.58     6.80      1.061          0.343    (  0.878)        0.718
   8   0.67     8.80      1.373          0.343    (  1.137)        1.030
   9   0.75    13.90      2.168          0.343    (  1.795)        1.826
  10   0.83    31.40      4.898          0.343    (  4.056)        4.556
  11   0.92     7.20      1.123          0.343    (  0.930)        0.781
  12   1.00     3.80      0.593          0.343    (  0.491)        0.250
             (Loss Rate Not Used)
     Sum =     100.0                                  Sum =    11.5
       Flood volume = Effective rainfall      0.96(In)
        times area       0.6(Ac.)/[(In)/(Ft.)] =       0.0(Ac.Ft)
       Total soil loss =      0.34(In)
       Total soil loss =     0.017(Ac.Ft)
       Total rainfall =      1.30(In)
       Flood volume =        2085.2 Cubic Feet
       Total soil loss =         746.2 Cubic Feet
       ------------------------------------------------------------------------
        Peak flow rate of this hydrograph =      1.914(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       0.0004      0.05  Q         |         |         |         |
    0+10       0.0013      0.14  QV        |         |         |         |
    0+15       0.0026      0.19  Q V       |         |         |         |
    0+20       0.0042      0.22  Q  V      |         |         |         |
    0+25       0.0060      0.26  |Q  V      |         |         |         |
    0+30       0.0082      0.33  |Q    V    |         |         |         |
    0+35       0.0110      0.40  |Q       V|         |         |         |
    0+40       0.0146      0.53  | Q       | V       |         |         |
    0+45       0.0205      0.85  |  Q      |      V  |         |         |
    0+50       0.0337      1.91  |       Q |         |       V |         |
    0+55       0.0435      1.42  |    Q    |         |         |     V   |
```

```
    1+ 0       0.0467      0.47  |Q        |         |         |        v|
    1+ 5       0.0477      0.14  Q         |         |         |        v|
    1+10       0.0479      0.02  Q         |         |         |        v|
    1+15       0.0479      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 03/12/24 File: ONSITEPOSTE43100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	0.80	0.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.00	1.20

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.800(In)
Area Averaged 100-Year Rainfall = 2.000(In)

Point rain (area averaged) = 2.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

```
      69.0  69.0      0.373     0.090        0.343       1.000      0.343
                                                        Sum (F) =   0.343
      Area averaged mean soil loss (F) (In/Hr) =  0.343
      Minimum soil loss rate ((In/Hr)) =  0.171
      (for 24 hour storm duration)
      Soil low loss rate (decimal) =   0.828
      ------------------------------------------------------------------------

                   U n i t  H y d r o g r a p h
                          VALLEY S-Curve
      ------------------------------------------------------------------------
                   Unit Hydrograph Data
      ------------------------------------------------------------------------
      Unit time period   Time % of lag   Distribution   Unit Hydrograph
          (hrs)                          Graph %           (CFS)
      ------------------------------------------------------------------------
          1   0.083        256.307         51.705             0.313
          2   0.167        512.614         39.667             0.240
          3   0.250        768.921          6.818             0.041
          4   0.333       1025.227          1.810             0.011
                                  Sum = 100.000   Sum=       0.605
------------------------------------------------------------------------

 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   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
    1   0.08     1.30      0.312       (  0.343)       0.258        0.054
    2   0.17     1.30      0.312       (  0.343)       0.258        0.054
    3   0.25     1.10      0.264       (  0.343)       0.219        0.045
    4   0.33     1.50      0.360       (  0.343)       0.298        0.062
    5   0.42     1.50      0.360       (  0.343)       0.298        0.062
    6   0.50     1.80      0.432          0.343    (  0.358)       0.089
    7   0.58     1.50      0.360       (  0.343)       0.298        0.062
    8   0.67     1.80      0.432          0.343    (  0.358)       0.089
    9   0.75     1.80      0.432          0.343    (  0.358)       0.089
   10   0.83     1.50      0.360       (  0.343)       0.298        0.062
   11   0.92     1.60      0.384       (  0.343)       0.318        0.066
   12   1.00     1.80      0.432          0.343    (  0.358)       0.089
   13   1.08     2.20      0.528          0.343    (  0.437)       0.185
   14   1.17     2.20      0.528          0.343    (  0.437)       0.185
   15   1.25     2.20      0.528          0.343    (  0.437)       0.185
   16   1.33     2.00      0.480          0.343    (  0.397)       0.137
   17   1.42     2.60      0.624          0.343    (  0.517)       0.281
   18   1.50     2.70      0.648          0.343    (  0.537)       0.305
   19   1.58     2.40      0.576          0.343    (  0.477)       0.233
   20   1.67     2.70      0.648          0.343    (  0.537)       0.305
   21   1.75     3.30      0.792          0.343    (  0.656)       0.449
   22   1.83     3.10      0.744          0.343    (  0.616)       0.401
   23   1.92     2.90      0.696          0.343    (  0.576)       0.353
   24   2.00     3.00      0.720          0.343    (  0.596)       0.377
   25   2.08     3.10      0.744          0.343    (  0.616)       0.401
   26   2.17     4.20      1.008          0.343    (  0.835)       0.665
   27   2.25     5.00      1.200          0.343    (  0.994)       0.857
   28   2.33     3.50      0.840          0.343    (  0.696)       0.497
   29   2.42     6.80      1.632          0.343    (  1.351)       1.289
   30   2.50     7.30      1.752          0.343    (  1.451)       1.409
   31   2.58     8.20      1.968          0.343    (  1.629)       1.625
   32   2.67     5.90      1.416          0.343    (  1.172)       1.073
   33   2.75     2.00      0.480          0.343    (  0.397)       0.137
   34   2.83     1.80      0.432          0.343    (  0.358)       0.089
   35   2.92     1.80      0.432          0.343    (  0.358)       0.089
   36   3.00     0.60      0.144       (  0.343)       0.119        0.025
             (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    12.4
      Flood volume = Effective rainfall      1.03(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      0.97(In)
      Total soil loss =     0.048(Ac.Ft)
      Total rainfall =      2.00(In)
      Flood volume =        2247.9 Cubic Feet
      Total soil loss =        2108.1 Cubic Feet
      ------------------------------------------------------------------------
```

Peak flow rate of this hydrograph = 0.905(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	0.0001	0.02	Q
0+10	0.0003	0.03	Q
0+15	0.0005	0.03	Q
0+20	0.0007	0.03	Q
0+25	0.0010	0.04	Q
0+30	0.0013	0.05	QV
0+35	0.0016	0.04	QV
0+40	0.0019	0.05	QV
0+45	0.0023	0.05	QV
0+50	0.0026	0.05	Q V
0+55	0.0029	0.04	Q V
1+ 0	0.0032	0.05	Q V
1+ 5	0.0038	0.08	Q V
1+10	0.0045	0.11	Q V
1+15	0.0053	0.11	Q V
1+20	0.0060	0.10	Q V
1+25	0.0069	0.13	Q V
1+30	0.0080	0.17	Q V
1+35	0.0091	0.16	Q V
1+40	0.0103	0.17	Q V
1+45	0.0119	0.23	Q V
1+50	0.0136	0.25	Q V
1+55	0.0151	0.23	Q V
2+ 0	0.0167	0.22	Q V
2+ 5	0.0183	0.24	Q V
2+10	0.0205	0.32	Q V
2+15	0.0236	0.45	Q V
2+20	0.0263	0.39	Q V
2+25	0.0302	0.57	Q V
2+30	0.0356	0.78	Q V
2+35	0.0418	0.91	Q V
2+40	0.0473	0.80	Q V
2+45	0.0500	0.38	Q V
2+50	0.0508	0.12	Q V
2+55	0.0513	0.07	Q V
3+ 0	0.0515	0.03	Q V
3+ 5	0.0516	0.01	Q V
3+10	0.0516	0.00	Q V
3+15	0.0516	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 03/12/24 File: ONSITEPOSTE46100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	1.20	0.72

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	2.80	1.68

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.200(In)
Area Averaged 100-Year Rainfall = 2.800(In)

Point rain (area averaged) = 2.800(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.800(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

69.0	69.0	0.373	0.090	0.343	1.000	0.343
					Sum (F) =	0.343

Area averaged mean soil loss (F) (In/Hr) = 0.343
Minimum soil loss rate ((In/Hr)) = 0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.828

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

Unit Hydrograph Data

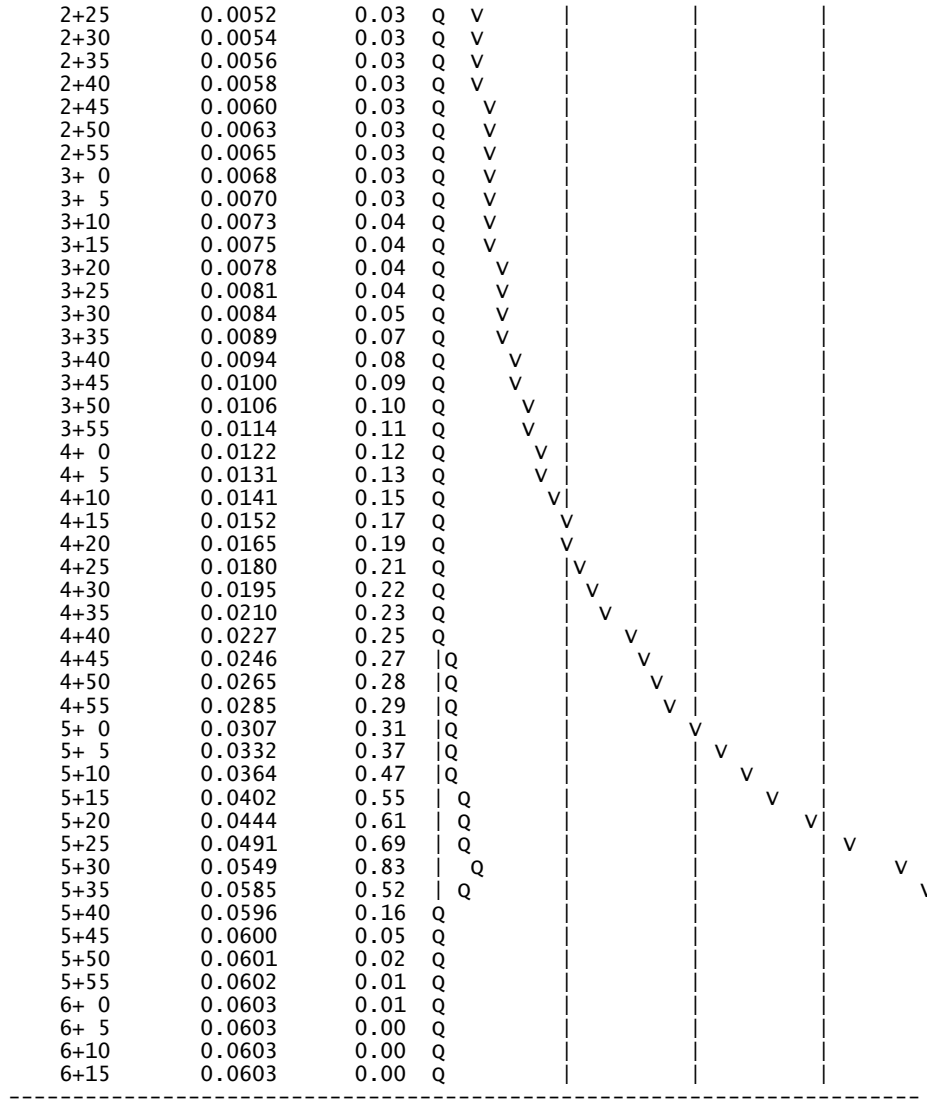
Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	256.307	51.705	0.313
2	0.167	512.614	39.667	0.240
3	0.250	768.921	6.818	0.041
4	0.333	1025.227	1.810	0.011
			Sum = 100.000 Sum=	0.605

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	0.168	(0.343)	0.139	0.029
2	0.17	0.60	0.202	(0.343)	0.167	0.035
3	0.25	0.60	0.202	(0.343)	0.167	0.035
4	0.33	0.60	0.202	(0.343)	0.167	0.035
5	0.42	0.60	0.202	(0.343)	0.167	0.035
6	0.50	0.70	0.235	(0.343)	0.195	0.040
7	0.58	0.70	0.235	(0.343)	0.195	0.040
8	0.67	0.70	0.235	(0.343)	0.195	0.040
9	0.75	0.70	0.235	(0.343)	0.195	0.040
10	0.83	0.70	0.235	(0.343)	0.195	0.040
11	0.92	0.70	0.235	(0.343)	0.195	0.040
12	1.00	0.80	0.269	(0.343)	0.223	0.046
13	1.08	0.80	0.269	(0.343)	0.223	0.046
14	1.17	0.80	0.269	(0.343)	0.223	0.046
15	1.25	0.80	0.269	(0.343)	0.223	0.046
16	1.33	0.80	0.269	(0.343)	0.223	0.046
17	1.42	0.80	0.269	(0.343)	0.223	0.046
18	1.50	0.80	0.269	(0.343)	0.223	0.046
19	1.58	0.80	0.269	(0.343)	0.223	0.046
20	1.67	0.80	0.269	(0.343)	0.223	0.046
21	1.75	0.80	0.269	(0.343)	0.223	0.046
22	1.83	0.80	0.269	(0.343)	0.223	0.046
23	1.92	0.80	0.269	(0.343)	0.223	0.046
24	2.00	0.90	0.302	(0.343)	0.250	0.052
25	2.08	0.80	0.269	(0.343)	0.223	0.046
26	2.17	0.90	0.302	(0.343)	0.250	0.052
27	2.25	0.90	0.302	(0.343)	0.250	0.052
28	2.33	0.90	0.302	(0.343)	0.250	0.052
29	2.42	0.90	0.302	(0.343)	0.250	0.052
30	2.50	0.90	0.302	(0.343)	0.250	0.052
31	2.58	0.90	0.302	(0.343)	0.250	0.052
32	2.67	0.90	0.302	(0.343)	0.250	0.052
33	2.75	1.00	0.336	(0.343)	0.278	0.058
34	2.83	1.00	0.336	(0.343)	0.278	0.058
35	2.92	1.00	0.336	(0.343)	0.278	0.058
36	3.00	1.00	0.336	(0.343)	0.278	0.058
37	3.08	1.00	0.336	(0.343)	0.278	0.058
38	3.17	1.10	0.370	(0.343)	0.306	0.064
39	3.25	1.10	0.370	(0.343)	0.306	0.064
40	3.33	1.10	0.370	(0.343)	0.306	0.064
41	3.42	1.20	0.403	(0.343)	0.334	0.069
42	3.50	1.30	0.437	0.343	(0.362)	0.094
43	3.58	1.40	0.470	0.343	(0.389)	0.128
44	3.67	1.40	0.470	0.343	(0.389)	0.128
45	3.75	1.50	0.504	0.343	(0.417)	0.161
46	3.83	1.50	0.504	0.343	(0.417)	0.161

```
47   3.92     1.60      0.538          0.343    (  0.445)        0.195
48   4.00     1.60      0.538          0.343    (  0.445)        0.195
49   4.08     1.70      0.571          0.343    (  0.473)        0.229
50   4.17     1.80      0.605          0.343    (  0.501)        0.262
51   4.25     1.90      0.638          0.343    (  0.529)        0.296
52   4.33     2.00      0.672          0.343    (  0.556)        0.329
53   4.42     2.10      0.706          0.343    (  0.584)        0.363
54   4.50     2.10      0.706          0.343    (  0.584)        0.363
55   4.58     2.20      0.739          0.343    (  0.612)        0.397
56   4.67     2.30      0.773          0.343    (  0.640)        0.430
57   4.75     2.40      0.806          0.343    (  0.668)        0.464
58   4.83     2.40      0.806          0.343    (  0.668)        0.464
59   4.92     2.50      0.840          0.343    (  0.696)        0.497
60   5.00     2.60      0.874          0.343    (  0.723)        0.531
61   5.08     3.10      1.042          0.343    (  0.862)        0.699
62   5.17     3.60      1.210          0.343    (  1.002)        0.867
63   5.25     3.90      1.310          0.343    (  1.085)        0.968
64   5.33     4.20      1.411          0.343    (  1.168)        1.069
65   5.42     4.70      1.579          0.343    (  1.308)        1.237
66   5.50     5.60      1.882          0.343    (  1.558)        1.539
67   5.58     1.90      0.638          0.343    (  0.529)        0.296
68   5.67     0.90      0.302       (  0.343)       0.250        0.052
69   5.75     0.60      0.202       (  0.343)       0.167        0.035
70   5.83     0.50      0.168       (  0.343)       0.139        0.029
71   5.92     0.30      0.101       (  0.343)       0.083        0.017
72   6.00     0.20      0.067       (  0.343)       0.056        0.012
              (Loss Rate Not Used)
   Sum =     100.0                                   Sum =    14.5
     Flood volume = Effective rainfall      1.21(In)
      times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
     Total soil loss =      1.59(In)
     Total soil loss =     0.080(Ac.Ft)
     Total rainfall =      2.80(In)
     Flood volume =        2628.5 Cubic Feet
     Total soil loss =        3469.9 Cubic Feet
     ---------------------------------------------------------------------
      Peak flow rate of this hydrograph =      0.833(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      0.01  Q         |         |         |         |
  0+10       0.0002      0.02  Q         |         |         |         |
  0+15       0.0003      0.02  Q         |         |         |         |
  0+20       0.0005      0.02  Q         |         |         |         |
  0+25       0.0006      0.02  Q         |         |         |         |
  0+30       0.0008      0.02  Q         |         |         |         |
  0+35       0.0009      0.02  Q         |         |         |         |
  0+40       0.0011      0.02  Q         |         |         |         |
  0+45       0.0013      0.02  Q         |         |         |         |
  0+50       0.0014      0.02  Q         |         |         |         |
  0+55       0.0016      0.02  QV        |         |         |         |
  1+ 0       0.0018      0.03  QV        |         |         |         |
  1+ 5       0.0020      0.03  QV        |         |         |         |
  1+10       0.0022      0.03  QV        |         |         |         |
  1+15       0.0024      0.03  QV        |         |         |         |
  1+20       0.0026      0.03  QV        |         |         |         |
  1+25       0.0028      0.03  QV        |         |         |         |
  1+30       0.0029      0.03  QV        |         |         |         |
  1+35       0.0031      0.03  Q V       |         |         |         |
  1+40       0.0033      0.03  Q V       |         |         |         |
  1+45       0.0035      0.03  Q V       |         |         |         |
  1+50       0.0037      0.03  Q V       |         |         |         |
  1+55       0.0039      0.03  Q V       |         |         |         |
  2+ 0       0.0041      0.03  Q V       |         |         |         |
  2+ 5       0.0043      0.03  Q V       |         |         |         |
  2+10       0.0045      0.03  Q V       |         |         |         |
  2+15       0.0047      0.03  Q  V      |         |         |         |
  2+20       0.0050      0.03  Q  V      |         |         |         |
```


2+25 0.0052 0.03
2+30 0.0054 0.03
2+35 0.0056 0.03
2+40 0.0058 0.03
2+45 0.0060 0.03
2+50 0.0063 0.03
2+55 0.0065 0.03
3+ 0 0.0068 0.03
3+ 5 0.0070 0.03
3+10 0.0073 0.04
3+15 0.0075 0.04
3+20 0.0078 0.04
3+25 0.0081 0.04
3+30 0.0084 0.05
3+35 0.0089 0.07
3+40 0.0094 0.08
3+45 0.0100 0.09
3+50 0.0106 0.10
3+55 0.0114 0.11
4+ 0 0.0122 0.12
4+ 5 0.0131 0.13
4+10 0.0141 0.15
4+15 0.0152 0.17
4+20 0.0165 0.19
4+25 0.0180 0.21
4+30 0.0195 0.22
4+35 0.0210 0.23
4+40 0.0227 0.25
4+45 0.0246 0.27
4+50 0.0265 0.28
4+55 0.0285 0.29
5+ 0 0.0307 0.31
5+ 5 0.0332 0.37
5+10 0.0364 0.47
5+15 0.0402 0.55
5+20 0.0444 0.61
5+25 0.0491 0.69
5+30 0.0549 0.83
5+35 0.0585 0.52
5+40 0.0596 0.16
5+45 0.0600 0.05
5+50 0.0601 0.02
5+55 0.0602 0.01
6+ 0 0.0603 0.01
6+ 5 0.0603 0.00
6+10 0.0603 0.00
6+15 0.0603 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 03/12/24 File: ONSITEPOSTE424100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - MVCC PARK
ONSITE UNIT HYDROGRAPH ANALYSIS - DMA E-4
DEVELOPED CONDITION, 100-YEAR 24-HOUR
FN: ONSITEPOSTE4.OUT- RSB

Drainage Area = 0.60(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.60(Ac.) = 0.001 Sq. Mi.
Length along longest watercourse = 600.00(Ft.)
Length along longest watercourse measured to centroid = 321.00(Ft.)
Length along longest watercourse = 0.114 Mi.
Length along longest watercourse measured to centroid = 0.061 Mi.
Difference in elevation = 25.00(Ft.)
Slope along watercourse = 220.0000 Ft./Mi.
Average Manning's 'N' = 0.025
Lag time = 0.033 Hr.
Lag time = 1.95 Min.
25% of lag time = 0.49 Min.
40% of lag time = 0.78 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]
0.60	2.00	1.20

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
0.60	5.40	3.24

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.400(In)

Point rain (area averaged) = 5.400(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 5.400(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
0.600	69.00	0.090

Total Area Entered = 0.60(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)

69.0	69.0	0.373	0.090	0.343	1.000	0.343
					Sum (F) =	0.343

Area averaged mean soil loss (F) (In/Hr) = 0.343
Minimum soil loss rate ((In/Hr)) = 0.171
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.828

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	256.307	51.705	0.313
2	0.167	512.614	39.667	0.240
3	0.250	768.921	6.818	0.041
4	0.333	1025.227	1.810	0.011
			Sum = 100.000	Sum= 0.605

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	0.043	(0.607)	0.036	0.007
2	0.17	0.07	0.043	(0.605)	0.036	0.007
3	0.25	0.07	0.043	(0.603)	0.036	0.007
4	0.33	0.10	0.065	(0.600)	0.054	0.011
5	0.42	0.10	0.065	(0.598)	0.054	0.011
6	0.50	0.10	0.065	(0.596)	0.054	0.011
7	0.58	0.10	0.065	(0.593)	0.054	0.011
8	0.67	0.10	0.065	(0.591)	0.054	0.011
9	0.75	0.10	0.065	(0.589)	0.054	0.011
10	0.83	0.13	0.086	(0.586)	0.072	0.015
11	0.92	0.13	0.086	(0.584)	0.072	0.015
12	1.00	0.13	0.086	(0.582)	0.072	0.015
13	1.08	0.10	0.065	(0.579)	0.054	0.011
14	1.17	0.10	0.065	(0.577)	0.054	0.011
15	1.25	0.10	0.065	(0.575)	0.054	0.011
16	1.33	0.10	0.065	(0.573)	0.054	0.011
17	1.42	0.10	0.065	(0.570)	0.054	0.011
18	1.50	0.10	0.065	(0.568)	0.054	0.011
19	1.58	0.10	0.065	(0.566)	0.054	0.011
20	1.67	0.10	0.065	(0.563)	0.054	0.011
21	1.75	0.10	0.065	(0.561)	0.054	0.011
22	1.83	0.13	0.086	(0.559)	0.072	0.015
23	1.92	0.13	0.086	(0.557)	0.072	0.015
24	2.00	0.13	0.086	(0.554)	0.072	0.015
25	2.08	0.13	0.086	(0.552)	0.072	0.015
26	2.17	0.13	0.086	(0.550)	0.072	0.015
27	2.25	0.13	0.086	(0.548)	0.072	0.015
28	2.33	0.13	0.086	(0.546)	0.072	0.015
29	2.42	0.13	0.086	(0.543)	0.072	0.015
30	2.50	0.13	0.086	(0.541)	0.072	0.015
31	2.58	0.17	0.108	(0.539)	0.089	0.019
32	2.67	0.17	0.108	(0.537)	0.089	0.019
33	2.75	0.17	0.108	(0.534)	0.089	0.019
34	2.83	0.17	0.108	(0.532)	0.089	0.019
35	2.92	0.17	0.108	(0.530)	0.089	0.019
36	3.00	0.17	0.108	(0.528)	0.089	0.019
37	3.08	0.17	0.108	(0.526)	0.089	0.019
38	3.17	0.17	0.108	(0.524)	0.089	0.019
39	3.25	0.17	0.108	(0.521)	0.089	0.019
40	3.33	0.17	0.108	(0.519)	0.089	0.019
41	3.42	0.17	0.108	(0.517)	0.089	0.019
42	3.50	0.17	0.108	(0.515)	0.089	0.019
43	3.58	0.17	0.108	(0.513)	0.089	0.019
44	3.67	0.17	0.108	(0.511)	0.089	0.019
45	3.75	0.17	0.108	(0.508)	0.089	0.019
46	3.83	0.20	0.130	(0.506)	0.107	0.022

47	3.92	0.20	0.130	(0.504)	0.107	0.022
48	4.00	0.20	0.130	(0.502)	0.107	0.022
49	4.08	0.20	0.130	(0.500)	0.107	0.022
50	4.17	0.20	0.130	(0.498)	0.107	0.022
51	4.25	0.20	0.130	(0.496)	0.107	0.022
52	4.33	0.23	0.151	(0.493)	0.125	0.026
53	4.42	0.23	0.151	(0.491)	0.125	0.026
54	4.50	0.23	0.151	(0.489)	0.125	0.026
55	4.58	0.23	0.151	(0.487)	0.125	0.026
56	4.67	0.23	0.151	(0.485)	0.125	0.026
57	4.75	0.23	0.151	(0.483)	0.125	0.026
58	4.83	0.27	0.173	(0.481)	0.143	0.030
59	4.92	0.27	0.173	(0.479)	0.143	0.030
60	5.00	0.27	0.173	(0.477)	0.143	0.030
61	5.08	0.20	0.130	(0.475)	0.107	0.022
62	5.17	0.20	0.130	(0.473)	0.107	0.022
63	5.25	0.20	0.130	(0.471)	0.107	0.022
64	5.33	0.23	0.151	(0.468)	0.125	0.026
65	5.42	0.23	0.151	(0.466)	0.125	0.026
66	5.50	0.23	0.151	(0.464)	0.125	0.026
67	5.58	0.27	0.173	(0.462)	0.143	0.030
68	5.67	0.27	0.173	(0.460)	0.143	0.030
69	5.75	0.27	0.173	(0.458)	0.143	0.030
70	5.83	0.27	0.173	(0.456)	0.143	0.030
71	5.92	0.27	0.173	(0.454)	0.143	0.030
72	6.00	0.27	0.173	(0.452)	0.143	0.030
73	6.08	0.30	0.194	(0.450)	0.161	0.033
74	6.17	0.30	0.194	(0.448)	0.161	0.033
75	6.25	0.30	0.194	(0.446)	0.161	0.033
76	6.33	0.30	0.194	(0.444)	0.161	0.033
77	6.42	0.30	0.194	(0.442)	0.161	0.033
78	6.50	0.30	0.194	(0.440)	0.161	0.033
79	6.58	0.33	0.216	(0.438)	0.179	0.037
80	6.67	0.33	0.216	(0.436)	0.179	0.037
81	6.75	0.33	0.216	(0.434)	0.179	0.037
82	6.83	0.33	0.216	(0.432)	0.179	0.037
83	6.92	0.33	0.216	(0.430)	0.179	0.037
84	7.00	0.33	0.216	(0.428)	0.179	0.037
85	7.08	0.33	0.216	(0.427)	0.179	0.037
86	7.17	0.33	0.216	(0.425)	0.179	0.037
87	7.25	0.33	0.216	(0.423)	0.179	0.037
88	7.33	0.37	0.238	(0.421)	0.197	0.041
89	7.42	0.37	0.238	(0.419)	0.197	0.041
90	7.50	0.37	0.238	(0.417)	0.197	0.041
91	7.58	0.40	0.259	(0.415)	0.215	0.045
92	7.67	0.40	0.259	(0.413)	0.215	0.045
93	7.75	0.40	0.259	(0.411)	0.215	0.045
94	7.83	0.43	0.281	(0.409)	0.233	0.048
95	7.92	0.43	0.281	(0.407)	0.233	0.048
96	8.00	0.43	0.281	(0.405)	0.233	0.048
97	8.08	0.50	0.324	(0.404)	0.268	0.056
98	8.17	0.50	0.324	(0.402)	0.268	0.056
99	8.25	0.50	0.324	(0.400)	0.268	0.056
100	8.33	0.50	0.324	(0.398)	0.268	0.056
101	8.42	0.50	0.324	(0.396)	0.268	0.056
102	8.50	0.50	0.324	(0.394)	0.268	0.056
103	8.58	0.53	0.346	(0.392)	0.286	0.059
104	8.67	0.53	0.346	(0.391)	0.286	0.059
105	8.75	0.53	0.346	(0.389)	0.286	0.059
106	8.83	0.57	0.367	(0.387)	0.304	0.063
107	8.92	0.57	0.367	(0.385)	0.304	0.063
108	9.00	0.57	0.367	(0.383)	0.304	0.063
109	9.08	0.63	0.410	(0.381)	0.340	0.071
110	9.17	0.63	0.410	(0.380)	0.340	0.071
111	9.25	0.63	0.410	(0.378)	0.340	0.071
112	9.33	0.67	0.432	(0.376)	0.358	0.074
113	9.42	0.67	0.432	(0.374)	0.358	0.074
114	9.50	0.67	0.432	(0.372)	0.358	0.074
115	9.58	0.70	0.454	0.371	(0.376)	0.083
116	9.67	0.70	0.454	0.369	(0.376)	0.085
117	9.75	0.70	0.454	0.367	(0.376)	0.087
118	9.83	0.73	0.475	0.365	(0.393)	0.110
119	9.92	0.73	0.475	0.364	(0.393)	0.112
120	10.00	0.73	0.475	0.362	(0.393)	0.113
121	10.08	0.50	0.324	(0.360)	0.268	0.056

122	10.17	0.50	0.324	(	0.358)	0.268		0.056
123	10.25	0.50	0.324	(	0.357)	0.268		0.056
124	10.33	0.50	0.324	(	0.355)	0.268		0.056
125	10.42	0.50	0.324	(	0.353)	0.268		0.056
126	10.50	0.50	0.324	(	0.351)	0.268		0.056
127	10.58	0.67	0.432		0.350	(	0.358)	0.082
128	10.67	0.67	0.432		0.348	(	0.358)	0.084
129	10.75	0.67	0.432		0.346	(	0.358)	0.086
130	10.83	0.67	0.432		0.345	(	0.358)	0.087
131	10.92	0.67	0.432		0.343	(	0.358)	0.089
132	11.00	0.67	0.432		0.341	(	0.358)	0.091
133	11.08	0.63	0.410		0.339	(	0.340)	0.071
134	11.17	0.63	0.410		0.338	(	0.340)	0.073
135	11.25	0.63	0.410		0.336	(	0.340)	0.074
136	11.33	0.63	0.410		0.334	(	0.340)	0.076
137	11.42	0.63	0.410		0.333	(	0.340)	0.078
138	11.50	0.63	0.410		0.331	(	0.340)	0.079
139	11.58	0.57	0.367	(	0.330)	0.304		0.063
140	11.67	0.57	0.367	(	0.328)	0.304		0.063
141	11.75	0.57	0.367	(	0.326)	0.304		0.063
142	11.83	0.60	0.389	(	0.325)	0.322		0.067
143	11.92	0.60	0.389	(	0.323)	0.322		0.067
144	12.00	0.60	0.389		0.321	(	0.322)	0.067
145	12.08	0.83	0.540		0.320	(	0.447)	0.220
146	12.17	0.83	0.540		0.318	(	0.447)	0.222
147	12.25	0.83	0.540		0.317	(	0.447)	0.223
148	12.33	0.87	0.562		0.315	(	0.465)	0.247
149	12.42	0.87	0.562		0.313	(	0.465)	0.248
150	12.50	0.87	0.562		0.312	(	0.465)	0.250
151	12.58	0.93	0.605		0.310	(	0.501)	0.295
152	12.67	0.93	0.605		0.309	(	0.501)	0.296
153	12.75	0.93	0.605		0.307	(	0.501)	0.298
154	12.83	0.97	0.626		0.306	(	0.519)	0.321
155	12.92	0.97	0.626		0.304	(	0.519)	0.322
156	13.00	0.97	0.626		0.303	(	0.519)	0.324
157	13.08	1.13	0.734		0.301	(	0.608)	0.433
158	13.17	1.13	0.734		0.299	(	0.608)	0.435
159	13.25	1.13	0.734		0.298	(	0.608)	0.436
160	13.33	1.13	0.734		0.296	(	0.608)	0.438
161	13.42	1.13	0.734		0.295	(	0.608)	0.439
162	13.50	1.13	0.734		0.293	(	0.608)	0.441
163	13.58	0.77	0.497		0.292	(	0.411)	0.205
164	13.67	0.77	0.497		0.290	(	0.411)	0.206
165	13.75	0.77	0.497		0.289	(	0.411)	0.208
166	13.83	0.77	0.497		0.288	(	0.411)	0.209
167	13.92	0.77	0.497		0.286	(	0.411)	0.211
168	14.00	0.77	0.497		0.285	(	0.411)	0.212
169	14.08	0.90	0.583		0.283	(	0.483)	0.300
170	14.17	0.90	0.583		0.282	(	0.483)	0.302
171	14.25	0.90	0.583		0.280	(	0.483)	0.303
172	14.33	0.87	0.562		0.279	(	0.465)	0.283
173	14.42	0.87	0.562		0.277	(	0.465)	0.284
174	14.50	0.87	0.562		0.276	(	0.465)	0.286
175	14.58	0.87	0.562		0.275	(	0.465)	0.287
176	14.67	0.87	0.562		0.273	(	0.465)	0.288
177	14.75	0.87	0.562		0.272	(	0.465)	0.290
178	14.83	0.83	0.540		0.270	(	0.447)	0.270
179	14.92	0.83	0.540		0.269	(	0.447)	0.271
180	15.00	0.83	0.540		0.268	(	0.447)	0.272
181	15.08	0.80	0.518		0.266	(	0.429)	0.252
182	15.17	0.80	0.518		0.265	(	0.429)	0.254
183	15.25	0.80	0.518		0.263	(	0.429)	0.255
184	15.33	0.77	0.497		0.262	(	0.411)	0.235
185	15.42	0.77	0.497		0.261	(	0.411)	0.236
186	15.50	0.77	0.497		0.259	(	0.411)	0.237
187	15.58	0.63	0.410		0.258	(	0.340)	0.152
188	15.67	0.63	0.410		0.257	(	0.340)	0.154
189	15.75	0.63	0.410		0.255	(	0.340)	0.155
190	15.83	0.63	0.410		0.254	(	0.340)	0.156
191	15.92	0.63	0.410		0.253	(	0.340)	0.158
192	16.00	0.63	0.410		0.252	(	0.340)	0.159
193	16.08	0.13	0.086	(	0.250)	0.072		0.015
194	16.17	0.13	0.086	(	0.249)	0.072		0.015
195	16.25	0.13	0.086	(	0.248)	0.072		0.015
196	16.33	0.13	0.086	(	0.246)	0.072		0.015

197	16.42	0.13	0.086	(0.245)	0.072	0.015
198	16.50	0.13	0.086	(0.244)	0.072	0.015
199	16.58	0.10	0.065	(0.243)	0.054	0.011
200	16.67	0.10	0.065	(0.242)	0.054	0.011
201	16.75	0.10	0.065	(0.240)	0.054	0.011
202	16.83	0.10	0.065	(0.239)	0.054	0.011
203	16.92	0.10	0.065	(0.238)	0.054	0.011
204	17.00	0.10	0.065	(0.237)	0.054	0.011
205	17.08	0.17	0.108	(0.235)	0.089	0.019
206	17.17	0.17	0.108	(0.234)	0.089	0.019
207	17.25	0.17	0.108	(0.233)	0.089	0.019
208	17.33	0.17	0.108	(0.232)	0.089	0.019
209	17.42	0.17	0.108	(0.231)	0.089	0.019
210	17.50	0.17	0.108	(0.230)	0.089	0.019
211	17.58	0.17	0.108	(0.228)	0.089	0.019
212	17.67	0.17	0.108	(0.227)	0.089	0.019
213	17.75	0.17	0.108	(0.226)	0.089	0.019
214	17.83	0.13	0.086	(0.225)	0.072	0.015
215	17.92	0.13	0.086	(0.224)	0.072	0.015
216	18.00	0.13	0.086	(0.223)	0.072	0.015
217	18.08	0.13	0.086	(0.222)	0.072	0.015
218	18.17	0.13	0.086	(0.221)	0.072	0.015
219	18.25	0.13	0.086	(0.220)	0.072	0.015
220	18.33	0.13	0.086	(0.219)	0.072	0.015
221	18.42	0.13	0.086	(0.217)	0.072	0.015
222	18.50	0.13	0.086	(0.216)	0.072	0.015
223	18.58	0.10	0.065	(0.215)	0.054	0.011
224	18.67	0.10	0.065	(0.214)	0.054	0.011
225	18.75	0.10	0.065	(0.213)	0.054	0.011
226	18.83	0.07	0.043	(0.212)	0.036	0.007
227	18.92	0.07	0.043	(0.211)	0.036	0.007
228	19.00	0.07	0.043	(0.210)	0.036	0.007
229	19.08	0.10	0.065	(0.209)	0.054	0.011
230	19.17	0.10	0.065	(0.208)	0.054	0.011
231	19.25	0.10	0.065	(0.207)	0.054	0.011
232	19.33	0.13	0.086	(0.206)	0.072	0.015
233	19.42	0.13	0.086	(0.205)	0.072	0.015
234	19.50	0.13	0.086	(0.204)	0.072	0.015
235	19.58	0.10	0.065	(0.203)	0.054	0.011
236	19.67	0.10	0.065	(0.203)	0.054	0.011
237	19.75	0.10	0.065	(0.202)	0.054	0.011
238	19.83	0.07	0.043	(0.201)	0.036	0.007
239	19.92	0.07	0.043	(0.200)	0.036	0.007
240	20.00	0.07	0.043	(0.199)	0.036	0.007
241	20.08	0.10	0.065	(0.198)	0.054	0.011
242	20.17	0.10	0.065	(0.197)	0.054	0.011
243	20.25	0.10	0.065	(0.196)	0.054	0.011
244	20.33	0.10	0.065	(0.195)	0.054	0.011
245	20.42	0.10	0.065	(0.195)	0.054	0.011
246	20.50	0.10	0.065	(0.194)	0.054	0.011
247	20.58	0.10	0.065	(0.193)	0.054	0.011
248	20.67	0.10	0.065	(0.192)	0.054	0.011
249	20.75	0.10	0.065	(0.191)	0.054	0.011
250	20.83	0.07	0.043	(0.191)	0.036	0.007
251	20.92	0.07	0.043	(0.190)	0.036	0.007
252	21.00	0.07	0.043	(0.189)	0.036	0.007
253	21.08	0.10	0.065	(0.188)	0.054	0.011
254	21.17	0.10	0.065	(0.188)	0.054	0.011
255	21.25	0.10	0.065	(0.187)	0.054	0.011
256	21.33	0.07	0.043	(0.186)	0.036	0.007
257	21.42	0.07	0.043	(0.185)	0.036	0.007
258	21.50	0.07	0.043	(0.185)	0.036	0.007
259	21.58	0.10	0.065	(0.184)	0.054	0.011
260	21.67	0.10	0.065	(0.183)	0.054	0.011
261	21.75	0.10	0.065	(0.183)	0.054	0.011
262	21.83	0.07	0.043	(0.182)	0.036	0.007
263	21.92	0.07	0.043	(0.182)	0.036	0.007
264	22.00	0.07	0.043	(0.181)	0.036	0.007
265	22.08	0.10	0.065	(0.180)	0.054	0.011
266	22.17	0.10	0.065	(0.180)	0.054	0.011
267	22.25	0.10	0.065	(0.179)	0.054	0.011
268	22.33	0.07	0.043	(0.179)	0.036	0.007
269	22.42	0.07	0.043	(0.178)	0.036	0.007
270	22.50	0.07	0.043	(0.178)	0.036	0.007
271	22.58	0.07	0.043	(0.177)	0.036	0.007

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272  22.67     0.07      0.043       (  0.176)       0.036        0.007
273  22.75     0.07      0.043       (  0.176)       0.036        0.007
274  22.83     0.07      0.043       (  0.176)       0.036        0.007
275  22.92     0.07      0.043       (  0.175)       0.036        0.007
276  23.00     0.07      0.043       (  0.175)       0.036        0.007
277  23.08     0.07      0.043       (  0.174)       0.036        0.007
278  23.17     0.07      0.043       (  0.174)       0.036        0.007
279  23.25     0.07      0.043       (  0.174)       0.036        0.007
280  23.33     0.07      0.043       (  0.173)       0.036        0.007
281  23.42     0.07      0.043       (  0.173)       0.036        0.007
282  23.50     0.07      0.043       (  0.173)       0.036        0.007
283  23.58     0.07      0.043       (  0.172)       0.036        0.007
284  23.67     0.07      0.043       (  0.172)       0.036        0.007
285  23.75     0.07      0.043       (  0.172)       0.036        0.007
286  23.83     0.07      0.043       (  0.172)       0.036        0.007
287  23.92     0.07      0.043       (  0.171)       0.036        0.007
288  24.00     0.07      0.043       (  0.171)       0.036        0.007
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    19.8
      Flood volume = Effective rainfall      1.65(In)
       times area       0.6(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      3.75(In)
      Total soil loss =     0.188(Ac.Ft)
      Total rainfall =      5.40(In)
      Flood volume =        3585.1 Cubic Feet
      Total soil loss =        8176.1 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.266(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.00  Q         |         |         |         |
   0+10       0.0000      0.00  Q         |         |         |         |
   0+15       0.0001      0.00  Q         |         |         |         |
   0+20       0.0001      0.01  Q         |         |         |         |
   0+25       0.0002      0.01  Q         |         |         |         |
   0+30       0.0002      0.01  Q         |         |         |         |
   0+35       0.0003      0.01  Q         |         |         |         |
   0+40       0.0003      0.01  Q         |         |         |         |
   0+45       0.0003      0.01  Q         |         |         |         |
   0+50       0.0004      0.01  Q         |         |         |         |
   0+55       0.0005      0.01  Q         |         |         |         |
   1+ 0       0.0005      0.01  Q         |         |         |         |
   1+ 5       0.0006      0.01  Q         |         |         |         |
   1+10       0.0006      0.01  Q         |         |         |         |
   1+15       0.0007      0.01  Q         |         |         |         |
   1+20       0.0007      0.01  Q         |         |         |         |
   1+25       0.0008      0.01  Q         |         |         |         |
   1+30       0.0008      0.01  Q         |         |         |         |
   1+35       0.0009      0.01  Q         |         |         |         |
   1+40       0.0009      0.01  Q         |         |         |         |
   1+45       0.0009      0.01  Q         |         |         |         |
   1+50       0.0010      0.01  Q         |         |         |         |
   1+55       0.0011      0.01  Q         |         |         |         |
   2+ 0       0.0011      0.01  Q         |         |         |         |
   2+ 5       0.0012      0.01  Q         |         |         |         |
   2+10       0.0012      0.01  Q         |         |         |         |
   2+15       0.0013      0.01  Q         |         |         |         |
   2+20       0.0014      0.01  Q         |         |         |         |
   2+25       0.0014      0.01  Q         |         |         |         |
   2+30       0.0015      0.01  Q         |         |         |         |
   2+35       0.0016      0.01  Q         |         |         |         |
   2+40       0.0016      0.01  Q         |         |         |         |
   2+45       0.0017      0.01  Q         |         |         |         |
   2+50       0.0018      0.01  Q         |         |         |         |
   2+55       0.0019      0.01  Q         |         |         |         |
   3+ 0       0.0020      0.01  Q         |         |         |         |
   3+ 5       0.0020      0.01  Q         |         |         |         |
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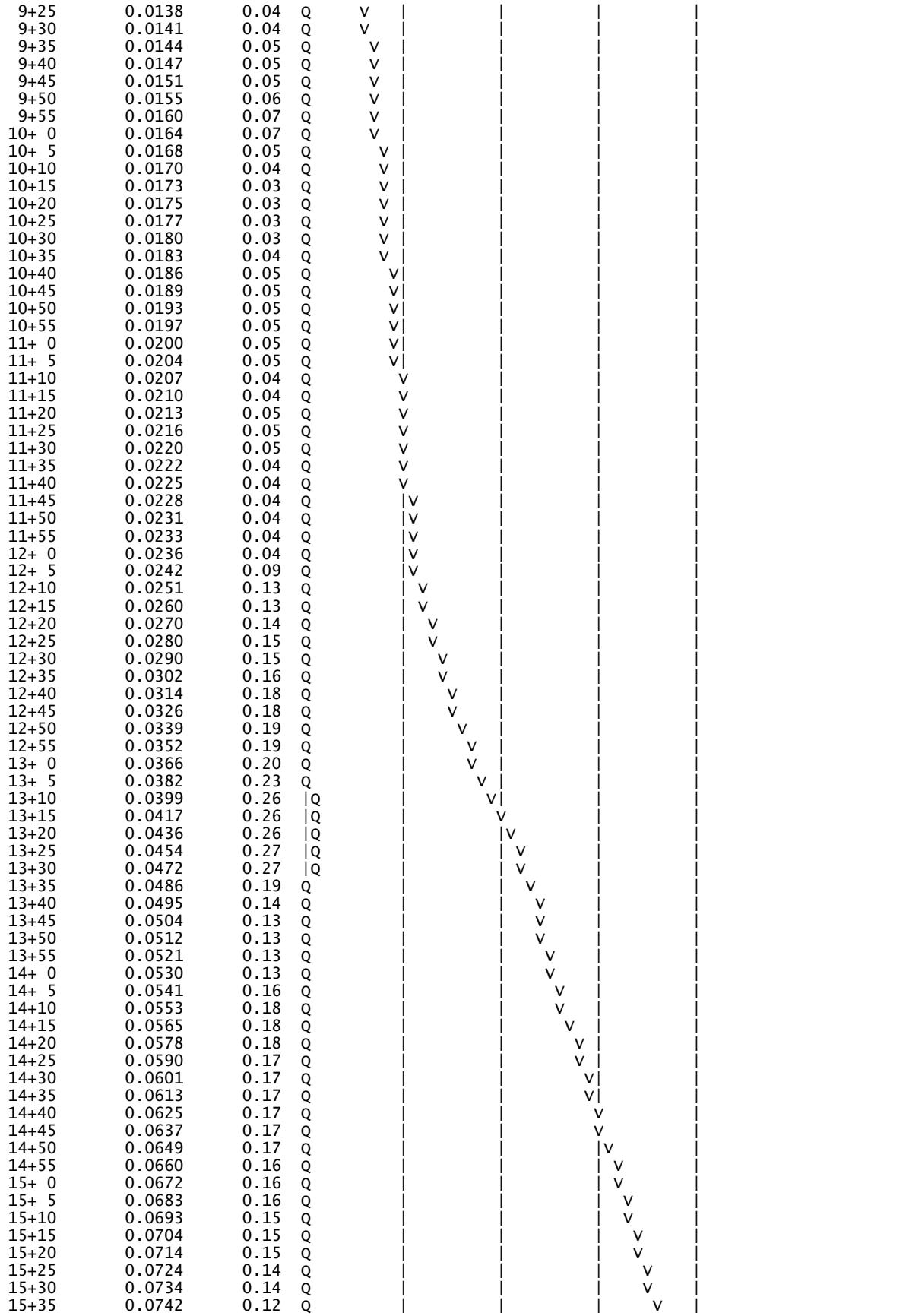
3+10       0.0021      0.01  QV        |         |         |         |
3+15       0.0022      0.01  QV        |         |         |         |
3+20       0.0023      0.01  QV        |         |         |         |
3+25       0.0023      0.01  QV        |         |         |         |
3+30       0.0024      0.01  QV        |         |         |         |
3+35       0.0025      0.01  QV        |         |         |         |
3+40       0.0026      0.01  QV        |         |         |         |
3+45       0.0026      0.01  QV        |         |         |         |
3+50       0.0027      0.01  QV        |         |         |         |
3+55       0.0028      0.01  QV        |         |         |         |
4+ 0       0.0029      0.01  QV        |         |         |         |
4+ 5       0.0030      0.01  QV        |         |         |         |
4+10       0.0031      0.01  QV        |         |         |         |
4+15       0.0032      0.01  QV        |         |         |         |
4+20       0.0033      0.01  QV        |         |         |         |
4+25       0.0034      0.02  QV        |         |         |         |
4+30       0.0035      0.02  QV        |         |         |         |
4+35       0.0036      0.02  QV        |         |         |         |
4+40       0.0037      0.02  QV        |         |         |         |
4+45       0.0038      0.02  QV        |         |         |         |
4+50       0.0040      0.02  QV        |         |         |         |
4+55       0.0041      0.02  QV        |         |         |         |
5+ 0       0.0042      0.02  Q V       |         |         |         |
5+ 5       0.0043      0.02  Q V       |         |         |         |
5+10       0.0044      0.01  Q V       |         |         |         |
5+15       0.0045      0.01  Q V       |         |         |         |
5+20       0.0046      0.01  Q V       |         |         |         |
5+25       0.0047      0.02  Q V       |         |         |         |
5+30       0.0048      0.02  Q V       |         |         |         |
5+35       0.0049      0.02  Q V       |         |         |         |
5+40       0.0051      0.02  Q V       |         |         |         |
5+45       0.0052      0.02  Q V       |         |         |         |
5+50       0.0053      0.02  Q V       |         |         |         |
5+55       0.0054      0.02  Q V       |         |         |         |
6+ 0       0.0055      0.02  Q V       |         |         |         |
6+ 5       0.0057      0.02  Q V       |         |         |         |
6+10       0.0058      0.02  Q V       |         |         |         |
6+15       0.0060      0.02  Q V       |         |         |         |
6+20       0.0061      0.02  Q V       |         |         |         |
6+25       0.0062      0.02  Q  V      |         |         |         |
6+30       0.0064      0.02  Q  V      |         |         |         |
6+35       0.0065      0.02  Q  V      |         |         |         |
6+40       0.0067      0.02  Q  V      |         |         |         |
6+45       0.0068      0.02  Q  V      |         |         |         |
6+50       0.0070      0.02  Q  V      |         |         |         |
6+55       0.0071      0.02  Q  V      |         |         |         |
7+ 0       0.0073      0.02  Q  V      |         |         |         |
7+ 5       0.0074      0.02  Q  V      |         |         |         |
7+10       0.0076      0.02  Q  V      |         |         |         |
7+15       0.0078      0.02  Q  V      |         |         |         |
7+20       0.0079      0.02  Q  V      |         |         |         |
7+25       0.0081      0.02  Q  V      |         |         |         |
7+30       0.0083      0.02  Q   V     |         |         |         |
7+35       0.0084      0.03  Q   V     |         |         |         |
7+40       0.0086      0.03  Q   V     |         |         |         |
7+45       0.0088      0.03  Q   V     |         |         |         |
7+50       0.0090      0.03  Q   V     |         |         |         |
7+55       0.0092      0.03  Q   V     |         |         |         |
8+ 0       0.0094      0.03  Q   V     |         |         |         |
8+ 5       0.0096      0.03  Q   V     |         |         |         |
8+10       0.0098      0.03  Q   V     |         |         |         |
8+15       0.0101      0.03  Q   V     |         |         |         |
8+20       0.0103      0.03  Q    V    |         |         |         |
8+25       0.0105      0.03  Q    V    |         |         |         |
8+30       0.0108      0.03  Q    V    |         |         |         |
8+35       0.0110      0.03  Q    V    |         |         |         |
8+40       0.0113      0.04  Q    V    |         |         |         |
8+45       0.0115      0.04  Q    V    |         |         |         |
8+50       0.0118      0.04  Q    V    |         |         |         |
8+55       0.0120      0.04  Q    V    |         |         |         |
9+ 0       0.0123      0.04  Q    V    |         |         |         |
9+ 5       0.0126      0.04  Q     V   |         |         |         |
9+10       0.0129      0.04  Q     V   |         |         |         |
9+15       0.0132      0.04  Q     V   |         |         |         |
9+20       0.0135      0.04  Q     V   |         |         |         |
```



15+40	0.0748	0.10	Q	|	|	|	V |
15+45	0.0755	0.09	Q	|	|	|	V |
15+50	0.0761	0.09	Q	|	|	|	V |
15+55	0.0768	0.09	Q	|	|	|	V |
16+ 0	0.0775	0.10	Q	|	|	|	V |
16+ 5	0.0778	0.05	Q	|	|	|	V |
16+10	0.0779	0.02	Q	|	|	|	V |
16+15	0.0780	0.01	Q	|	|	|	V |
16+20	0.0781	0.01	Q	|	|	|	V |
16+25	0.0781	0.01	Q	|	|	|	V |
16+30	0.0782	0.01	Q	|	|	|	V |
16+35	0.0782	0.01	Q	|	|	|	V |
16+40	0.0783	0.01	Q	|	|	|	V |
16+45	0.0783	0.01	Q	|	|	|	V |
16+50	0.0784	0.01	Q	|	|	|	V |
16+55	0.0784	0.01	Q	|	|	|	V |
17+ 0	0.0785	0.01	Q	|	|	|	V |
17+ 5	0.0785	0.01	Q	|	|	|	V |
17+10	0.0786	0.01	Q	|	|	|	V |
17+15	0.0787	0.01	Q	|	|	|	V |
17+20	0.0788	0.01	Q	|	|	|	V |
17+25	0.0788	0.01	Q	|	|	|	V |
17+30	0.0789	0.01	Q	|	|	|	V |
17+35	0.0790	0.01	Q	|	|	|	V |
17+40	0.0791	0.01	Q	|	|	|	V |
17+45	0.0791	0.01	Q	|	|	|	V |
17+50	0.0792	0.01	Q	|	|	|	V |
17+55	0.0793	0.01	Q	|	|	|	V |
18+ 0	0.0793	0.01	Q	|	|	|	V |
18+ 5	0.0794	0.01	Q	|	|	|	V |
18+10	0.0795	0.01	Q	|	|	|	V |
18+15	0.0795	0.01	Q	|	|	|	V |
18+20	0.0796	0.01	Q	|	|	|	V |
18+25	0.0797	0.01	Q	|	|	|	V |
18+30	0.0797	0.01	Q	|	|	|	V |
18+35	0.0798	0.01	Q	|	|	|	V |
18+40	0.0798	0.01	Q	|	|	|	V |
18+45	0.0799	0.01	Q	|	|	|	V |
18+50	0.0799	0.01	Q	|	|	|	V |
18+55	0.0799	0.00	Q	|	|	|	V |
19+ 0	0.0800	0.00	Q	|	|	|	V |
19+ 5	0.0800	0.01	Q	|	|	|	V |
19+10	0.0800	0.01	Q	|	|	|	V |
19+15	0.0801	0.01	Q	|	|	|	V |
19+20	0.0801	0.01	Q	|	|	|	V |
19+25	0.0802	0.01	Q	|	|	|	V |
19+30	0.0803	0.01	Q	|	|	|	V|
19+35	0.0803	0.01	Q	|	|	|	V|
19+40	0.0804	0.01	Q	|	|	|	V|
19+45	0.0804	0.01	Q	|	|	|	V|
19+50	0.0805	0.01	Q	|	|	|	V|
19+55	0.0805	0.00	Q	|	|	|	V|
20+ 0	0.0805	0.00	Q	|	|	|	V|
20+ 5	0.0806	0.01	Q	|	|	|	V|
20+10	0.0806	0.01	Q	|	|	|	V|
20+15	0.0807	0.01	Q	|	|	|	V|
20+20	0.0807	0.01	Q	|	|	|	V|
20+25	0.0807	0.01	Q	|	|	|	V|
20+30	0.0808	0.01	Q	|	|	|	V|
20+35	0.0808	0.01	Q	|	|	|	V|
20+40	0.0809	0.01	Q	|	|	|	V|
20+45	0.0809	0.01	Q	|	|	|	V|
20+50	0.0810	0.01	Q	|	|	|	V|
20+55	0.0810	0.00	Q	|	|	|	V|
21+ 0	0.0810	0.00	Q	|	|	|	V|
21+ 5	0.0811	0.01	Q	|	|	|	V|
21+10	0.0811	0.01	Q	|	|	|	V|
21+15	0.0812	0.01	Q	|	|	|	V|
21+20	0.0812	0.01	Q	|	|	|	V|
21+25	0.0812	0.00	Q	|	|	|	V|
21+30	0.0813	0.00	Q	|	|	|	V|
21+35	0.0813	0.01	Q	|	|	|	V|
21+40	0.0813	0.01	Q	|	|	|	V|
21+45	0.0814	0.01	Q	|	|	|	V|
21+50	0.0814	0.01	Q	|	|	|	V|

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   21+55       0.0815      0.00  Q          |          |          |         v|
   22+ 0       0.0815      0.00  Q          |          |          |         v|
   22+ 5       0.0815      0.01  Q          |          |          |         v|
   22+10       0.0816      0.01  Q          |          |          |         v|
   22+15       0.0816      0.01  Q          |          |          |         v|
   22+20       0.0817      0.01  Q          |          |          |         v|
   22+25       0.0817      0.00  Q          |          |          |         v|
   22+30       0.0817      0.00  Q          |          |          |         v|
   22+35       0.0818      0.00  Q          |          |          |         v|
   22+40       0.0818      0.00  Q          |          |          |         v|
   22+45       0.0818      0.00  Q          |          |          |         v|
   22+50       0.0819      0.00  Q          |          |          |         v|
   22+55       0.0819      0.00  Q          |          |          |         v|
   23+ 0       0.0819      0.00  Q          |          |          |         v|
   23+ 5       0.0819      0.00  Q          |          |          |         v|
   23+10       0.0820      0.00  Q          |          |          |         v|
   23+15       0.0820      0.00  Q          |          |          |         v|
   23+20       0.0820      0.00  Q          |          |          |         v|
   23+25       0.0821      0.00  Q          |          |          |         v|
   23+30       0.0821      0.00  Q          |          |          |         v|
   23+35       0.0821      0.00  Q          |          |          |         v|
   23+40       0.0822      0.00  Q          |          |          |         v|
   23+45       0.0822      0.00  Q          |          |          |         v|
   23+50       0.0822      0.00  Q          |          |          |         v|
   23+55       0.0823      0.00  Q          |          |          |         v|
   24+ 0       0.0823      0.00  Q          |          |          |         v|
   24+ 5       0.0823      0.00  Q          |          |          |         v|
   24+10       0.0823      0.00  Q          |          |          |         v|
   24+15       0.0823      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 03/07/24 File: STREAMTRIBPROP1100.out

++

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
PROPOSED CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBPROP.OUT- RSB

Drainage Area = 1210.90(Ac.) = 1.892 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1210.90(Ac.) = 1.892 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6827.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.293 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.380 Hr.
Lag time = 22.82 Min.
25% of lag time = 5.71 Min.
40% of lag time = 9.13 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]
     1210.90            0.50                 605.45

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1210.90            1.30                1574.17

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =   98.90 %
Adjusted average point rain =    1.286(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   605.450           78.00         0.000
   605.450           86.00         0.000
 Total Area Entered =   1210.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5500
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.906          1.971             24.055
    2   0.167         43.812          6.062             73.975
    3   0.250         65.719         10.638            129.817
    4   0.333         87.625         14.573            177.838
```

5	0.417	109.531	15.332	187.109
6	0.500	131.437	11.408	139.224
7	0.583	153.344	7.362	89.841
8	0.667	175.250	5.021	61.276
9	0.750	197.156	3.591	43.827
10	0.833	219.062	3.010	36.732
11	0.917	240.968	2.518	30.723
12	1.000	262.875	2.161	26.376
13	1.083	284.781	1.915	23.372
14	1.167	306.687	1.619	19.754
15	1.250	328.593	1.378	16.814
16	1.333	350.499	1.314	16.039
17	1.417	372.406	1.131	13.805
18	1.500	394.312	0.964	11.763
19	1.583	416.218	0.892	10.884
20	1.667	438.124	0.710	8.663
21	1.750	460.031	0.696	8.499
22	1.833	481.937	0.664	8.099
23	1.917	503.843	0.654	7.987
24	2.000	525.749	0.542	6.608
25	2.083	547.655	0.482	5.881
26	2.167	569.562	0.447	5.455
27	2.250	591.468	0.395	4.818
28	2.333	613.374	0.378	4.613
29	2.417	635.280	0.313	3.824
30	2.500	657.186	0.302	3.685
31	2.583	679.093	0.239	2.915
32	2.667	700.999	0.219	2.673
33	2.750	722.905	0.219	2.673
34	2.833	744.811	0.219	2.673
35	2.917	766.718	0.219	2.673
36	3.000	788.624	0.219	2.673
37	3.083	810.530	0.223	2.725
			Sum = 100.000	Sum= 1220.360

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	3.30	0.509	0.222	(0.458)	0.288
2	0.17	4.20	0.648	0.222	(0.583)	0.426
3	0.25	4.40	0.679	0.222	(0.611)	0.457
4	0.33	4.80	0.741	0.222	(0.667)	0.519
5	0.42	5.20	0.802	0.222	(0.722)	0.581
6	0.50	6.20	0.957	0.222	(0.861)	0.735
7	0.58	6.80	1.049	0.222	(0.944)	0.828
8	0.67	8.80	1.358	0.222	(1.222)	1.136

```
 9   0.75    13.90      2.145          0.222    (  1.930)        1.923
10   0.83    31.40      4.845          0.222    (  4.360)        4.623
11   0.92     7.20      1.111          0.222    (  1.000)        0.889
12   1.00     3.80      0.586          0.222    (  0.528)        0.365
               (Loss Rate Not Used)
   Sum =     100.0                                  Sum =    12.8
      Flood volume = Effective rainfall      1.06(In)
       times area    1210.9(Ac.)/[(In)/(Ft.)] =     107.4(Ac.Ft)
      Total soil loss =      0.22(In)
      Total soil loss =    22.361(Ac.Ft)
      Total rainfall =      1.29(In)
      Flood volume =     4677472.7 Cubic Feet
      Total soil loss =      974057.6 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1679.345(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      425.0     850.0    1275.0    1700.0
-------------------------------------------------------------------------
  0+ 5       0.0477      6.92  Q         |         |         |         |
  0+10       0.2649     31.54  Q         |         |         |         |
  0+15       0.8153     79.91  VQ        |         |         |         |
  0+20       1.8682    152.88  V  Q      |         |         |         |
  0+25       3.5313    241.48  |V   Q    |         |         |         |
  0+30       5.7993    329.32  | V    Q  |         |         |         |
  0+35       8.6432    412.93  |  V     Q|         |         |         |
  0+40      12.1156    504.19  |   V     |Q        |         |         |
  0+45      16.4509    629.49  |     V   |   Q     |         |         |
  0+50      22.4484    870.84  |       V |         Q         |         |
  0+55      30.7223   1201.37  |         |V        |       Q |         |
  1+ 0      41.1018   1507.11  |         |    V    |         |    Q    |
  1+ 5      52.6675   1679.34  |         |        V|         |        Q|
  1+10      63.6112   1589.03  |         |         |  V      |      Q  |
  1+15      72.1281   1236.65  |         |         |     V  Q|         |
  1+20      78.1660    876.70  |         |         Q        V|         |
  1+25      82.4871    627.42  |         |   Q     |         V         |
  1+30      85.7340    471.46  |         |Q        |         |V        |
  1+35      88.3978    386.79  |        Q|         |         | V       |
  1+40      90.6418    325.82  |      Q  |         |         |  V      |
  1+45      92.5779    281.12  |     Q   |         |         |   V     |
  1+50      94.2703    245.74  |    Q    |         |         |    V    |
  1+55      95.7367    212.91  |    Q    |         |         |    V    |
  2+ 0      97.0220    186.63  |   Q     |         |         |     V   |
  2+ 5      98.1858    168.98  |  Q      |         |         |     V   |
```

```
    2+10      99.2094    148.64  |  Q      |         |         |     V   |
    2+15     100.1103    130.80  |  Q      |         |         |      V  |
    2+20     100.9196    117.52  | Q       |         |         |      V  |
    2+25     101.6262    102.60  | Q       |         |         |      V  |
    2+30     102.2868     95.92  | Q       |         |         |       V |
    2+35     102.9018     89.30  | Q       |         |         |       V |
    2+40     103.4740     83.07  |Q        |         |         |       V |
    2+45     103.9761     72.90  |Q        |         |         |       V |
    2+50     104.4264     65.39  |Q        |         |         |       V |
    2+55     104.8360     59.48  |Q        |         |         |        V|
    3+ 0     105.2064     53.78  |Q        |         |         |        V|
    3+ 5     105.5482     49.63  |Q        |         |         |        V|
    3+10     105.8475     43.46  |Q        |         |         |        V|
    3+15     106.1171     39.14  Q         |         |         |        V|
    3+20     106.3477     33.49  Q         |         |         |        V|
    3+25     106.5560     30.25  Q         |         |         |        V|
    3+30     106.7503     28.21  Q         |         |         |        V|
    3+35     106.9304     26.16  Q         |         |         |        V|
    3+40     107.0955     23.96  Q         |         |         |        V|
    3+45     107.2398     20.96  Q         |         |         |        V|
    3+50     107.3497     15.96  Q         |         |         |        V|
    3+55     107.3731      3.40  Q         |         |         |        V|
    4+ 0     107.3800      0.99  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 03/07/24 File: STREAMTRIBPROP3100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
PROPOSED CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBPROP.OUT- RSB

Drainage Area = 1210.90(Ac.) = 1.892 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1210.90(Ac.) = 1.892 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6827.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.293 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.380 Hr.
Lag time = 22.82 Min.
25% of lag time = 5.71 Min.
40% of lag time = 9.13 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]
     1210.90            0.80                  968.72

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1210.90            2.00                 2421.80

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    2.000(In)

Point rain (area averaged) =    2.000(In)
Areal adjustment factor =   99.47 %
Adjusted average point rain =    1.989(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   605.450           78.00         0.000
   605.450           86.00         0.000
 Total Area Entered =   1210.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.906          1.971             24.055
    2   0.167         43.812          6.062             73.975
    3   0.250         65.719         10.638            129.817
    4   0.333         87.625         14.573            177.838
    5   0.417        109.531         15.332            187.109
    6   0.500        131.437         11.408            139.224
```

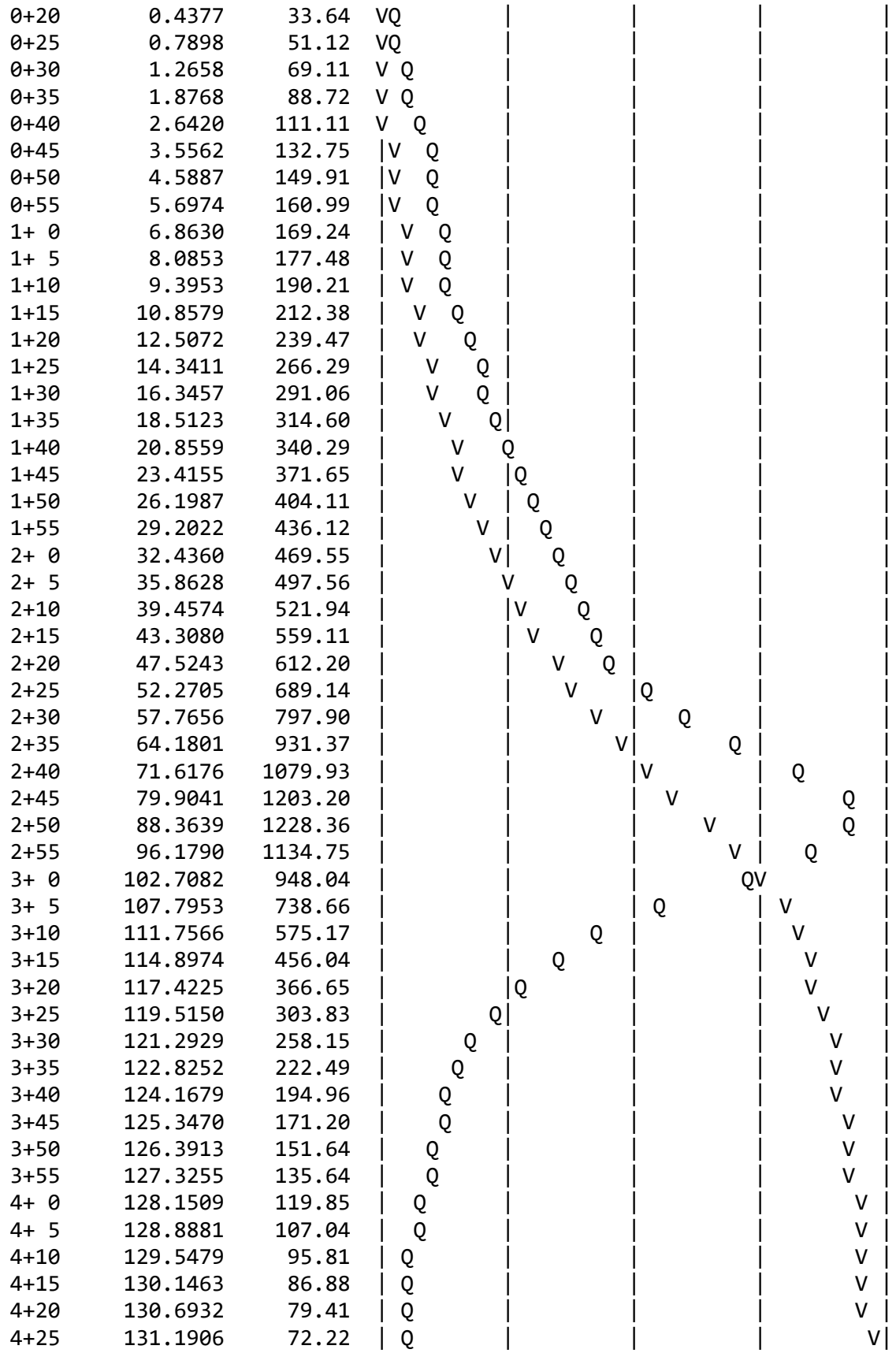
7	0.583	153.344	7.362	89.841
8	0.667	175.250	5.021	61.276
9	0.750	197.156	3.591	43.827
10	0.833	219.062	3.010	36.732
11	0.917	240.968	2.518	30.723
12	1.000	262.875	2.161	26.376
13	1.083	284.781	1.915	23.372
14	1.167	306.687	1.619	19.754
15	1.250	328.593	1.378	16.814
16	1.333	350.499	1.314	16.039
17	1.417	372.406	1.131	13.805
18	1.500	394.312	0.964	11.763
19	1.583	416.218	0.892	10.884
20	1.667	438.124	0.710	8.663
21	1.750	460.031	0.696	8.499
22	1.833	481.937	0.664	8.099
23	1.917	503.843	0.654	7.987
24	2.000	525.749	0.542	6.608
25	2.083	547.655	0.482	5.881
26	2.167	569.562	0.447	5.455
27	2.250	591.468	0.395	4.818
28	2.333	613.374	0.378	4.613
29	2.417	635.280	0.313	3.824
30	2.500	657.186	0.302	3.685
31	2.583	679.093	0.239	2.915
32	2.667	700.999	0.219	2.673
33	2.750	722.905	0.219	2.673
34	2.833	744.811	0.219	2.673
35	2.917	766.718	0.219	2.673
36	3.000	788.624	0.219	2.673
37	3.083	810.530	0.223	2.725
			Sum = 100.000	Sum= 1220.360

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	0.310	0.222	(0.279)	0.089
2	0.17	1.30	0.310	0.222	(0.279)	0.089
3	0.25	1.10	0.263	0.222	(0.236)	0.041
4	0.33	1.50	0.358	0.222	(0.322)	0.136
5	0.42	1.50	0.358	0.222	(0.322)	0.136
6	0.50	1.80	0.430	0.222	(0.387)	0.208
7	0.58	1.50	0.358	0.222	(0.322)	0.136
8	0.67	1.80	0.430	0.222	(0.387)	0.208
9	0.75	1.80	0.430	0.222	(0.387)	0.208
10	0.83	1.50	0.358	0.222	(0.322)	0.136

```
11   0.92     1.60      0.382          0.222    (  0.344)        0.160
12   1.00     1.80      0.430          0.222    (  0.387)        0.208
13   1.08     2.20      0.525          0.222    (  0.473)        0.304
14   1.17     2.20      0.525          0.222    (  0.473)        0.304
15   1.25     2.20      0.525          0.222    (  0.473)        0.304
16   1.33     2.00      0.477          0.222    (  0.430)        0.256
17   1.42     2.60      0.621          0.222    (  0.559)        0.399
18   1.50     2.70      0.645          0.222    (  0.580)        0.423
19   1.58     2.40      0.573          0.222    (  0.516)        0.351
20   1.67     2.70      0.645          0.222    (  0.580)        0.423
21   1.75     3.30      0.788          0.222    (  0.709)        0.566
22   1.83     3.10      0.740          0.222    (  0.666)        0.518
23   1.92     2.90      0.692          0.222    (  0.623)        0.471
24   2.00     3.00      0.716          0.222    (  0.645)        0.495
25   2.08     3.10      0.740          0.222    (  0.666)        0.518
26   2.17     4.20      1.003          0.222    (  0.902)        0.781
27   2.25     5.00      1.194          0.222    (  1.074)        0.972
28   2.33     3.50      0.836          0.222    (  0.752)        0.614
29   2.42     6.80      1.623          0.222    (  1.461)        1.402
30   2.50     7.30      1.743          0.222    (  1.568)        1.521
31   2.58     8.20      1.958          0.222    (  1.762)        1.736
32   2.67     5.90      1.408          0.222    (  1.268)        1.187
33   2.75     2.00      0.477          0.222    (  0.430)        0.256
34   2.83     1.80      0.430          0.222    (  0.387)        0.208
35   2.92     1.80      0.430          0.222    (  0.387)        0.208
36   3.00     0.60      0.143       (  0.222)       0.129        0.014
              (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    16.0
      Flood volume = Effective rainfall      1.33(In)
       times area    1210.9(Ac.)/[(In)/(Ft.)] =     134.4(Ac.Ft)
      Total soil loss =      0.66(In)
      Total soil loss =    66.304(Ac.Ft)
      Total rainfall =      1.99(In)
      Flood volume =     5856339.2 Cubic Feet
      Total soil loss =     2888222.1 Cubic Feet
      ------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1228.358(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      325.0     650.0     975.0    1300.0
-------------------------------------------------------------------------
  0+ 5       0.0147      2.14  Q         |         |         |         |
  0+10       0.0747      8.70  Q         |         |         |         |
  0+15       0.2061     19.08  Q         |         |         |         |
```



```
    4+30     131.6351     64.54  |Q        |         |         |        V|
    4+35     132.0295     57.26  |Q        |         |         |        V|
    4+40     132.3852     51.66  |Q        |         |         |        V|
    4+45     132.7019     45.98  |Q        |         |         |        V|
    4+50     132.9821     40.69  |Q        |         |         |        V|
    4+55     133.2289     35.83  |Q        |         |         |        V|
    5+ 0     133.4465     31.60  Q         |         |         |        V|
    5+ 5     133.6395     28.02  Q         |         |         |        V|
    5+10     133.8121     25.06  Q         |         |         |        V|
    5+15     133.9657     22.30  Q         |         |         |        V|
    5+20     134.0995     19.42  Q         |         |         |        V|
    5+25     134.2208     17.61  Q         |         |         |        V|
    5+30     134.3158     13.80  Q         |         |         |        V|
    5+35     134.3829      9.74  Q         |         |         |        V|
    5+40     134.4179      5.07  Q         |         |         |        V|
    5+45     134.4306      1.85  Q         |         |         |        V|
    5+50     134.4386      1.16  Q         |         |         |        V|
    5+55     134.4428      0.61  Q         |         |         |        V|
    6+ 0     134.4430      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 03/07/24 File: STREAMTRIBPROP6100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
PROPOSED CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBPROP.OUT- RSB

Drainage Area = 1210.90(Ac.) = 1.892 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1210.90(Ac.) = 1.892 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6827.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.293 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.380 Hr.
Lag time = 22.82 Min.
25% of lag time = 5.71 Min.
40% of lag time = 9.13 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

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Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1210.90            1.20                 1453.08

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1210.90            2.80                 3390.52

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.200(In)
Area Averaged 100-Year Rainfall =    2.800(In)

Point rain (area averaged) =    2.800(In)
Areal adjustment factor =   99.58 %
Adjusted average point rain =    2.788(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   605.450           78.00         0.000
   605.450           86.00         0.000
 Total Area Entered =   1210.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------------
    1   0.083         21.906          1.971             24.055
    2   0.167         43.812          6.062             73.975
    3   0.250         65.719         10.638            129.817
    4   0.333         87.625         14.573            177.838
    5   0.417        109.531         15.332            187.109
    6   0.500        131.437         11.408            139.224
```

7	0.583	153.344	7.362	89.841
8	0.667	175.250	5.021	61.276
9	0.750	197.156	3.591	43.827
10	0.833	219.062	3.010	36.732
11	0.917	240.968	2.518	30.723
12	1.000	262.875	2.161	26.376
13	1.083	284.781	1.915	23.372
14	1.167	306.687	1.619	19.754
15	1.250	328.593	1.378	16.814
16	1.333	350.499	1.314	16.039
17	1.417	372.406	1.131	13.805
18	1.500	394.312	0.964	11.763
19	1.583	416.218	0.892	10.884
20	1.667	438.124	0.710	8.663
21	1.750	460.031	0.696	8.499
22	1.833	481.937	0.664	8.099
23	1.917	503.843	0.654	7.987
24	2.000	525.749	0.542	6.608
25	2.083	547.655	0.482	5.881
26	2.167	569.562	0.447	5.455
27	2.250	591.468	0.395	4.818
28	2.333	613.374	0.378	4.613
29	2.417	635.280	0.313	3.824
30	2.500	657.186	0.302	3.685
31	2.583	679.093	0.239	2.915
32	2.667	700.999	0.219	2.673
33	2.750	722.905	0.219	2.673
34	2.833	744.811	0.219	2.673
35	2.917	766.718	0.219	2.673
36	3.000	788.624	0.219	2.673
37	3.083	810.530	0.223	2.725
			Sum = 100.000	Sum= 1220.360

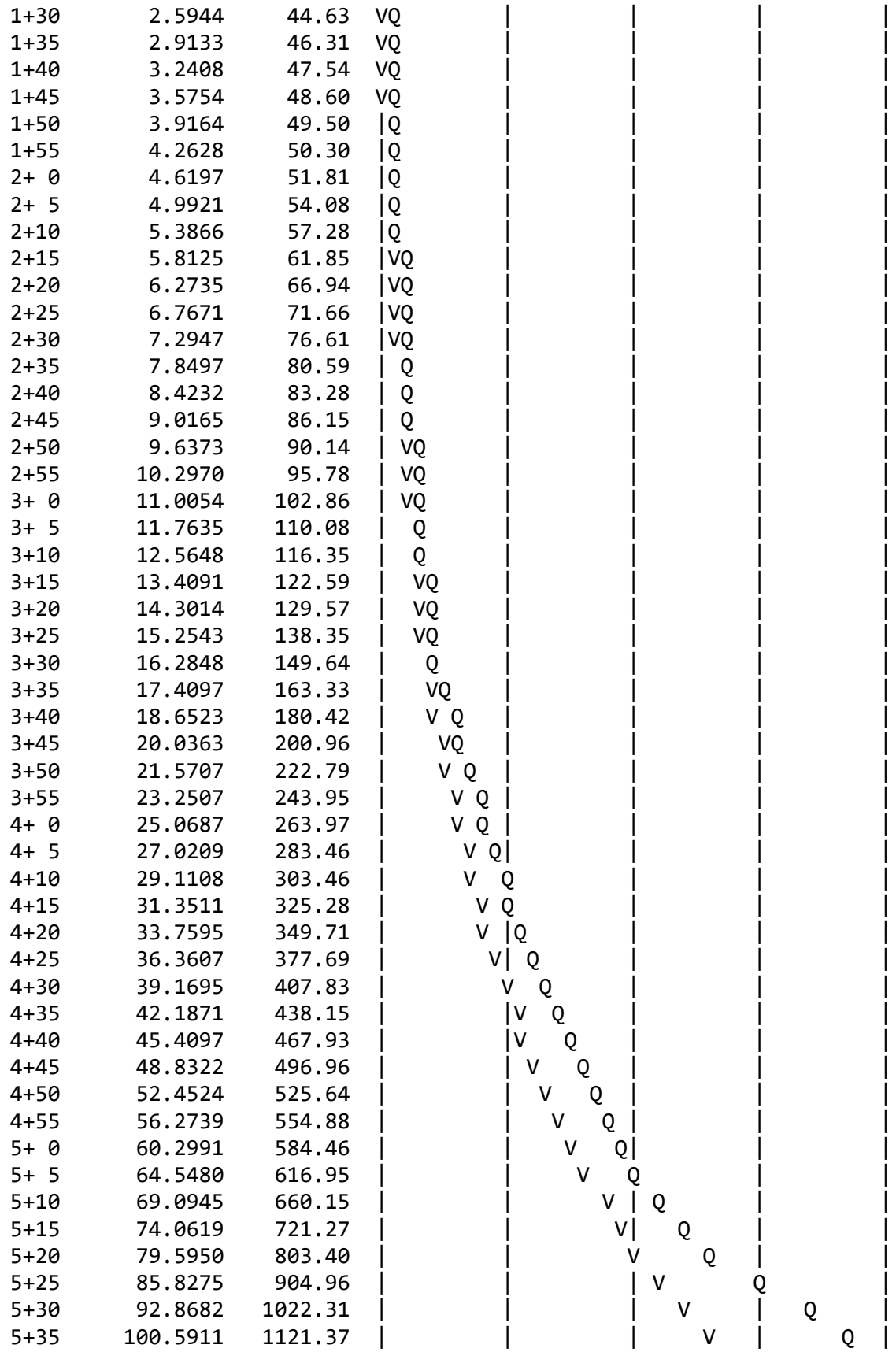
The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

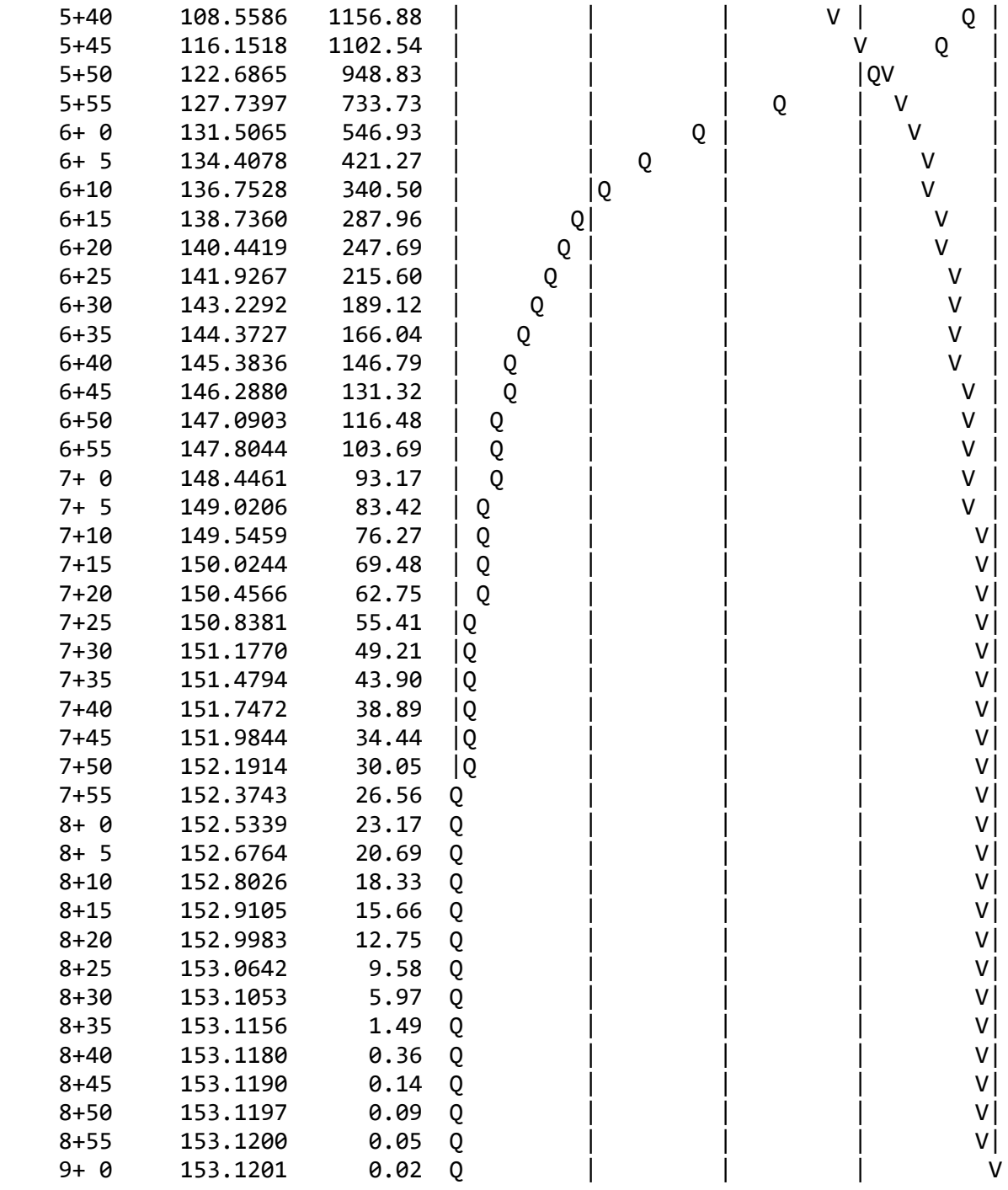
Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.167	(0.222)	0.151	0.017
2	0.17	0.60	0.201	(0.222)	0.181	0.020
3	0.25	0.60	0.201	(0.222)	0.181	0.020
4	0.33	0.60	0.201	(0.222)	0.181	0.020
5	0.42	0.60	0.201	(0.222)	0.181	0.020
6	0.50	0.70	0.234	(0.222)	0.211	0.023
7	0.58	0.70	0.234	(0.222)	0.211	0.023
8	0.67	0.70	0.234	(0.222)	0.211	0.023
9	0.75	0.70	0.234	(0.222)	0.211	0.023
10	0.83	0.70	0.234	(0.222)	0.211	0.023

11	0.92	0.70	0.234	(0.222)	0.211	0.023
12	1.00	0.80	0.268	0.222	(0.241)	0.046
13	1.08	0.80	0.268	0.222	(0.241)	0.046
14	1.17	0.80	0.268	0.222	(0.241)	0.046
15	1.25	0.80	0.268	0.222	(0.241)	0.046
16	1.33	0.80	0.268	0.222	(0.241)	0.046
17	1.42	0.80	0.268	0.222	(0.241)	0.046
18	1.50	0.80	0.268	0.222	(0.241)	0.046
19	1.58	0.80	0.268	0.222	(0.241)	0.046
20	1.67	0.80	0.268	0.222	(0.241)	0.046
21	1.75	0.80	0.268	0.222	(0.241)	0.046
22	1.83	0.80	0.268	0.222	(0.241)	0.046
23	1.92	0.80	0.268	0.222	(0.241)	0.046
24	2.00	0.90	0.301	0.222	(0.271)	0.080
25	2.08	0.80	0.268	0.222	(0.241)	0.046
26	2.17	0.90	0.301	0.222	(0.271)	0.080
27	2.25	0.90	0.301	0.222	(0.271)	0.080
28	2.33	0.90	0.301	0.222	(0.271)	0.080
29	2.42	0.90	0.301	0.222	(0.271)	0.080
30	2.50	0.90	0.301	0.222	(0.271)	0.080
31	2.58	0.90	0.301	0.222	(0.271)	0.080
32	2.67	0.90	0.301	0.222	(0.271)	0.080
33	2.75	1.00	0.335	0.222	(0.301)	0.113
34	2.83	1.00	0.335	0.222	(0.301)	0.113
35	2.92	1.00	0.335	0.222	(0.301)	0.113
36	3.00	1.00	0.335	0.222	(0.301)	0.113
37	3.08	1.00	0.335	0.222	(0.301)	0.113
38	3.17	1.10	0.368	0.222	(0.331)	0.146
39	3.25	1.10	0.368	0.222	(0.331)	0.146
40	3.33	1.10	0.368	0.222	(0.331)	0.146
41	3.42	1.20	0.402	0.222	(0.361)	0.180
42	3.50	1.30	0.435	0.222	(0.391)	0.213
43	3.58	1.40	0.468	0.222	(0.422)	0.247
44	3.67	1.40	0.468	0.222	(0.422)	0.247
45	3.75	1.50	0.502	0.222	(0.452)	0.280
46	3.83	1.50	0.502	0.222	(0.452)	0.280
47	3.92	1.60	0.535	0.222	(0.482)	0.314
48	4.00	1.60	0.535	0.222	(0.482)	0.314
49	4.08	1.70	0.569	0.222	(0.512)	0.347
50	4.17	1.80	0.602	0.222	(0.542)	0.381
51	4.25	1.90	0.636	0.222	(0.572)	0.414
52	4.33	2.00	0.669	0.222	(0.602)	0.448
53	4.42	2.10	0.703	0.222	(0.632)	0.481
54	4.50	2.10	0.703	0.222	(0.632)	0.481
55	4.58	2.20	0.736	0.222	(0.663)	0.515
56	4.67	2.30	0.770	0.222	(0.693)	0.548
57	4.75	2.40	0.803	0.222	(0.723)	0.581
58	4.83	2.40	0.803	0.222	(0.723)	0.581
59	4.92	2.50	0.837	0.222	(0.753)	0.615
60	5.00	2.60	0.870	0.222	(0.783)	0.648

```
61   5.08     3.10      1.037          0.222    (  0.934)        0.816
62   5.17     3.60      1.205          0.222    (  1.084)        0.983
63   5.25     3.90      1.305          0.222    (  1.174)        1.083
64   5.33     4.20      1.405          0.222    (  1.265)        1.184
65   5.42     4.70      1.573          0.222    (  1.415)        1.351
66   5.50     5.60      1.874          0.222    (  1.686)        1.652
67   5.58     1.90      0.636          0.222    (  0.572)        0.414
68   5.67     0.90      0.301          0.222    (  0.271)        0.080
69   5.75     0.60      0.201       (  0.222)       0.181        0.020
70   5.83     0.50      0.167       (  0.222)       0.151        0.017
71   5.92     0.30      0.100       (  0.222)       0.090        0.010
72   6.00     0.20      0.067       (  0.222)       0.060        0.007
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    18.2
      Flood volume = Effective rainfall      1.52(In)
       times area    1210.9(Ac.)/[(In)/(Ft.)] =     153.1(Ac.Ft)
      Total soil loss =      1.27(In)
      Total soil loss =   128.247(Ac.Ft)
      Total rainfall =      2.79(In)
      Flood volume =     6669911.0 Cubic Feet
      Total soil loss =     5586446.6 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =   1156.883(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      300.0     600.0     900.0    1200.0
-------------------------------------------------------------------------
  0+ 5       0.0028      0.40  Q         |         |         |         |
  0+10       0.0146      1.72  Q         |         |         |         |
  0+15       0.0432      4.14  Q         |         |         |         |
  0+20       0.0952      7.55  Q         |         |         |         |
  0+25       0.1729     11.28  Q         |         |         |         |
  0+30       0.2715     14.32  Q         |         |         |         |
  0+35       0.3854     16.54  Q         |         |         |         |
  0+40       0.5114     18.30  Q         |         |         |         |
  0+45       0.6479     19.83  Q         |         |         |         |
  0+50       0.7941     21.22  Q         |         |         |         |
  0+55       0.9478     22.32  Q         |         |         |         |
  1+ 0       1.1111     23.71  Q         |         |         |         |
  1+ 5       1.2907     26.07  Q         |         |         |         |
  1+10       1.4944     29.57  Q         |         |         |         |
  1+15       1.7290     34.08  VQ        |         |         |         |
  1+20       1.9959     38.74  VQ        |         |         |         |
  1+25       2.2870     42.27  VQ        |         |         |         |
```





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 03/07/24 File: STREAMTRIBPROP24100.out

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

Program License Serial Number 6586

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

English Units used in output format

22-0192 - HILLWOOD SEATON
OFFSITE UNIT HYDROGRAPH ANALYSIS - TRIB TO STREAM
PROPOSED CONDITION, 100-YEAR 24-HOUR
FN: STREAMTRIBPROP.OUT- RSB

Drainage Area = 1210.90(Ac.) = 1.892 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1210.90(Ac.) = 1.892 Sq. Mi.
Length along longest watercourse = 13244.00(Ft.)
Length along longest watercourse measured to centroid = 6827.00(Ft.)
Length along longest watercourse = 2.508 Mi.
Length along longest watercourse measured to centroid = 1.293 Mi.
Difference in elevation = 758.00(Ft.)
Slope along watercourse = 302.1927 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.380 Hr.
Lag time = 22.82 Min.
25% of lag time = 5.71 Min.
40% of lag time = 9.13 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]
     1210.90            2.00                 2421.80

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
     1210.90            5.40                 6538.86

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    2.000(In)
Area Averaged 100-Year Rainfall =    5.400(In)

Point rain (area averaged) =    5.400(In)
Areal adjustment factor =   99.76 %
Adjusted average point rain =    5.387(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
   605.450           78.00         0.000
   605.450           86.00         0.000
 Total Area Entered =   1210.90(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
78.0  78.0      0.268     0.000        0.268       0.500      0.134
86.0  86.0      0.176     0.000        0.176       0.500      0.088
                                                 Sum (F) =   0.222
Area averaged mean soil loss (F) (In/Hr) =  0.222
Minimum soil loss rate ((In/Hr)) =  0.111
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------

               U n i t  H y d r o g r a p h
                       VALLEY S-Curve
------------------------------------------------------------------
               Unit Hydrograph Data
------------------------------------------------------------------
Unit time period   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %            (CFS)
------------------------------------------------------------------
    1   0.083         21.906          1.971             24.055
    2   0.167         43.812          6.062             73.975
    3   0.250         65.719         10.638            129.817
    4   0.333         87.625         14.573            177.838
    5   0.417        109.531         15.332            187.109
    6   0.500        131.437         11.408            139.224
```

7	0.583	153.344	7.362	89.841
8	0.667	175.250	5.021	61.276
9	0.750	197.156	3.591	43.827
10	0.833	219.062	3.010	36.732
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14	1.167	306.687	1.619	19.754
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17	1.417	372.406	1.131	13.805
18	1.500	394.312	0.964	11.763
19	1.583	416.218	0.892	10.884
20	1.667	438.124	0.710	8.663
21	1.750	460.031	0.696	8.499
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27	2.250	591.468	0.395	4.818
28	2.333	613.374	0.378	4.613
29	2.417	635.280	0.313	3.824
30	2.500	657.186	0.302	3.685
31	2.583	679.093	0.239	2.915
32	2.667	700.999	0.219	2.673
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34	2.833	744.811	0.219	2.673
35	2.917	766.718	0.219	2.673
36	3.000	788.624	0.219	2.673
37	3.083	810.530	0.223	2.725
			Sum = 100.000	Sum= 1220.360

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	0.043	(0.393)	0.039	0.004
2	0.17	0.07	0.043	(0.391)	0.039	0.004
3	0.25	0.07	0.043	(0.390)	0.039	0.004
4	0.33	0.10	0.065	(0.388)	0.058	0.006
5	0.42	0.10	0.065	(0.387)	0.058	0.006
6	0.50	0.10	0.065	(0.385)	0.058	0.006
7	0.58	0.10	0.065	(0.384)	0.058	0.006
8	0.67	0.10	0.065	(0.382)	0.058	0.006
9	0.75	0.10	0.065	(0.381)	0.058	0.006
10	0.83	0.13	0.086	(0.379)	0.078	0.009

11	0.92	0.13	0.086	(0.378)	0.078	0.009
12	1.00	0.13	0.086	(0.376)	0.078	0.009
13	1.08	0.10	0.065	(0.375)	0.058	0.006
14	1.17	0.10	0.065	(0.373)	0.058	0.006
15	1.25	0.10	0.065	(0.372)	0.058	0.006
16	1.33	0.10	0.065	(0.370)	0.058	0.006
17	1.42	0.10	0.065	(0.369)	0.058	0.006
18	1.50	0.10	0.065	(0.367)	0.058	0.006
19	1.58	0.10	0.065	(0.366)	0.058	0.006
20	1.67	0.10	0.065	(0.364)	0.058	0.006
21	1.75	0.10	0.065	(0.363)	0.058	0.006
22	1.83	0.13	0.086	(0.362)	0.078	0.009
23	1.92	0.13	0.086	(0.360)	0.078	0.009
24	2.00	0.13	0.086	(0.359)	0.078	0.009
25	2.08	0.13	0.086	(0.357)	0.078	0.009
26	2.17	0.13	0.086	(0.356)	0.078	0.009
27	2.25	0.13	0.086	(0.354)	0.078	0.009
28	2.33	0.13	0.086	(0.353)	0.078	0.009
29	2.42	0.13	0.086	(0.351)	0.078	0.009
30	2.50	0.13	0.086	(0.350)	0.078	0.009
31	2.58	0.17	0.108	(0.349)	0.097	0.011
32	2.67	0.17	0.108	(0.347)	0.097	0.011
33	2.75	0.17	0.108	(0.346)	0.097	0.011
34	2.83	0.17	0.108	(0.344)	0.097	0.011
35	2.92	0.17	0.108	(0.343)	0.097	0.011
36	3.00	0.17	0.108	(0.341)	0.097	0.011
37	3.08	0.17	0.108	(0.340)	0.097	0.011
38	3.17	0.17	0.108	(0.339)	0.097	0.011
39	3.25	0.17	0.108	(0.337)	0.097	0.011
40	3.33	0.17	0.108	(0.336)	0.097	0.011
41	3.42	0.17	0.108	(0.334)	0.097	0.011
42	3.50	0.17	0.108	(0.333)	0.097	0.011
43	3.58	0.17	0.108	(0.332)	0.097	0.011
44	3.67	0.17	0.108	(0.330)	0.097	0.011
45	3.75	0.17	0.108	(0.329)	0.097	0.011
46	3.83	0.20	0.129	(0.327)	0.116	0.013
47	3.92	0.20	0.129	(0.326)	0.116	0.013
48	4.00	0.20	0.129	(0.325)	0.116	0.013
49	4.08	0.20	0.129	(0.323)	0.116	0.013
50	4.17	0.20	0.129	(0.322)	0.116	0.013
51	4.25	0.20	0.129	(0.321)	0.116	0.013
52	4.33	0.23	0.151	(0.319)	0.136	0.015
53	4.42	0.23	0.151	(0.318)	0.136	0.015
54	4.50	0.23	0.151	(0.316)	0.136	0.015
55	4.58	0.23	0.151	(0.315)	0.136	0.015
56	4.67	0.23	0.151	(0.314)	0.136	0.015
57	4.75	0.23	0.151	(0.312)	0.136	0.015
58	4.83	0.27	0.172	(0.311)	0.155	0.017
59	4.92	0.27	0.172	(0.310)	0.155	0.017
60	5.00	0.27	0.172	(0.308)	0.155	0.017

61	5.08	0.20	0.129	(0.307)	0.116	0.013
62	5.17	0.20	0.129	(0.306)	0.116	0.013
63	5.25	0.20	0.129	(0.304)	0.116	0.013
64	5.33	0.23	0.151	(0.303)	0.136	0.015
65	5.42	0.23	0.151	(0.302)	0.136	0.015
66	5.50	0.23	0.151	(0.300)	0.136	0.015
67	5.58	0.27	0.172	(0.299)	0.155	0.017
68	5.67	0.27	0.172	(0.298)	0.155	0.017
69	5.75	0.27	0.172	(0.296)	0.155	0.017
70	5.83	0.27	0.172	(0.295)	0.155	0.017
71	5.92	0.27	0.172	(0.294)	0.155	0.017
72	6.00	0.27	0.172	(0.293)	0.155	0.017
73	6.08	0.30	0.194	(0.291)	0.175	0.019
74	6.17	0.30	0.194	(0.290)	0.175	0.019
75	6.25	0.30	0.194	(0.289)	0.175	0.019
76	6.33	0.30	0.194	(0.287)	0.175	0.019
77	6.42	0.30	0.194	(0.286)	0.175	0.019
78	6.50	0.30	0.194	(0.285)	0.175	0.019
79	6.58	0.33	0.215	(0.283)	0.194	0.022
80	6.67	0.33	0.215	(0.282)	0.194	0.022
81	6.75	0.33	0.215	(0.281)	0.194	0.022
82	6.83	0.33	0.215	(0.280)	0.194	0.022
83	6.92	0.33	0.215	(0.278)	0.194	0.022
84	7.00	0.33	0.215	(0.277)	0.194	0.022
85	7.08	0.33	0.215	(0.276)	0.194	0.022
86	7.17	0.33	0.215	(0.275)	0.194	0.022
87	7.25	0.33	0.215	(0.273)	0.194	0.022
88	7.33	0.37	0.237	(0.272)	0.213	0.024
89	7.42	0.37	0.237	(0.271)	0.213	0.024
90	7.50	0.37	0.237	(0.270)	0.213	0.024
91	7.58	0.40	0.259	(0.268)	0.233	0.026
92	7.67	0.40	0.259	(0.267)	0.233	0.026
93	7.75	0.40	0.259	(0.266)	0.233	0.026
94	7.83	0.43	0.280	(0.265)	0.252	0.028
95	7.92	0.43	0.280	(0.263)	0.252	0.028
96	8.00	0.43	0.280	(0.262)	0.252	0.028
97	8.08	0.50	0.323	0.261	(0.291)	0.062
98	8.17	0.50	0.323	0.260	(0.291)	0.063
99	8.25	0.50	0.323	0.259	(0.291)	0.065
100	8.33	0.50	0.323	0.257	(0.291)	0.066
101	8.42	0.50	0.323	0.256	(0.291)	0.067
102	8.50	0.50	0.323	0.255	(0.291)	0.068
103	8.58	0.53	0.345	0.254	(0.310)	0.091
104	8.67	0.53	0.345	0.253	(0.310)	0.092
105	8.75	0.53	0.345	0.251	(0.310)	0.093
106	8.83	0.57	0.366	0.250	(0.330)	0.116
107	8.92	0.57	0.366	0.249	(0.330)	0.117
108	9.00	0.57	0.366	0.248	(0.330)	0.118
109	9.08	0.63	0.409	0.247	(0.368)	0.163
110	9.17	0.63	0.409	0.246	(0.368)	0.164

111	9.25	0.63	0.409	0.244	(	0.368)	0.165
112	9.33	0.67	0.431	0.243	(	0.388)	0.188
113	9.42	0.67	0.431	0.242	(	0.388)	0.189
114	9.50	0.67	0.431	0.241	(	0.388)	0.190
115	9.58	0.70	0.453	0.240	(	0.407)	0.213
116	9.67	0.70	0.453	0.239	(	0.407)	0.214
117	9.75	0.70	0.453	0.237	(	0.407)	0.215
118	9.83	0.73	0.474	0.236	(	0.427)	0.238
119	9.92	0.73	0.474	0.235	(	0.427)	0.239
120	10.00	0.73	0.474	0.234	(	0.427)	0.240
121	10.08	0.50	0.323	0.233	(	0.291)	0.090
122	10.17	0.50	0.323	0.232	(	0.291)	0.091
123	10.25	0.50	0.323	0.231	(	0.291)	0.093
124	10.33	0.50	0.323	0.230	(	0.291)	0.094
125	10.42	0.50	0.323	0.228	(	0.291)	0.095
126	10.50	0.50	0.323	0.227	(	0.291)	0.096
127	10.58	0.67	0.431	0.226	(	0.388)	0.205
128	10.67	0.67	0.431	0.225	(	0.388)	0.206
129	10.75	0.67	0.431	0.224	(	0.388)	0.207
130	10.83	0.67	0.431	0.223	(	0.388)	0.208
131	10.92	0.67	0.431	0.222	(	0.388)	0.209
132	11.00	0.67	0.431	0.221	(	0.388)	0.210
133	11.08	0.63	0.409	0.220	(	0.368)	0.190
134	11.17	0.63	0.409	0.219	(	0.368)	0.191
135	11.25	0.63	0.409	0.217	(	0.368)	0.192
136	11.33	0.63	0.409	0.216	(	0.368)	0.193
137	11.42	0.63	0.409	0.215	(	0.368)	0.194
138	11.50	0.63	0.409	0.214	(	0.368)	0.195
139	11.58	0.57	0.366	0.213	(	0.330)	0.153
140	11.67	0.57	0.366	0.212	(	0.330)	0.154
141	11.75	0.57	0.366	0.211	(	0.330)	0.155
142	11.83	0.60	0.388	0.210	(	0.349)	0.178
143	11.92	0.60	0.388	0.209	(	0.349)	0.179
144	12.00	0.60	0.388	0.208	(	0.349)	0.180
145	12.08	0.83	0.539	0.207	(	0.485)	0.332
146	12.17	0.83	0.539	0.206	(	0.485)	0.333
147	12.25	0.83	0.539	0.205	(	0.485)	0.334
148	12.33	0.87	0.560	0.204	(	0.504)	0.357
149	12.42	0.87	0.560	0.203	(	0.504)	0.358
150	12.50	0.87	0.560	0.202	(	0.504)	0.359
151	12.58	0.93	0.603	0.201	(	0.543)	0.403
152	12.67	0.93	0.603	0.200	(	0.543)	0.404
153	12.75	0.93	0.603	0.199	(	0.543)	0.405
154	12.83	0.97	0.625	0.198	(	0.562)	0.427
155	12.92	0.97	0.625	0.197	(	0.562)	0.428
156	13.00	0.97	0.625	0.196	(	0.562)	0.429
157	13.08	1.13	0.733	0.195	(	0.659)	0.538
158	13.17	1.13	0.733	0.194	(	0.659)	0.539
159	13.25	1.13	0.733	0.193	(	0.659)	0.540
160	13.33	1.13	0.733	0.192	(	0.659)	0.541

161	13.42	1.13	0.733		0.191	(0.659)	0.542
162	13.50	1.13	0.733		0.190	(0.659)	0.543
163	13.58	0.77	0.496		0.189	(0.446)	0.307
164	13.67	0.77	0.496		0.188	(0.446)	0.308
165	13.75	0.77	0.496		0.187	(0.446)	0.309
166	13.83	0.77	0.496		0.186	(0.446)	0.310
167	13.92	0.77	0.496		0.185	(0.446)	0.311
168	14.00	0.77	0.496		0.184	(0.446)	0.312
169	14.08	0.90	0.582		0.183	(0.524)	0.399
170	14.17	0.90	0.582		0.182	(0.524)	0.400
171	14.25	0.90	0.582		0.181	(0.524)	0.401
172	14.33	0.87	0.560		0.180	(0.504)	0.380
173	14.42	0.87	0.560		0.179	(0.504)	0.381
174	14.50	0.87	0.560		0.178	(0.504)	0.382
175	14.58	0.87	0.560		0.178	(0.504)	0.383
176	14.67	0.87	0.560		0.177	(0.504)	0.384
177	14.75	0.87	0.560		0.176	(0.504)	0.385
178	14.83	0.83	0.539		0.175	(0.485)	0.364
179	14.92	0.83	0.539		0.174	(0.485)	0.365
180	15.00	0.83	0.539		0.173	(0.485)	0.366
181	15.08	0.80	0.517		0.172	(0.465)	0.345
182	15.17	0.80	0.517		0.171	(0.465)	0.346
183	15.25	0.80	0.517		0.170	(0.465)	0.347
184	15.33	0.77	0.496		0.170	(0.446)	0.326
185	15.42	0.77	0.496		0.169	(0.446)	0.327
186	15.50	0.77	0.496		0.168	(0.446)	0.328
187	15.58	0.63	0.409		0.167	(0.368)	0.242
188	15.67	0.63	0.409		0.166	(0.368)	0.243
189	15.75	0.63	0.409		0.165	(0.368)	0.244
190	15.83	0.63	0.409		0.164	(0.368)	0.245
191	15.92	0.63	0.409		0.164	(0.368)	0.246
192	16.00	0.63	0.409		0.163	(0.368)	0.247
193	16.08	0.13	0.086	(0.162)		0.078	0.009
194	16.17	0.13	0.086	(0.161)		0.078	0.009
195	16.25	0.13	0.086	(0.160)		0.078	0.009
196	16.33	0.13	0.086	(0.159)		0.078	0.009
197	16.42	0.13	0.086	(0.159)		0.078	0.009
198	16.50	0.13	0.086	(0.158)		0.078	0.009
199	16.58	0.10	0.065	(0.157)		0.058	0.006
200	16.67	0.10	0.065	(0.156)		0.058	0.006
201	16.75	0.10	0.065	(0.155)		0.058	0.006
202	16.83	0.10	0.065	(0.155)		0.058	0.006
203	16.92	0.10	0.065	(0.154)		0.058	0.006
204	17.00	0.10	0.065	(0.153)		0.058	0.006
205	17.08	0.17	0.108	(0.152)		0.097	0.011
206	17.17	0.17	0.108	(0.152)		0.097	0.011
207	17.25	0.17	0.108	(0.151)		0.097	0.011
208	17.33	0.17	0.108	(0.150)		0.097	0.011
209	17.42	0.17	0.108	(0.149)		0.097	0.011
210	17.50	0.17	0.108	(0.149)		0.097	0.011

211	17.58	0.17	0.108	(0.148)	0.097	0.011
212	17.67	0.17	0.108	(0.147)	0.097	0.011
213	17.75	0.17	0.108	(0.146)	0.097	0.011
214	17.83	0.13	0.086	(0.146)	0.078	0.009
215	17.92	0.13	0.086	(0.145)	0.078	0.009
216	18.00	0.13	0.086	(0.144)	0.078	0.009
217	18.08	0.13	0.086	(0.143)	0.078	0.009
218	18.17	0.13	0.086	(0.143)	0.078	0.009
219	18.25	0.13	0.086	(0.142)	0.078	0.009
220	18.33	0.13	0.086	(0.141)	0.078	0.009
221	18.42	0.13	0.086	(0.141)	0.078	0.009
222	18.50	0.13	0.086	(0.140)	0.078	0.009
223	18.58	0.10	0.065	(0.139)	0.058	0.006
224	18.67	0.10	0.065	(0.139)	0.058	0.006
225	18.75	0.10	0.065	(0.138)	0.058	0.006
226	18.83	0.07	0.043	(0.137)	0.039	0.004
227	18.92	0.07	0.043	(0.137)	0.039	0.004
228	19.00	0.07	0.043	(0.136)	0.039	0.004
229	19.08	0.10	0.065	(0.135)	0.058	0.006
230	19.17	0.10	0.065	(0.135)	0.058	0.006
231	19.25	0.10	0.065	(0.134)	0.058	0.006
232	19.33	0.13	0.086	(0.133)	0.078	0.009
233	19.42	0.13	0.086	(0.133)	0.078	0.009
234	19.50	0.13	0.086	(0.132)	0.078	0.009
235	19.58	0.10	0.065	(0.132)	0.058	0.006
236	19.67	0.10	0.065	(0.131)	0.058	0.006
237	19.75	0.10	0.065	(0.130)	0.058	0.006
238	19.83	0.07	0.043	(0.130)	0.039	0.004
239	19.92	0.07	0.043	(0.129)	0.039	0.004
240	20.00	0.07	0.043	(0.129)	0.039	0.004
241	20.08	0.10	0.065	(0.128)	0.058	0.006
242	20.17	0.10	0.065	(0.128)	0.058	0.006
243	20.25	0.10	0.065	(0.127)	0.058	0.006
244	20.33	0.10	0.065	(0.126)	0.058	0.006
245	20.42	0.10	0.065	(0.126)	0.058	0.006
246	20.50	0.10	0.065	(0.125)	0.058	0.006
247	20.58	0.10	0.065	(0.125)	0.058	0.006
248	20.67	0.10	0.065	(0.124)	0.058	0.006
249	20.75	0.10	0.065	(0.124)	0.058	0.006
250	20.83	0.07	0.043	(0.123)	0.039	0.004
251	20.92	0.07	0.043	(0.123)	0.039	0.004
252	21.00	0.07	0.043	(0.122)	0.039	0.004
253	21.08	0.10	0.065	(0.122)	0.058	0.006
254	21.17	0.10	0.065	(0.121)	0.058	0.006
255	21.25	0.10	0.065	(0.121)	0.058	0.006
256	21.33	0.07	0.043	(0.120)	0.039	0.004
257	21.42	0.07	0.043	(0.120)	0.039	0.004
258	21.50	0.07	0.043	(0.120)	0.039	0.004
259	21.58	0.10	0.065	(0.119)	0.058	0.006
260	21.67	0.10	0.065	(0.119)	0.058	0.006

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261  21.75     0.10      0.065       (  0.118)       0.058        0.006
262  21.83     0.07      0.043       (  0.118)       0.039        0.004
263  21.92     0.07      0.043       (  0.117)       0.039        0.004
264  22.00     0.07      0.043       (  0.117)       0.039        0.004
265  22.08     0.10      0.065       (  0.117)       0.058        0.006
266  22.17     0.10      0.065       (  0.116)       0.058        0.006
267  22.25     0.10      0.065       (  0.116)       0.058        0.006
268  22.33     0.07      0.043       (  0.116)       0.039        0.004
269  22.42     0.07      0.043       (  0.115)       0.039        0.004
270  22.50     0.07      0.043       (  0.115)       0.039        0.004
271  22.58     0.07      0.043       (  0.114)       0.039        0.004
272  22.67     0.07      0.043       (  0.114)       0.039        0.004
273  22.75     0.07      0.043       (  0.114)       0.039        0.004
274  22.83     0.07      0.043       (  0.114)       0.039        0.004
275  22.92     0.07      0.043       (  0.113)       0.039        0.004
276  23.00     0.07      0.043       (  0.113)       0.039        0.004
277  23.08     0.07      0.043       (  0.113)       0.039        0.004
278  23.17     0.07      0.043       (  0.112)       0.039        0.004
279  23.25     0.07      0.043       (  0.112)       0.039        0.004
280  23.33     0.07      0.043       (  0.112)       0.039        0.004
281  23.42     0.07      0.043       (  0.112)       0.039        0.004
282  23.50     0.07      0.043       (  0.112)       0.039        0.004
283  23.58     0.07      0.043       (  0.111)       0.039        0.004
284  23.67     0.07      0.043       (  0.111)       0.039        0.004
285  23.75     0.07      0.043       (  0.111)       0.039        0.004
286  23.83     0.07      0.043       (  0.111)       0.039        0.004
287  23.92     0.07      0.043       (  0.111)       0.039        0.004
288  24.00     0.07      0.043       (  0.111)       0.039        0.004
               (Loss Rate Not Used)
   Sum =     100.0                                    Sum =    27.1
      Flood volume = Effective rainfall      2.26(In)
       times area    1210.9(Ac.)/[(In)/(Ft.)] =     227.7(Ac.Ft)
      Total soil loss =      3.13(In)
      Total soil loss =   315.910(Ac.Ft)
      Total rainfall =      5.39(In)
      Flood volume =     9918884.7 Cubic Feet
      Total soil loss =    13761040.4 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =    578.878(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      150.0     300.0     450.0     600.0
---------------------------------------------------------------------
  0+ 5       0.0007      0.10  Q         |         |         |         |
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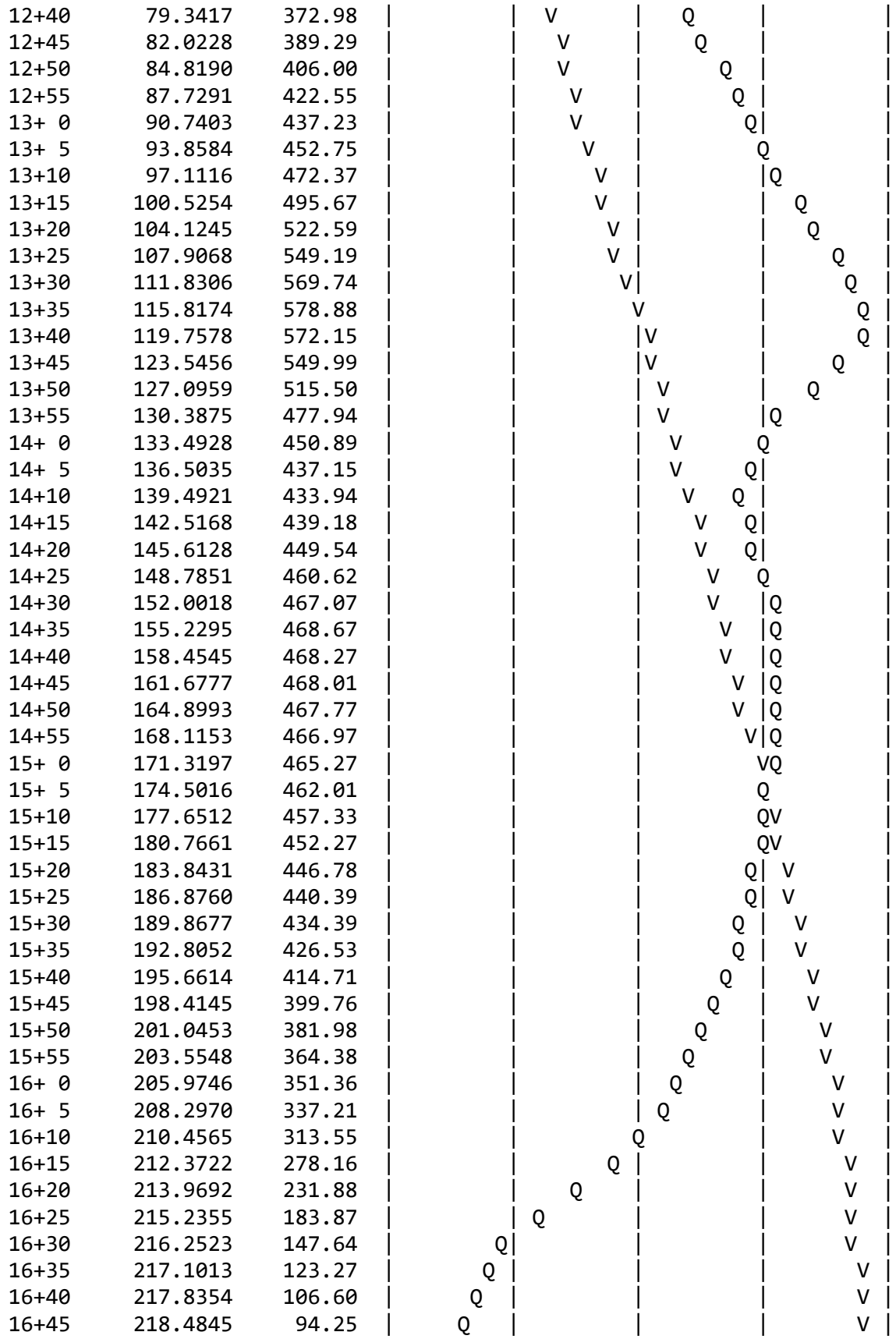
0+10	0.0036	0.42	Q	|	|	|	|
0+15	0.0104	0.98	Q	|	|	|	|
0+20	0.0228	1.80	Q	|	|	|	|
0+25	0.0419	2.77	Q	|	|	|	|
0+30	0.0670	3.65	Q	|	|	|	|
0+35	0.0974	4.42	Q	|	|	|	|
0+40	0.1324	5.09	Q	|	|	|	|
0+45	0.1708	5.58	Q	|	|	|	|
0+50	0.2120	5.98	Q	|	|	|	|
0+55	0.2561	6.40	Q	|	|	|	|
1+ 0	0.3036	6.89	Q	|	|	|	|
1+ 5	0.3546	7.40	Q	|	|	|	|
1+10	0.4083	7.80	Q	|	|	|	|
1+15	0.4630	7.95	Q	|	|	|	|
1+20	0.5173	7.88	Q	|	|	|	|
1+25	0.5704	7.71	Q	|	|	|	|
1+30	0.6226	7.59	Q	|	|	|	|
1+35	0.6747	7.56	Q	|	|	|	|
1+40	0.7267	7.56	Q	|	|	|	|
1+45	0.7789	7.58	Q	|	|	|	|
1+50	0.8317	7.66	Q	|	|	|	|
1+55	0.8858	7.85	Q	|	|	|	|
2+ 0	0.9420	8.16	Q	|	|	|	|
2+ 5	1.0010	8.57	Q	|	|	|	|
2+10	1.0630	9.00	Q	|	|	|	|
2+15	1.1272	9.33	Q	|	|	|	|
2+20	1.1929	9.54	Q	|	|	|	|
2+25	1.2597	9.69	Q	|	|	|	|
2+30	1.3272	9.80	Q	|	|	|	|
2+35	1.3957	9.95	Q	|	|	|	|
2+40	1.4659	10.19	Q	|	|	|	|
2+45	1.5386	10.55	Q	|	|	|	|
2+50	1.6143	10.99	Q	|	|	|	|
2+55	1.6931	11.45	Q	|	|	|	|
3+ 0	1.7744	11.80	Q	|	|	|	|
3+ 5	1.8574	12.04	Q	|	|	|	|
3+10	1.9415	12.21	Q	|	|	|	|
3+15	2.0264	12.33	Q	|	|	|	|
3+20	2.1120	12.44	Q	|	|	|	|
3+25	2.1983	12.52	Q	|	|	|	|
3+30	2.2850	12.59	Q	|	|	|	|
3+35	2.3722	12.66	Q	|	|	|	|
3+40	2.4598	12.72	Q	|	|	|	|
3+45	2.5477	12.77	Q	|	|	|	|
3+50	2.6363	12.87	Q	|	|	|	|
3+55	2.7263	13.06	Q	|	|	|	|
4+ 0	2.8184	13.37	Q	|	|	|	|
4+ 5	2.9134	13.79	Q	|	|	|	|
4+10	3.0113	14.22	Q	|	|	|	|
4+15	3.1114	14.54	Q	|	|	|	|

4+20	3.2134	14.81	Q	|	|	|	|
4+25	3.3176	15.13	VQ	|	|	|	|
4+30	3.4245	15.52	VQ	|	|	|	|
4+35	3.5347	16.00	VQ	|	|	|	|
4+40	3.6482	16.49	VQ	|	|	|	|
4+45	3.7644	16.86	VQ	|	|	|	|
4+50	3.8826	17.17	VQ	|	|	|	|
4+55	4.0033	17.52	VQ	|	|	|	|
5+ 0	4.1268	17.93	VQ	|	|	|	|
5+ 5	4.2531	18.33	VQ	|	|	|	|
5+10	4.3806	18.52	VQ	|	|	|	|
5+15	4.5070	18.35	VQ	|	|	|	|
5+20	4.6303	17.91	VQ	|	|	|	|
5+25	4.7505	17.46	VQ	|	|	|	|
5+30	4.8696	17.29	VQ	|	|	|	|
5+35	4.9900	17.48	VQ	|	|	|	|
5+40	5.1132	17.89	VQ	|	|	|	|
5+45	5.2398	18.38	VQ	|	|	|	|
5+50	5.3698	18.88	VQ	|	|	|	|
5+55	5.5032	19.36	VQ	|	|	|	|
6+ 0	5.6389	19.70	VQ	|	|	|	|
6+ 5	5.7766	19.99	|Q	|	|	|	|
6+10	5.9165	20.32	|Q	|	|	|	|
6+15	6.0592	20.73	|Q	|	|	|	|
6+20	6.2053	21.21	|Q	|	|	|	|
6+25	6.3548	21.70	|Q	|	|	|	|
6+30	6.5068	22.08	|Q	|	|	|	|
6+35	6.6610	22.39	|Q	|	|	|	|
6+40	6.8177	22.75	|Q	|	|	|	|
6+45	6.9774	23.18	|Q	|	|	|	|
6+50	7.1405	23.69	|Q	|	|	|	|
6+55	7.3071	24.19	|Q	|	|	|	|
7+ 0	7.4764	24.58	|Q	|	|	|	|
7+ 5	7.6476	24.85	|Q	|	|	|	|
7+10	7.8201	25.06	|Q	|	|	|	|
7+15	7.9938	25.21	|Q	|	|	|	|
7+20	8.1687	25.40	|Q	|	|	|	|
7+25	8.3455	25.67	|Q	|	|	|	|
7+30	8.5249	26.05	|Q	|	|	|	|
7+35	8.7080	26.58	|Q	|	|	|	|
7+40	8.8954	27.21	|Q	|	|	|	|
7+45	9.0873	27.86	|Q	|	|	|	|
7+50	9.2839	28.55	|Q	|	|	|	|
7+55	9.4857	29.30	|Q	|	|	|	|
8+ 0	9.6924	30.01	|VQ	|	|	|	|
8+ 5	9.9095	31.53	|VQ	|	|	|	|
8+10	10.1487	34.73	|VQ	|	|	|	|
8+15	10.4227	39.78	|VQ	|	|	|	|
8+20	10.7430	46.50	|V Q	|	|	|	|
8+25	11.1126	53.67	|V Q	|	|	|	|

8+30	11.5214	59.36	VQ				
8+35	11.9623	64.03	V Q				
8+40	12.4366	68.86	V Q				
8+45	12.9487	74.36	V Q				
8+50	13.5080	81.20	V Q				
8+55	14.1219	89.14	V Q				
9+ 0	14.7909	97.13	V Q				
9+ 5	15.5212	106.04	V Q				
9+10	16.3240	116.57	V Q				
9+15	17.2057	128.02	V Q				
9+20	18.1755	140.82	V Q				
9+25	19.2381	154.29	V Q				
9+30	20.3838	166.36	V Q				
9+35	21.6071	177.62	V Q				
9+40	22.9063	188.64	V Q				
9+45	24.2762	198.91	V Q				
9+50	25.7175	209.28	V Q				
9+55	27.2322	219.92	V Q				
10+ 0	28.8163	230.02	V Q				
10+ 5	30.4425	236.12	V Q				
10+10	32.0532	233.87	V Q				
10+15	33.5787	221.50	V Q				
10+20	34.9598	200.53	V Q				
10+25	36.1799	177.16	V Q				
10+30	37.2843	160.36	V Q				
10+35	38.3399	153.28	V Q				
10+40	39.4110	155.51	V Q				
10+45	40.5552	166.15	V Q				
10+50	41.8148	182.89	V Q				
10+55	43.2013	201.33	V Q				
11+ 0	44.6825	215.07	V Q				
11+ 5	46.2206	223.33	V Q				
11+10	47.7891	227.74	V Q				
11+15	49.3690	229.40	V Q				
11+20	50.9483	229.31	V Q				
11+25	52.5226	228.60	V Q				
11+30	54.0977	228.70	V Q				
11+35	55.6720	228.58	V Q				
11+40	57.2337	226.76	V Q				
11+45	58.7665	222.57	V Q				
11+50	60.2604	216.91	V Q				
11+55	61.7187	211.74	V Q				
12+ 0	63.1643	209.90	V Q				
12+ 5	64.6445	214.92	V Q				
12+10	66.2192	228.65	V Q				
12+15	67.9456	250.67	V Q				
12+20	69.8717	279.68	V Q				
12+25	72.0129	310.89	V Q				
12+30	74.3256	335.81	V Q				
12+35	76.7730	355.37	V Q				



16+50	219.0602	83.59	| Q |	|	|	V |
16+55	219.5738	74.57	| Q |	|	|	V |
17+ 0	220.0345	66.89	| Q |	|	|	V |
17+ 5	220.4493	60.23	| Q |	|	|	V |
17+10	220.8258	54.67	| Q |	|	|	V |
17+15	221.1710	50.13	| Q |	|	|	V |
17+20	221.4883	46.06	| Q |	|	|	V |
17+25	221.7821	42.66	| Q |	|	|	V |
17+30	222.0553	39.68	| Q |	|	|	V|
17+35	222.3085	36.77	| Q |	|	|	V|
17+40	222.5450	34.33	| Q |	|	|	V|
17+45	222.7647	31.91	| Q |	|	|	V|
17+50	222.9680	29.52	|Q |	|	|	V|
17+55	223.1551	27.17	|Q |	|	|	V|
18+ 0	223.3274	25.01	|Q |	|	|	V|
18+ 5	223.4856	22.97	|Q |	|	|	V|
18+10	223.6307	21.08	|Q |	|	|	V|
18+15	223.7645	19.42	|Q |	|	|	V|
18+20	223.8878	17.91	|Q |	|	|	V|
18+25	224.0028	16.70	|Q |	|	|	V|
18+30	224.1099	15.55	|Q |	|	|	V|
18+35	224.2101	14.54	Q |	|	|	V|
18+40	224.3045	13.71	Q |	|	|	V|
18+45	224.3925	12.77	Q |	|	|	V|
18+50	224.4730	11.68	Q |	|	|	V|
18+55	224.5451	10.47	Q |	|	|	V|
19+ 0	224.6087	9.24	Q |	|	|	V|
19+ 5	224.6642	8.05	Q |	|	|	V|
19+10	224.7170	7.66	Q |	|	|	V|
19+15	224.7689	7.54	Q |	|	|	V|
19+20	224.8219	7.69	Q |	|	|	V|
19+25	224.8773	8.05	Q |	|	|	V|
19+30	224.9356	8.47	Q |	|	|	V|
19+35	224.9966	8.85	Q |	|	|	V|
19+40	225.0594	9.12	Q |	|	|	V|
19+45	225.1223	9.13	Q |	|	|	V|
19+50	225.1835	8.89	Q |	|	|	V|
19+55	225.2417	8.45	Q |	|	|	V|
20+ 0	225.2965	7.96	Q |	|	|	V|
20+ 5	225.3482	7.51	Q |	|	|	V|
20+10	225.3977	7.18	Q |	|	|	V|
20+15	225.4467	7.11	Q |	|	|	V|
20+20	225.4967	7.26	Q |	|	|	V|
20+25	225.5483	7.49	Q |	|	|	V|
20+30	225.6011	7.67	Q |	|	|	V|
20+35	225.6545	7.75	Q |	|	|	V|
20+40	225.7081	7.79	Q |	|	|	V|
20+45	225.7619	7.80	Q |	|	|	V|
20+50	225.8153	7.76	Q |	|	|	V|
20+55	225.8677	7.61	Q |	|	|	V|

21+ 0	225.9183	7.34	Q	|	|	|	V|
21+ 5	225.9666	7.01	Q	|	|	|	V|
21+10	226.0133	6.78	Q	|	|	|	V|
21+15	226.0598	6.76	Q	|	|	|	V|
21+20	226.1074	6.90	Q	|	|	|	V|
21+25	226.1557	7.02	Q	|	|	|	V|
21+30	226.2036	6.94	Q	|	|	|	V|
21+35	226.2499	6.73	Q	|	|	|	V|
21+40	226.2950	6.54	Q	|	|	|	V|
21+45	226.3402	6.56	Q	|	|	|	V|
21+50	226.3865	6.73	Q	|	|	|	V|
21+55	226.4339	6.88	Q	|	|	|	V|
22+ 0	226.4809	6.83	Q	|	|	|	V|
22+ 5	226.5266	6.64	Q	|	|	|	V|
22+10	226.5712	6.47	Q	|	|	|	V|
22+15	226.6160	6.51	Q	|	|	|	V|
22+20	226.6621	6.69	Q	|	|	|	V|
22+25	226.7091	6.83	Q	|	|	|	V|
22+30	226.7558	6.78	Q	|	|	|	V|
22+35	226.8008	6.53	Q	|	|	|	V|
22+40	226.8435	6.20	Q	|	|	|	V|
22+45	226.8845	5.96	Q	|	|	|	V|
22+50	226.9245	5.81	Q	|	|	|	V|
22+55	226.9639	5.72	Q	|	|	|	V|
23+ 0	227.0029	5.66	Q	|	|	|	V|
23+ 5	227.0416	5.62	Q	|	|	|	V|
23+10	227.0799	5.57	Q	|	|	|	V|
23+15	227.1180	5.53	Q	|	|	|	V|
23+20	227.1559	5.50	Q	|	|	|	V|
23+25	227.1936	5.47	Q	|	|	|	V|
23+30	227.2311	5.45	Q	|	|	|	V|
23+35	227.2685	5.42	Q	|	|	|	V|
23+40	227.3057	5.40	Q	|	|	|	V|
23+45	227.3427	5.38	Q	|	|	|	V|
23+50	227.3797	5.37	Q	|	|	|	V|
23+55	227.4166	5.36	Q	|	|	|	V|
24+ 0	227.4535	5.35	Q	|	|	|	V|
24+ 5	227.4896	5.24	Q	|	|	|	V|
24+10	227.5234	4.91	Q	|	|	|	V|
24+15	227.5533	4.34	Q	|	|	|	V|
24+20	227.5778	3.56	Q	|	|	|	V|
24+25	227.5968	2.75	Q	|	|	|	V|
24+30	227.6116	2.15	Q	|	|	|	V|
24+35	227.6237	1.76	Q	|	|	|	V|
24+40	227.6339	1.49	Q	|	|	|	V|
24+45	227.6428	1.29	Q	|	|	|	V|
24+50	227.6505	1.12	Q	|	|	|	V|
24+55	227.6573	0.99	Q	|	|	|	V|
25+ 0	227.6634	0.88	Q	|	|	|	V|
25+ 5	227.6687	0.78	Q	|	|	|	V|

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   25+10     227.6735      0.69  Q          |          |          |         V|
   25+15     227.6777      0.61  Q          |          |          |         V|
   25+20     227.6813      0.53  Q          |          |          |         V|
   25+25     227.6846      0.47  Q          |          |          |         V|
   25+30     227.6875      0.42  Q          |          |          |         V|
   25+35     227.6901      0.38  Q          |          |          |         V|
   25+40     227.6924      0.34  Q          |          |          |         V|
   25+45     227.6945      0.30  Q          |          |          |         V|
   25+50     227.6963      0.27  Q          |          |          |         V|
   25+55     227.6979      0.23  Q          |          |          |         V|
   26+ 0     227.6993      0.20  Q          |          |          |         V|
   26+ 5     227.7006      0.18  Q          |          |          |         V|
   26+10     227.7016      0.16  Q          |          |          |         V|
   26+15     227.7026      0.13  Q          |          |          |         V|
   26+20     227.7033      0.11  Q          |          |          |         V|
   26+25     227.7040      0.10  Q          |          |          |         V|
   26+30     227.7046      0.08  Q          |          |          |         V|
   26+35     227.7051      0.07  Q          |          |          |         V|
   26+40     227.7055      0.06  Q          |          |          |         V|
   26+45     227.7058      0.05  Q          |          |          |         V|
   26+50     227.7060      0.03  Q          |          |          |         V|
   26+55     227.7062      0.02  Q          |          |          |         V|
   27+ 0     227.7063      0.01  Q          |          |          |          V
-------------------------------------------------------------------------
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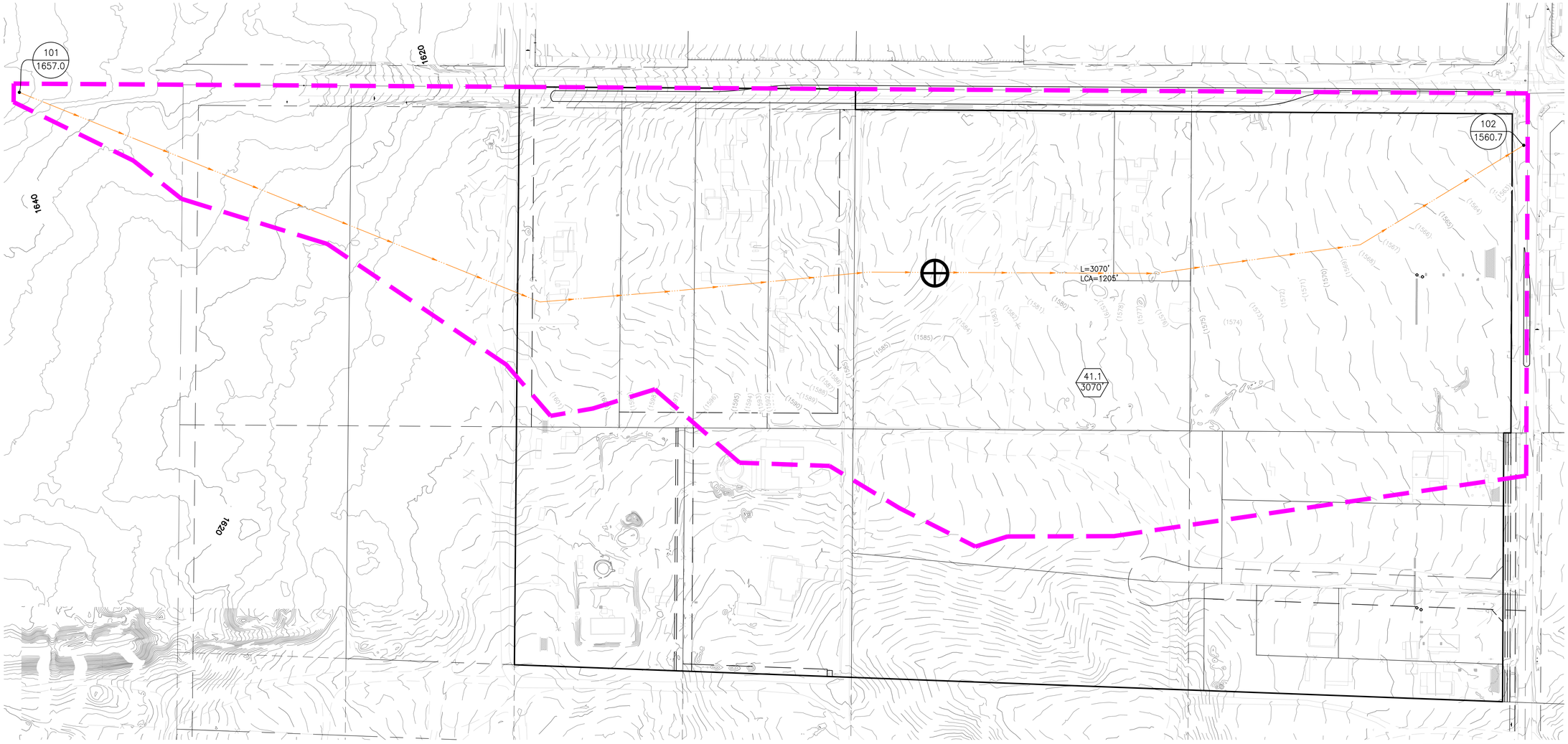
UNIT HYDROGRAPH HYDROLOGY MAP

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- L=14XX' / LCA=1000' — LONGEST FLOW PATH CENTROIDAL LENGTH
- 101 / 14XX — NODE DESIGNATION / NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)
- CENTROID





1" = 100'

50 0 100 200 300

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
INDUSTRIAL EXISITNG UNIT HYDROGRAPH
220050 CAJALCO COMMERCE CENTER

SCALE:	1"=100'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	5/10/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 1
DESIGNED:	RSB		OF 6 SHEETS
CHECKED:	SKK		DWG. NO.
PLN CK REF:			
F.B.			

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BERDYCAB

CAJALCO ROAD

DECKER ROAD

SEATON AVENUE

PROPOSED 66" LINE C

PROPOSED PUBLIC 15" LINE B

PROPOSED UNDERGROUND STORAGE CHAMBER

PROPOSED LIFT STATION

PROPOSED 12" LINE A

SD CONNECT TO LAT E-9.1, IP200029
CAJALCO RD STA 51+09.79
APPROX. 2,010'

202
1557.6

201
1600.1

47.0
1581'

L=864'
LCA=876'

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- L=14XX' / LCA=1000' — LONGEST FLOW PATH CENTROIDAL LENGTH
- 101 / 14XX — NODE DESIGNATION NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) LONGEST WATER PATH (FT)
- CENTROID

N W WEBB E S

1" = 80'

40 0 80 160 240

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
INDUSTRIAL PROPOSED UNIT HYDROGRAPH
220050 CAJALCO COMMERCE CENTER

SCALE:	1"=80'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	5/10/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE, CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 2
DESIGNED:	RSB		OF 6 SHEETS
CHECKED:	SKK		
PLN CK REF:			DWG. NO.
F.B.			

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REBECCA B

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- L=14XX' LCA=1000' — LONGEST FLOW PATH CENTROIDAL LENGTH
- 101 / 14XX — NODE DESIGNATION, NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES), LONGEST WATER PATH (FT)
- CENTROID

411 1590.4

L=577' LCA=276'

412 1574.2

431 1584.0

DMA E-1

4.7 577'

L=495' LCA=179'

DMA E-3

3.2 495'

4.9 206'

DMA W-1

421 1603.7

L=321' LCA=192'

DMA E-2

1.2 321'

401 1606.5

L=206' LCA=195'

432 1570.3

422 1574.5

2.0 627'

L=627' LCA=278'

402 1576.0

451 1588.0

442 1573.4

452 1563.6

441 1592.1

L=181' LCA=25'

0.6 181'

DMA E-5

DMA E-4

N W WEBB E S

1" = 40'

20 0 40 80 120

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
PARK - ONSITE EXISTING UNIT HYDROGRAPH
220050 CAJALCO COMMERCE CENTER

SCALE:	1"=40'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	5/10/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 3
DESIGNED:	RSB		OF 6 SHEETS
CHECKED:	SKK		
PLN CK REF:			DWG. NO.
F.B.			

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BERRYCAB

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- L=14XX' LCA=1000' — LONGEST FLOW PATH CENTROIDAL LENGTH
- 101 / 14XX — NODE DESIGNATION / NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)
- CENTROID

511 1590.4

501 1599.5

531 1584.0

DMA E-1

4.7 / 596'

L=596' LCA=301'

L=454' LCA=59'

PROPOSED 66" LINE C

DECKER ROAD

PROPOSED 48" LINE D FOR OFFSITE FLOWS

4.9 / 454'

12 STALLS

75 STALLS

512 1578.3

DMA E-3

3.2 / 492'

L=492' LCA=165'

DMA E-2

1.2 / 380'

PROP BIORETENTION BASIN

532 1572.3

DMA W-1

502 1584.0

522 1583.6

L=380' LCA=90'

PROPOSED 22' CONCRETE CHANNEL FOR OFFSITE FLOWS

PROP BIORETENTION BASIN

2.0 / 627'

L=627' LCA=278'

552 1563.6

DMA E-5

521 1593.0

551 1588.0

PROPOSED 3-12'X12' RCB FOR OFFSITE FLOWS

DMA E-4

0.6 / 600'

L=600' LCA=321'

541 1591.3

542 1566.3

N W WEBB E S

1" = 40'

20 0 40 80 120

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
PARK - ONSITE PROPOSED UNIT HYDROGRAPH
220050 CAJALCO COMMERCE CENTER

SCALE:	1"=40'
DATE:	5/10/24
DESIGNED:	RSB
CHECKED:	SKK
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	22-0192
SHEET	4
OF	6 SHEETS
DWG. NO.	

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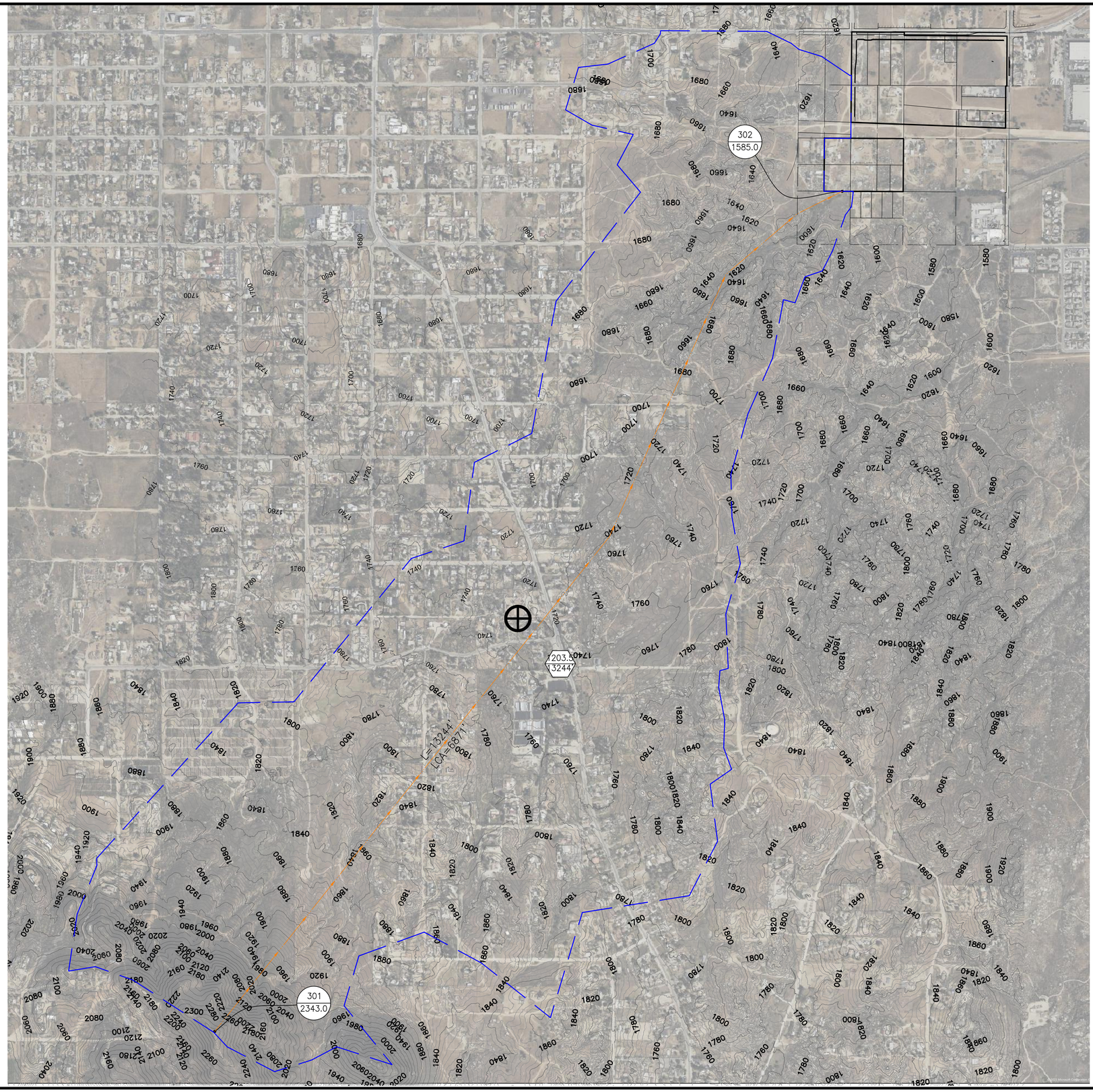

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- L=14XX' / LCA=1000' — LONGEST FLOW PATH / CENTROIDAL LENGTH
- 101 / 14XX — NODE DESIGNATION / NODE ELEVATION
- *14XX — *INVERT ELEVATION
- 5.0 / 1000' — WATERSHED AREA (ACRES) / LONGEST WATER PATH (FT)
- CENTROID

N
W WEBB E
S

1" = 600'

300 0 600 1200 1800

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
PARK - OFFSITE EXISITNG UNIT HYDROGRAPH
MEAD VALLEY COMMERCE CENTER

SCALE:	1"=600'
DATE:	5/10/24
DESIGNED:	RSB
CHECKED:	SKK
PLN CK REF:	
F.B.	

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE, CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

W.O.	22-0192
SHEET	5
OF	6 SHEETS
DWG. NO.	

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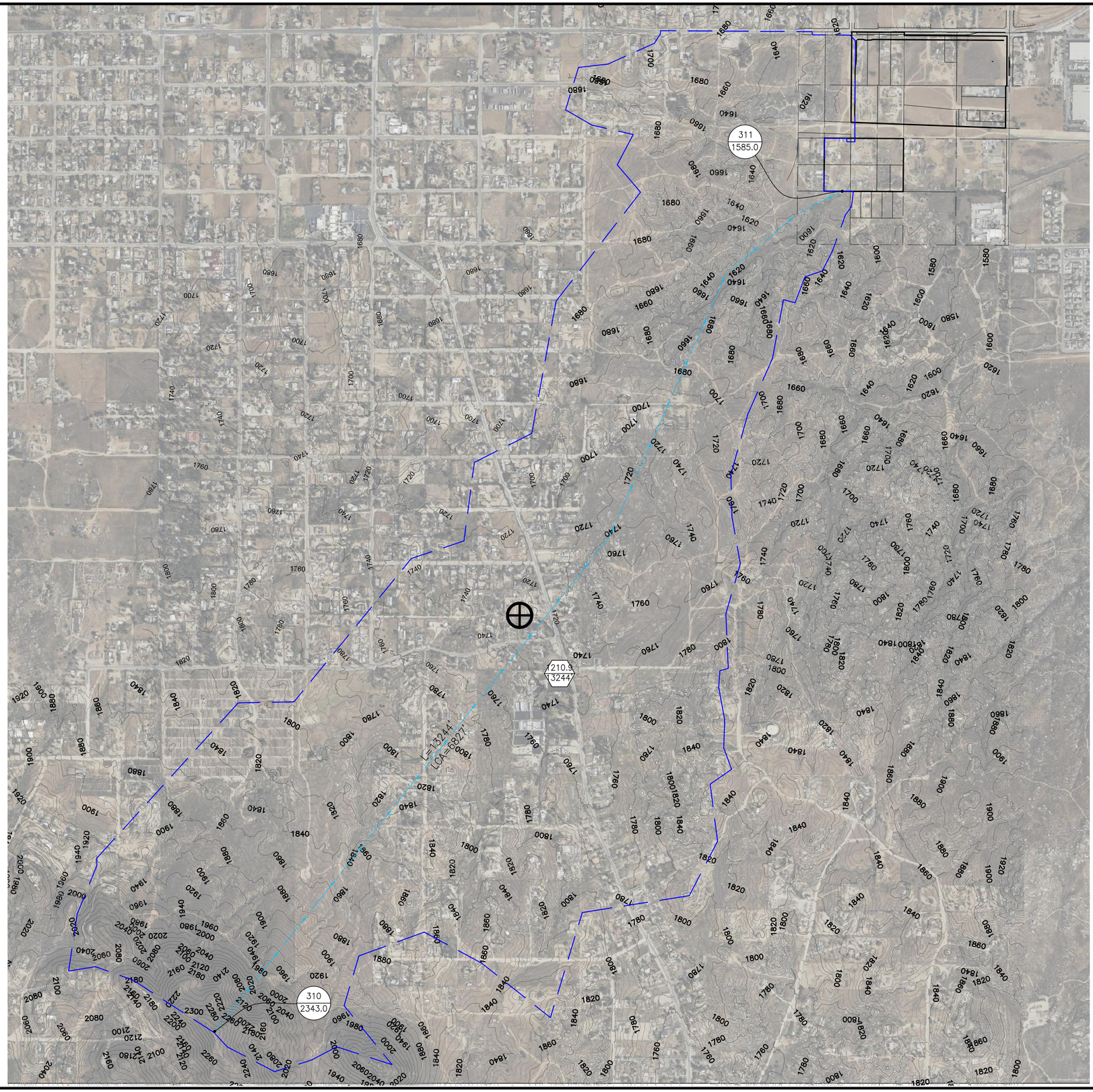

LEGEND

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
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N
W WEBB E
S

1" = 600'

300 0 600 1200 1800

RIVERSIDE COUNTY

UNIT HYDROGRAPH HYDROLOGY
PARK - OFFSITE EXISITNG UNIT HYDROGRAPH
MEAD VALLEY COMMERCE CENTER

SCALE:	1"=600'	ALBERT A. WEBB ASSOCIATES	W.O. 22-0192
DATE:	5/10/24	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE, CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256	SHEET 6
DESIGNED:	RSB		OF 6 SHEETS
CHECKED:	SKK		
PLN CK REF:			DWG. NO.
F.B.			

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APPENDIX B – HYDRAULIC ANALYSIS

TO BE INCLUDED IN FINAL ENGINEERING

APPENDIX C – ROUTING ANALYSIS

MVCC Chamber Stage Storage

Square Footage	CF		AC-FT
114075	34222.5	0.3	0.79
	79852.5	0.7	1.83
	114075	1	2.62
	228150	2	5.24
	342225	3	7.86
	456300	4	10.48
	570375	5	13.09
	684450	6	15.71
	798525	7	18.33
	912600	8	20.95
	1026675	9	23.57

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2022
Study date: 03/15/24

HILLWOOD-CAJALCO COMMERCE CENTER
100-YR 1-HR CHAMBER ROUTING
22-0192
2024-03-15 RSB

Program License Serial Number 6586

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

From study/file name: ONSITEPOST1100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 14
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 147.277 (CFS)
Total volume = 4.502 (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 100.000 to Point/Station 101.000
**** 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
0.300	0.790	1.960	0.783	0.797
0.700	1.830	1.960	1.823	1.837
1.000	2.620	10.000	2.586	2.654
2.000	5.240	10.000	5.206	5.274
3.000	7.860	10.000	7.826	7.894
4.000	10.480	10.000	10.446	10.514
5.000	13.090	10.000	13.056	13.124
6.000	15.710	10.000	15.676	15.744
7.000	18.330	10.000	18.296	18.364
8.000	20.950	10.000	20.916	20.984
9.000	23.570	10.000	23.536	23.604

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 36.8 73.64 110.46 147.28	Depth (Ft.)
0.083	14.87	0.13	0.051	O I | | | |	0.02
0.167	24.77	0.46	0.185	O I | | | |	0.07
0.250	29.31	0.91	0.367	O I | | | |	0.14
0.333	31.13	1.41	0.567	O I | | | |	0.22
0.417	34.59	1.94	0.782	O I| | | |	0.30
0.500	39.41	1.96	1.023	O I | | |	0.39
0.583	45.09	1.96	1.301	O |I | | |	0.50
0.667	52.43	1.96	1.623	O | I | | |	0.62
0.750	70.56	3.95	2.026	O | | I| | |	0.77
0.833	147.28	10.00	2.728	| O | | | I	1.04
0.917	102.70	10.00	3.520	| O | | I | |	1.34
1.000	45.68	10.00	3.962	| O |I | | |	1.51
1.083	14.08	10.00	4.099	| OI | | | |	1.56
1.167	1.83	10.00	4.085	I O | | | |	1.56
1.250	0.00	10.00	4.022	I O | | | |	1.54
1.333	0.00	10.00	3.953	I O | | | |	1.51
1.417	0.00	10.00	3.885	I O | | | |	1.48
1.500	0.00	10.00	3.816	I O | | | |	1.46
1.583	0.00	10.00	3.747	I O | | | |	1.43
1.667	0.00	10.00	3.678	I O | | | |	1.40
1.750	0.00	10.00	3.609	I O | | | |	1.38
1.833	0.00	10.00	3.540	I O | | | |	1.35
1.917	0.00	10.00	3.471	I O | | | |	1.32
2.000	0.00	10.00	3.403	I O | | | |	1.30

2.083	0.00	10.00	3.334	I O				1.27
2.167	0.00	10.00	3.265	I O				1.25
2.250	0.00	10.00	3.196	I O				1.22
2.333	0.00	10.00	3.127	I O				1.19
2.417	0.00	10.00	3.058	I O				1.17
2.500	0.00	10.00	2.989	I O				1.14
2.583	0.00	10.00	2.920	I O				1.11
2.667	0.00	10.00	2.852	I O				1.09
2.750	0.00	10.00	2.783	I O				1.06
2.833	0.00	10.00	2.714	I O				1.04
2.917	0.00	10.00	2.645	I O				1.01
3.000	0.00	9.57	2.578	I O				0.98
3.083	0.00	8.92	2.514	IO				0.96
3.167	0.00	8.32	2.455	IO				0.94
3.250	0.00	7.75	2.399	IO				0.92
3.333	0.00	7.23	2.348	IO				0.90
3.417	0.00	6.74	2.300	IO				0.88
3.500	0.00	6.28	2.255	IO				0.86
3.583	0.00	5.86	2.213	IO				0.85
3.667	0.00	5.46	2.174	IO				0.83
3.750	0.00	5.09	2.138	IO				0.82
3.833	0.00	4.75	2.104	IO				0.80
3.917	0.00	4.42	2.072	O				0.79
4.000	0.00	4.12	2.043	O				0.78
4.083	0.00	3.85	2.015	O				0.77
4.167	0.00	3.58	1.990	O				0.76
4.250	0.00	3.34	1.966	O				0.75
4.333	0.00	3.12	1.944	O				0.74
4.417	0.00	2.90	1.923	O				0.74
4.500	0.00	2.71	1.904	O				0.73
4.583	0.00	2.52	1.885	O				0.72
4.667	0.00	2.35	1.869	O				0.71
4.750	0.00	2.19	1.853	O				0.71
4.833	0.00	2.05	1.838	O				0.70
4.917	0.00	1.96	1.825	O				0.70
5.000	0.00	1.96	1.811	O				0.69
5.083	0.00	1.96	1.798	O				0.69
5.167	0.00	1.96	1.784	O				0.68
5.250	0.00	1.96	1.771	O				0.68
5.333	0.00	1.96	1.757	O				0.67
5.417	0.00	1.96	1.744	O				0.67
5.500	0.00	1.96	1.730	O				0.66
5.583	0.00	1.96	1.717	O				0.66
5.667	0.00	1.96	1.703	O				0.65
5.750	0.00	1.96	1.690	O				0.65
5.833	0.00	1.96	1.676	O				0.64
5.917	0.00	1.96	1.663	O				0.64
6.000	0.00	1.96	1.649	O				0.63
6.083	0.00	1.96	1.636	O				0.63
6.167	0.00	1.96	1.622	O				0.62

6.250	0.00	1.96	1.609	O				0.61
6.333	0.00	1.96	1.595	O				0.61
6.417	0.00	1.96	1.582	O				0.60
6.500	0.00	1.96	1.568	O				0.60
6.583	0.00	1.96	1.555	O				0.59
6.667	0.00	1.96	1.541	O				0.59
6.750	0.00	1.96	1.528	O				0.58
6.833	0.00	1.96	1.514	O				0.58
6.917	0.00	1.96	1.501	O				0.57
7.000	0.00	1.96	1.487	O				0.57
7.083	0.00	1.96	1.474	O				0.56
7.167	0.00	1.96	1.460	O				0.56
7.250	0.00	1.96	1.447	O				0.55
7.333	0.00	1.96	1.433	O				0.55
7.417	0.00	1.96	1.420	O				0.54
7.500	0.00	1.96	1.406	O				0.54
7.583	0.00	1.96	1.393	O				0.53
7.667	0.00	1.96	1.379	O				0.53
7.750	0.00	1.96	1.366	O				0.52
7.833	0.00	1.96	1.352	O				0.52
7.917	0.00	1.96	1.339	O				0.51
8.000	0.00	1.96	1.325	O				0.51
8.083	0.00	1.96	1.312	O				0.50
8.167	0.00	1.96	1.298	O				0.50
8.250	0.00	1.96	1.285	O				0.49
8.333	0.00	1.96	1.271	O				0.49
8.417	0.00	1.96	1.258	O				0.48
8.500	0.00	1.96	1.244	O				0.47
8.583	0.00	1.96	1.231	O				0.47
8.667	0.00	1.96	1.217	O				0.46
8.750	0.00	1.96	1.204	O				0.46
8.833	0.00	1.96	1.190	O				0.45
8.917	0.00	1.96	1.177	O				0.45
9.000	0.00	1.96	1.163	O				0.44
9.083	0.00	1.96	1.150	O				0.44
9.167	0.00	1.96	1.136	O				0.43
9.250	0.00	1.96	1.123	O				0.43
9.333	0.00	1.96	1.109	O				0.42
9.417	0.00	1.96	1.096	O				0.42
9.500	0.00	1.96	1.082	O				0.41
9.583	0.00	1.96	1.069	O				0.41
9.667	0.00	1.96	1.055	O				0.40
9.750	0.00	1.96	1.042	O				0.40
9.833	0.00	1.96	1.028	O				0.39
9.917	0.00	1.96	1.015	O				0.39
10.000	0.00	1.96	1.001	O				0.38
10.083	0.00	1.96	0.988	O				0.38
10.167	0.00	1.96	0.974	O				0.37
10.250	0.00	1.96	0.961	O				0.37
10.333	0.00	1.96	0.947	O				0.36

10.417	0.00	1.96	0.934	O				0.36
10.500	0.00	1.96	0.920	O				0.35
10.583	0.00	1.96	0.907	O				0.34
10.667	0.00	1.96	0.893	O				0.34
10.750	0.00	1.96	0.880	O				0.33
10.833	0.00	1.96	0.866	O				0.33
10.917	0.00	1.96	0.853	O				0.32
11.000	0.00	1.96	0.839	O				0.32
11.083	0.00	1.96	0.826	O				0.31
11.167	0.00	1.96	0.812	O				0.31
11.250	0.00	1.96	0.799	O				0.30
11.333	0.00	1.95	0.785	O				0.30
11.417	0.00	1.92	0.772	O				0.29
11.500	0.00	1.88	0.759	O				0.29
11.583	0.00	1.85	0.746	O				0.28
11.667	0.00	1.82	0.733	O				0.28
11.750	0.00	1.79	0.721	O				0.27
11.833	0.00	1.76	0.709	O				0.27
11.917	0.00	1.73	0.697	O				0.26
12.000	0.00	1.70	0.685	O				0.26
12.083	0.00	1.67	0.673	O				0.26
12.167	0.00	1.64	0.662	O				0.25
12.250	0.00	1.61	0.651	O				0.25
12.333	0.00	1.59	0.640	O				0.24
12.417	0.00	1.56	0.629	O				0.24
12.500	0.00	1.53	0.618	O				0.23
12.583	0.00	1.51	0.608	O				0.23
12.667	0.00	1.48	0.597	O				0.23
12.750	0.00	1.46	0.587	O				0.22
12.833	0.00	1.43	0.577	O				0.22
12.917	0.00	1.41	0.568	O				0.22
13.000	0.00	1.38	0.558	O				0.21
13.083	0.00	1.36	0.549	O				0.21
13.167	0.00	1.34	0.539	O				0.20
13.250	0.00	1.32	0.530	O				0.20
13.333	0.00	1.29	0.521	O				0.20
13.417	0.00	1.27	0.512	O				0.19
13.500	0.00	1.25	0.504	O				0.19
13.583	0.00	1.23	0.495	O				0.19
13.667	0.00	1.21	0.487	O				0.18
13.750	0.00	1.19	0.478	O				0.18
13.833	0.00	1.17	0.470	O				0.18
13.917	0.00	1.15	0.462	O				0.18
14.000	0.00	1.13	0.455	O				0.17
14.083	0.00	1.11	0.447	O				0.17
14.167	0.00	1.09	0.439	O				0.17
14.250	0.00	1.07	0.432	O				0.16
14.333	0.00	1.05	0.424	O				0.16
14.417	0.00	1.04	0.417	O				0.16
14.500	0.00	1.02	0.410	O				0.16

14.583	0.00	1.00	0.403	O	|	|	|	0.15
14.667	0.00	0.98	0.396	O	|	|	|	0.15
14.750	0.00	0.97	0.390	O	|	|	|	0.15
14.833	0.00	0.95	0.383	O	|	|	|	0.15
14.917	0.00	0.93	0.377	O	|	|	|	0.14
15.000	0.00	0.92	0.370	O	|	|	|	0.14
15.083	0.00	0.90	0.364	O	|	|	|	0.14
15.167	0.00	0.89	0.358	O	|	|	|	0.14
15.250	0.00	0.87	0.352	O	|	|	|	0.13
15.333	0.00	0.86	0.346	O	|	|	|	0.13
15.417	0.00	0.84	0.340	O	|	|	|	0.13
15.500	0.00	0.83	0.334	O	|	|	|	0.13
15.583	0.00	0.82	0.329	O	|	|	|	0.12
15.667	0.00	0.80	0.323	O	|	|	|	0.12
15.750	0.00	0.79	0.317	O	|	|	|	0.12
15.833	0.00	0.77	0.312	O	|	|	|	0.12
15.917	0.00	0.76	0.307	O	|	|	|	0.12
16.000	0.00	0.75	0.302	O	|	|	|	0.11
16.083	0.00	0.74	0.297	O	|	|	|	0.11
16.167	0.00	0.72	0.291	O	|	|	|	0.11
16.250	0.00	0.71	0.287	O	|	|	|	0.11
16.333	0.00	0.70	0.282	O	|	|	|	0.11
16.417	0.00	0.69	0.277	O	|	|	|	0.11
16.500	0.00	0.68	0.272	O	|	|	|	0.10
16.583	0.00	0.66	0.268	O	|	|	|	0.10
16.667	0.00	0.65	0.263	O	|	|	|	0.10
16.750	0.00	0.64	0.259	O	|	|	|	0.10
16.833	0.00	0.63	0.254	O	|	|	|	0.10
16.917	0.00	0.62	0.250	O	|	|	|	0.09
17.000	0.00	0.61	0.246	O	|	|	|	0.09
17.083	0.00	0.60	0.242	O	|	|	|	0.09
17.167	0.00	0.59	0.237	O	|	|	|	0.09
17.250	0.00	0.58	0.233	O	|	|	|	0.09
17.333	0.00	0.57	0.229	O	|	|	|	0.09
17.417	0.00	0.56	0.226	O	|	|	|	0.09
17.500	0.00	0.55	0.222	O	|	|	|	0.08
17.583	0.00	0.54	0.218	O	|	|	|	0.08
17.667	0.00	0.53	0.214	O	|	|	|	0.08
17.750	0.00	0.52	0.211	O	|	|	|	0.08
17.833	0.00	0.51	0.207	O	|	|	|	0.08
17.917	0.00	0.51	0.204	O	|	|	|	0.08
18.000	0.00	0.50	0.200	O	|	|	|	0.08
18.083	0.00	0.49	0.197	O	|	|	|	0.07
18.167	0.00	0.48	0.193	O	|	|	|	0.07
18.250	0.00	0.47	0.190	O	|	|	|	0.07
18.333	0.00	0.46	0.187	O	|	|	|	0.07
18.417	0.00	0.46	0.184	O	|	|	|	0.07
18.500	0.00	0.45	0.181	O	|	|	|	0.07
18.583	0.00	0.44	0.178	O	|	|	|	0.07
18.667	0.00	0.43	0.175	O	|	|	|	0.07

18.750	0.00	0.43	0.172	O	|	|	|	0.07
18.833	0.00	0.42	0.169	O	|	|	|	0.06
18.917	0.00	0.41	0.166	O	|	|	|	0.06
19.000	0.00	0.40	0.163	O	|	|	|	0.06
19.083	0.00	0.40	0.160	O	|	|	|	0.06
19.167	0.00	0.39	0.158	O	|	|	|	0.06
19.250	0.00	0.38	0.155	O	|	|	|	0.06
19.333	0.00	0.38	0.152	O	|	|	|	0.06
19.417	0.00	0.37	0.150	O	|	|	|	0.06
19.500	0.00	0.37	0.147	O	|	|	|	0.06
19.583	0.00	0.36	0.145	O	|	|	|	0.05
19.667	0.00	0.35	0.142	O	|	|	|	0.05
19.750	0.00	0.35	0.140	O	|	|	|	0.05
19.833	0.00	0.34	0.137	O	|	|	|	0.05
19.917	0.00	0.34	0.135	O	|	|	|	0.05
20.000	0.00	0.33	0.133	O	|	|	|	0.05
20.083	0.00	0.32	0.131	O	|	|	|	0.05
20.167	0.00	0.32	0.128	O	|	|	|	0.05
20.250	0.00	0.31	0.126	O	|	|	|	0.05
20.333	0.00	0.31	0.124	O	|	|	|	0.05
20.417	0.00	0.30	0.122	O	|	|	|	0.05
20.500	0.00	0.30	0.120	O	|	|	|	0.05
20.583	0.00	0.29	0.118	O	|	|	|	0.04
20.667	0.00	0.29	0.116	O	|	|	|	0.04
20.750	0.00	0.28	0.114	O	|	|	|	0.04
20.833	0.00	0.28	0.112	O	|	|	|	0.04
20.917	0.00	0.27	0.110	O	|	|	|	0.04
21.000	0.00	0.27	0.108	O	|	|	|	0.04
21.083	0.00	0.26	0.106	O	|	|	|	0.04
21.167	0.00	0.26	0.105	O	|	|	|	0.04
21.250	0.00	0.26	0.103	O	|	|	|	0.04
21.333	0.00	0.25	0.101	O	|	|	|	0.04
21.417	0.00	0.25	0.099	O	|	|	|	0.04
21.500	0.00	0.24	0.098	O	|	|	|	0.04
21.583	0.00	0.24	0.096	O	|	|	|	0.04
21.667	0.00	0.23	0.094	O	|	|	|	0.04
21.750	0.00	0.23	0.093	O	|	|	|	0.04
21.833	0.00	0.23	0.091	O	|	|	|	0.03
21.917	0.00	0.22	0.090	O	|	|	|	0.03
22.000	0.00	0.22	0.088	O	|	|	|	0.03
22.083	0.00	0.21	0.087	O	|	|	|	0.03
22.167	0.00	0.21	0.085	O	|	|	|	0.03
22.250	0.00	0.21	0.084	O	|	|	|	0.03
22.333	0.00	0.20	0.082	O	|	|	|	0.03
22.417	0.00	0.20	0.081	O	|	|	|	0.03
22.500	0.00	0.20	0.080	O	|	|	|	0.03
22.583	0.00	0.19	0.078	O	|	|	|	0.03
22.667	0.00	0.19	0.077	O	|	|	|	0.03
22.750	0.00	0.19	0.076	O	|	|	|	0.03
22.833	0.00	0.18	0.074	O	|	|	|	0.03

22.917	0.00	0.18	0.073	O	|	|	|	0.03
23.000	0.00	0.18	0.072	O	|	|	|	0.03
23.083	0.00	0.18	0.071	O	|	|	|	0.03
23.167	0.00	0.17	0.069	O	|	|	|	0.03
23.250	0.00	0.17	0.068	O	|	|	|	0.03
23.333	0.00	0.17	0.067	O	|	|	|	0.03
23.417	0.00	0.16	0.066	O	|	|	|	0.03
23.500	0.00	0.16	0.065	O	|	|	|	0.02
23.583	0.00	0.16	0.064	O	|	|	|	0.02
23.667	0.00	0.16	0.063	O	|	|	|	0.02
23.750	0.00	0.15	0.062	O	|	|	|	0.02
23.833	0.00	0.15	0.061	O	|	|	|	0.02
23.917	0.00	0.15	0.059	O	|	|	|	0.02
24.000	0.00	0.15	0.058	O	|	|	|	0.02
24.083	0.00	0.14	0.057	O	|	|	|	0.02
24.167	0.00	0.14	0.057	O	|	|	|	0.02
24.250	0.00	0.14	0.056	O	|	|	|	0.02
24.333	0.00	0.14	0.055	O	|	|	|	0.02
24.417	0.00	0.13	0.054	O	|	|	|	0.02
24.500	0.00	0.13	0.053	O	|	|	|	0.02
24.583	0.00	0.13	0.052	O	|	|	|	0.02
24.667	0.00	0.13	0.051	O	|	|	|	0.02
24.750	0.00	0.12	0.050	O	|	|	|	0.02
24.833	0.00	0.12	0.049	O	|	|	|	0.02
24.917	0.00	0.12	0.048	O	|	|	|	0.02
25.000	0.00	0.12	0.048	O	|	|	|	0.02
25.083	0.00	0.12	0.047	O	|	|	|	0.02
25.167	0.00	0.11	0.046	O	|	|	|	0.02
25.250	0.00	0.11	0.045	O	|	|	|	0.02
25.333	0.00	0.11	0.044	O	|	|	|	0.02
25.417	0.00	0.11	0.044	O	|	|	|	0.02
25.500	0.00	0.11	0.043	O	|	|	|	0.02
25.583	0.00	0.10	0.042	O	|	|	|	0.02
25.667	0.00	0.10	0.042	O	|	|	|	0.02
25.750	0.00	0.10	0.041	O	|	|	|	0.02
25.833	0.00	0.10	0.040	O	|	|	|	0.02
25.917	0.00	0.10	0.039	O	|	|	|	0.01
26.000	0.00	0.10	0.039	O	|	|	|	0.01
26.083	0.00	0.09	0.038	O	|	|	|	0.01
26.167	0.00	0.09	0.038	O	|	|	|	0.01
26.250	0.00	0.09	0.037	O	|	|	|	0.01
26.333	0.00	0.09	0.036	O	|	|	|	0.01
26.417	0.00	0.09	0.036	O	|	|	|	0.01
26.500	0.00	0.09	0.035	O	|	|	|	0.01
26.583	0.00	0.09	0.034	O	|	|	|	0.01
26.667	0.00	0.08	0.034	O	|	|	|	0.01
26.750	0.00	0.08	0.033	O	|	|	|	0.01
26.833	0.00	0.08	0.033	O	|	|	|	0.01
26.917	0.00	0.08	0.032	O	|	|	|	0.01
27.000	0.00	0.08	0.032	O	|	|	|	0.01

27.083	0.00	0.08	0.031	O				0.01
27.167	0.00	0.08	0.031	O				0.01
27.250	0.00	0.07	0.030	O				0.01
27.333	0.00	0.07	0.030	O				0.01
27.417	0.00	0.07	0.029	O				0.01
27.500	0.00	0.07	0.029	O				0.01
27.583	0.00	0.07	0.028	O				0.01
27.667	0.00	0.07	0.028	O				0.01
27.750	0.00	0.07	0.027	O				0.01
27.833	0.00	0.07	0.027	O				0.01
27.917	0.00	0.06	0.026	O				0.01
28.000	0.00	0.06	0.026	O				0.01
28.083	0.00	0.06	0.025	O				0.01
28.167	0.00	0.06	0.025	O				0.01
28.250	0.00	0.06	0.024	O				0.01
28.333	0.00	0.06	0.024	O				0.01
28.417	0.00	0.06	0.024	O				0.01
28.500	0.00	0.06	0.023	O				0.01
28.583	0.00	0.06	0.023	O				0.01
28.667	0.00	0.06	0.022	O				0.01
28.750	0.00	0.05	0.022	O				0.01
28.833	0.00	0.05	0.022	O				0.01
28.917	0.00	0.05	0.021	O				0.01
29.000	0.00	0.05	0.021	O				0.01
29.083	0.00	0.05	0.021	O				0.01
29.167	0.00	0.05	0.020	O				0.01
29.250	0.00	0.05	0.020	O				0.01
29.333	0.00	0.05	0.020	O				0.01
29.417	0.00	0.05	0.019	O				0.01
29.500	0.00	0.05	0.019	O				0.01
29.583	0.00	0.05	0.019	O				0.01
29.667	0.00	0.05	0.018	O				0.01
29.750	0.00	0.04	0.018	O				0.01
29.833	0.00	0.04	0.018	O				0.01
29.917	0.00	0.04	0.017	O				0.01
30.000	0.00	0.04	0.017	O				0.01
30.083	0.00	0.04	0.017	O				0.01
30.167	0.00	0.04	0.017	O				0.01
30.250	0.00	0.04	0.016	O				0.01
30.333	0.00	0.04	0.016	O				0.01
30.417	0.00	0.04	0.016	O				0.01
30.500	0.00	0.04	0.015	O				0.01
30.583	0.00	0.04	0.015	O				0.01
30.667	0.00	0.04	0.015	O				0.01
30.750	0.00	0.04	0.015	O				0.01
30.833	0.00	0.04	0.014	O				0.01
30.917	0.00	0.04	0.014	O				0.01
31.000	0.00	0.03	0.014	O				0.01
31.083	0.00	0.03	0.014	O				0.01
31.167	0.00	0.03	0.013	O				0.01

31.250	0.00	0.03	0.013	O	|	|	|	0.01
31.333	0.00	0.03	0.013	O	|	|	|	0.00
31.417	0.00	0.03	0.013	O	|	|	|	0.00
31.500	0.00	0.03	0.013	O	|	|	|	0.00
31.583	0.00	0.03	0.012	O	|	|	|	0.00
31.667	0.00	0.03	0.012	O	|	|	|	0.00
31.750	0.00	0.03	0.012	O	|	|	|	0.00
31.833	0.00	0.03	0.012	O	|	|	|	0.00
31.917	0.00	0.03	0.012	O	|	|	|	0.00
32.000	0.00	0.03	0.011	O	|	|	|	0.00
32.083	0.00	0.03	0.011	O	|	|	|	0.00
32.167	0.00	0.03	0.011	O	|	|	|	0.00
32.250	0.00	0.03	0.011	O	|	|	|	0.00
32.333	0.00	0.03	0.011	O	|	|	|	0.00
32.417	0.00	0.03	0.010	O	|	|	|	0.00
32.500	0.00	0.03	0.010	O	|	|	|	0.00
32.583	0.00	0.02	0.010	O	|	|	|	0.00
32.667	0.00	0.02	0.010	O	|	|	|	0.00
32.750	0.00	0.02	0.010	O	|	|	|	0.00
32.833	0.00	0.02	0.010	O	|	|	|	0.00
32.917	0.00	0.02	0.009	O	|	|	|	0.00
33.000	0.00	0.02	0.009	O	|	|	|	0.00
33.083	0.00	0.02	0.009	O	|	|	|	0.00
33.167	0.00	0.02	0.009	O	|	|	|	0.00
33.250	0.00	0.02	0.009	O	|	|	|	0.00
33.333	0.00	0.02	0.009	O	|	|	|	0.00
33.417	0.00	0.02	0.008	O	|	|	|	0.00
33.500	0.00	0.02	0.008	O	|	|	|	0.00
33.583	0.00	0.02	0.008	O	|	|	|	0.00
33.667	0.00	0.02	0.008	O	|	|	|	0.00
33.750	0.00	0.02	0.008	O	|	|	|	0.00
33.833	0.00	0.02	0.008	O	|	|	|	0.00
33.917	0.00	0.02	0.008	O	|	|	|	0.00
34.000	0.00	0.02	0.008	O	|	|	|	0.00
34.083	0.00	0.02	0.007	O	|	|	|	0.00
34.167	0.00	0.02	0.007	O	|	|	|	0.00
34.250	0.00	0.02	0.007	O	|	|	|	0.00
34.333	0.00	0.02	0.007	O	|	|	|	0.00
34.417	0.00	0.02	0.007	O	|	|	|	0.00
34.500	0.00	0.02	0.007	O	|	|	|	0.00
34.583	0.00	0.02	0.007	O	|	|	|	0.00
34.667	0.00	0.02	0.007	O	|	|	|	0.00
34.750	0.00	0.02	0.006	O	|	|	|	0.00
34.833	0.00	0.02	0.006	O	|	|	|	0.00
34.917	0.00	0.02	0.006	O	|	|	|	0.00
35.000	0.00	0.02	0.006	O	|	|	|	0.00
35.083	0.00	0.01	0.006	O	|	|	|	0.00
35.167	0.00	0.01	0.006	O	|	|	|	0.00
35.250	0.00	0.01	0.006	O	|	|	|	0.00
35.333	0.00	0.01	0.006	O	|	|	|	0.00

35.417	0.00	0.01	0.006	O	|	|	|	0.00
35.500	0.00	0.01	0.006	O	|	|	|	0.00
35.583	0.00	0.01	0.005	O	|	|	|	0.00
35.667	0.00	0.01	0.005	O	|	|	|	0.00
35.750	0.00	0.01	0.005	O	|	|	|	0.00
35.833	0.00	0.01	0.005	O	|	|	|	0.00
35.917	0.00	0.01	0.005	O	|	|	|	0.00
36.000	0.00	0.01	0.005	O	|	|	|	0.00
36.083	0.00	0.01	0.005	O	|	|	|	0.00
36.167	0.00	0.01	0.005	O	|	|	|	0.00
36.250	0.00	0.01	0.005	O	|	|	|	0.00
36.333	0.00	0.01	0.005	O	|	|	|	0.00
36.417	0.00	0.01	0.005	O	|	|	|	0.00
36.500	0.00	0.01	0.005	O	|	|	|	0.00
36.583	0.00	0.01	0.004	O	|	|	|	0.00
36.667	0.00	0.01	0.004	O	|	|	|	0.00
36.750	0.00	0.01	0.004	O	|	|	|	0.00
36.833	0.00	0.01	0.004	O	|	|	|	0.00
36.917	0.00	0.01	0.004	O	|	|	|	0.00
37.000	0.00	0.01	0.004	O	|	|	|	0.00
37.083	0.00	0.01	0.004	O	|	|	|	0.00
37.167	0.00	0.01	0.004	O	|	|	|	0.00
37.250	0.00	0.01	0.004	O	|	|	|	0.00
37.333	0.00	0.01	0.004	O	|	|	|	0.00
37.417	0.00	0.01	0.004	O	|	|	|	0.00
37.500	0.00	0.01	0.004	O	|	|	|	0.00
37.583	0.00	0.01	0.004	O	|	|	|	0.00
37.667	0.00	0.01	0.004	O	|	|	|	0.00
37.750	0.00	0.01	0.003	O	|	|	|	0.00
37.833	0.00	0.01	0.003	O	|	|	|	0.00
37.917	0.00	0.01	0.003	O	|	|	|	0.00
38.000	0.00	0.01	0.003	O	|	|	|	0.00
38.083	0.00	0.01	0.003	O	|	|	|	0.00
38.167	0.00	0.01	0.003	O	|	|	|	0.00
38.250	0.00	0.01	0.003	O	|	|	|	0.00
38.333	0.00	0.01	0.003	O	|	|	|	0.00
38.417	0.00	0.01	0.003	O	|	|	|	0.00
38.500	0.00	0.01	0.003	O	|	|	|	0.00
38.583	0.00	0.01	0.003	O	|	|	|	0.00
38.667	0.00	0.01	0.003	O	|	|	|	0.00
38.750	0.00	0.01	0.003	O	|	|	|	0.00
38.833	0.00	0.01	0.003	O	|	|	|	0.00
38.917	0.00	0.01	0.003	O	|	|	|	0.00
39.000	0.00	0.01	0.003	O	|	|	|	0.00
39.083	0.00	0.01	0.003	O	|	|	|	0.00
39.167	0.00	0.01	0.003	O	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

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

Number of intervals = 470
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.000 (CFS)
Total volume = 4.500 (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: 03/15/24

HILLWOOD-CAJALCO COMMERCE CENTER
100-YR 3-HR CHAMBER ROUTING
22-0192
2024-03-15 RSB

Program License Serial Number 6586

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

From study/file name: ONSITEPOST3100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 38
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 81.040 (CFS)
Total volume = 6.695 (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 100.000 to Point/Station 101.000
**** 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
0.300	0.790	1.960	0.783	0.797
0.700	1.830	1.960	1.823	1.837
1.000	2.620	10.000	2.586	2.654
2.000	5.240	10.000	5.206	5.274
3.000	7.860	10.000	7.826	7.894
4.000	10.480	10.000	10.446	10.514
5.000	13.090	10.000	13.056	13.124
6.000	15.710	10.000	15.676	15.744
7.000	18.330	10.000	18.296	18.364
8.000	20.950	10.000	20.916	20.984
9.000	23.570	10.000	23.536	23.604

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 20.3 40.52 60.78 81.04	Depth (Ft.)
0.083	6.63	0.06	0.023	O I	0.01
0.167	10.86	0.20	0.082	O I	0.03
0.250	10.51	0.38	0.154	O I	0.06
0.333	11.90	0.56	0.227	O I	0.09
0.417	13.10	0.77	0.309	O I	0.12
0.500	15.01	0.99	0.400	O I	0.15
0.583	14.39	1.22	0.493	O I	0.19
0.667	15.18	1.45	0.586	O I	0.22
0.750	16.10	1.69	0.683	O I	0.26
0.833	14.57	1.93	0.776	O I	0.29
0.917	13.99	1.96	0.861	O I	0.33
1.000	15.34	1.96	0.948	O I	0.36
1.083	18.64	1.96	1.052	O I	0.40
1.167	20.35	1.96	1.173	O I	0.45
1.250	20.60	1.96	1.300	O I	0.50
1.333	19.36	1.96	1.424	O I	0.54
1.417	22.29	1.96	1.554	O I	0.59
1.500	25.17	1.96	1.704	O I	0.65
1.583	24.08	2.26	1.859	O I	0.71
1.667	24.82	3.76	2.007	O I	0.77
1.750	29.55	5.35	2.163	O I	0.83
1.833	30.88	7.03	2.328	O I	0.89
1.917	29.22	8.59	2.481	O I	0.95
2.000	28.92	9.98	2.618	O I	1.00

2.083	29.81	10.00	2.751	| O |	I |	|	|	|	1.05
2.167	37.11	10.00	2.913	| O |	| I |	|	|	|	1.11
2.250	46.51	10.00	3.132	| O |	| | I |	|	|	1.20
2.333	41.05	10.00	3.364	| O |	| I |	|	|	1.28
2.417	56.12	10.00	3.630	| O |	| |	I |	|	1.39
2.500	71.38	10.00	4.000	| O |	| |	| I |	1.53
2.583	81.04	10.00	4.456	| O |	| |	| | I	1.70
2.667	70.63	10.00	4.910	| O |	| |	| I |	1.87
2.750	37.82	10.00	5.214	| O |	| I |	|	|	1.99
2.833	19.65	10.00	5.343	| O I |	| |	|	|	2.04
2.917	16.40	10.00	5.399	| O I |	| |	|	|	2.06
3.000	9.98	10.00	5.421	| O |	| |	|	|	2.07
3.083	2.90	10.00	5.396	|I O |	| |	|	|	2.06
3.167	0.31	10.00	5.338	I O |	| |	|	|	2.04
3.250	0.00	10.00	5.270	I O |	| |	|	|	2.01
3.333	0.00	10.00	5.202	I O |	| |	|	|	1.99
3.417	0.00	10.00	5.133	I O |	| |	|	|	1.96
3.500	0.00	10.00	5.064	I O |	| |	|	|	1.93
3.583	0.00	10.00	4.995	I O |	| |	|	|	1.91
3.667	0.00	10.00	4.926	I O |	| |	|	|	1.88
3.750	0.00	10.00	4.857	I O |	| |	|	|	1.85
3.833	0.00	10.00	4.788	I O |	| |	|	|	1.83
3.917	0.00	10.00	4.719	I O |	| |	|	|	1.80
4.000	0.00	10.00	4.651	I O |	| |	|	|	1.78
4.083	0.00	10.00	4.582	I O |	| |	|	|	1.75
4.167	0.00	10.00	4.513	I O |	| |	|	|	1.72
4.250	0.00	10.00	4.444	I O |	| |	|	|	1.70
4.333	0.00	10.00	4.375	I O |	| |	|	|	1.67
4.417	0.00	10.00	4.306	I O |	| |	|	|	1.64
4.500	0.00	10.00	4.237	I O |	| |	|	|	1.62
4.583	0.00	10.00	4.168	I O |	| |	|	|	1.59
4.667	0.00	10.00	4.100	I O |	| |	|	|	1.56
4.750	0.00	10.00	4.031	I O |	| |	|	|	1.54
4.833	0.00	10.00	3.962	I O |	| |	|	|	1.51
4.917	0.00	10.00	3.893	I O |	| |	|	|	1.49
5.000	0.00	10.00	3.824	I O |	| |	|	|	1.46
5.083	0.00	10.00	3.755	I O |	| |	|	|	1.43
5.167	0.00	10.00	3.686	I O |	| |	|	|	1.41
5.250	0.00	10.00	3.618	I O |	| |	|	|	1.38
5.333	0.00	10.00	3.549	I O |	| |	|	|	1.35
5.417	0.00	10.00	3.480	I O |	| |	|	|	1.33
5.500	0.00	10.00	3.411	I O |	| |	|	|	1.30
5.583	0.00	10.00	3.342	I O |	| |	|	|	1.28
5.667	0.00	10.00	3.273	I O |	| |	|	|	1.25
5.750	0.00	10.00	3.204	I O |	| |	|	|	1.22
5.833	0.00	10.00	3.135	I O |	| |	|	|	1.20
5.917	0.00	10.00	3.067	I O |	| |	|	|	1.17
6.000	0.00	10.00	2.998	I O |	| |	|	|	1.14
6.083	0.00	10.00	2.929	I O |	| |	|	|	1.12
6.167	0.00	10.00	2.860	I O |	| |	|	|	1.09

6.250	0.00	10.00	2.791	I O				1.07
6.333	0.00	10.00	2.722	I O				1.04
6.417	0.00	10.00	2.653	I O				1.01
6.500	0.00	9.65	2.586	I O				0.99
6.583	0.00	9.00	2.521	I O				0.96
6.667	0.00	8.39	2.462	I O				0.94
6.750	0.00	7.82	2.406	I O				0.92
6.833	0.00	7.29	2.354	I O				0.90
6.917	0.00	6.80	2.305	I O				0.88
7.000	0.00	6.34	2.260	I O				0.86
7.083	0.00	5.91	2.218	I O				0.85
7.167	0.00	5.51	2.179	I O				0.83
7.250	0.00	5.13	2.142	I O				0.82
7.333	0.00	4.79	2.108	IO				0.81
7.417	0.00	4.46	2.076	IO				0.79
7.500	0.00	4.16	2.046	IO				0.78
7.583	0.00	3.88	2.019	IO				0.77
7.667	0.00	3.62	1.993	IO				0.76
7.750	0.00	3.37	1.969	IO				0.75
7.833	0.00	3.14	1.946	IO				0.74
7.917	0.00	2.93	1.925	IO				0.74
8.000	0.00	2.73	1.906	IO				0.73
8.083	0.00	2.55	1.888	IO				0.72
8.167	0.00	2.37	1.871	O				0.72
8.250	0.00	2.21	1.855	O				0.71
8.333	0.00	2.06	1.840	O				0.70
8.417	0.00	1.96	1.826	O				0.70
8.500	0.00	1.96	1.813	O				0.69
8.583	0.00	1.96	1.799	O				0.69
8.667	0.00	1.96	1.786	O				0.68
8.750	0.00	1.96	1.772	O				0.68
8.833	0.00	1.96	1.759	O				0.67
8.917	0.00	1.96	1.745	O				0.67
9.000	0.00	1.96	1.732	O				0.66
9.083	0.00	1.96	1.718	O				0.66
9.167	0.00	1.96	1.705	O				0.65
9.250	0.00	1.96	1.691	O				0.65
9.333	0.00	1.96	1.678	O				0.64
9.417	0.00	1.96	1.664	O				0.64
9.500	0.00	1.96	1.651	O				0.63
9.583	0.00	1.96	1.637	O				0.63
9.667	0.00	1.96	1.624	O				0.62
9.750	0.00	1.96	1.610	O				0.62
9.833	0.00	1.96	1.597	O				0.61
9.917	0.00	1.96	1.583	O				0.61
10.000	0.00	1.96	1.570	O				0.60
10.083	0.00	1.96	1.556	O				0.59
10.167	0.00	1.96	1.543	O				0.59
10.250	0.00	1.96	1.529	O				0.58
10.333	0.00	1.96	1.516	O				0.58

10.417	0.00	1.96	1.502	O				0.57
10.500	0.00	1.96	1.489	O				0.57
10.583	0.00	1.96	1.475	O				0.56
10.667	0.00	1.96	1.462	O				0.56
10.750	0.00	1.96	1.448	O				0.55
10.833	0.00	1.96	1.435	O				0.55
10.917	0.00	1.96	1.421	O				0.54
11.000	0.00	1.96	1.408	O				0.54
11.083	0.00	1.96	1.394	O				0.53
11.167	0.00	1.96	1.381	O				0.53
11.250	0.00	1.96	1.367	O				0.52
11.333	0.00	1.96	1.354	O				0.52
11.417	0.00	1.96	1.340	O				0.51
11.500	0.00	1.96	1.327	O				0.51
11.583	0.00	1.96	1.313	O				0.50
11.667	0.00	1.96	1.300	O				0.50
11.750	0.00	1.96	1.286	O				0.49
11.833	0.00	1.96	1.273	O				0.49
11.917	0.00	1.96	1.259	O				0.48
12.000	0.00	1.96	1.246	O				0.48
12.083	0.00	1.96	1.232	O				0.47
12.167	0.00	1.96	1.219	O				0.46
12.250	0.00	1.96	1.205	O				0.46
12.333	0.00	1.96	1.192	O				0.45
12.417	0.00	1.96	1.178	O				0.45
12.500	0.00	1.96	1.165	O				0.44
12.583	0.00	1.96	1.151	O				0.44
12.667	0.00	1.96	1.138	O				0.43
12.750	0.00	1.96	1.124	O				0.43
12.833	0.00	1.96	1.111	O				0.42
12.917	0.00	1.96	1.097	O				0.42
13.000	0.00	1.96	1.084	O				0.41
13.083	0.00	1.96	1.070	O				0.41
13.167	0.00	1.96	1.057	O				0.40
13.250	0.00	1.96	1.043	O				0.40
13.333	0.00	1.96	1.030	O				0.39
13.417	0.00	1.96	1.016	O				0.39
13.500	0.00	1.96	1.003	O				0.38
13.583	0.00	1.96	0.989	O				0.38
13.667	0.00	1.96	0.976	O				0.37
13.750	0.00	1.96	0.962	O				0.37
13.833	0.00	1.96	0.949	O				0.36
13.917	0.00	1.96	0.935	O				0.36
14.000	0.00	1.96	0.922	O				0.35
14.083	0.00	1.96	0.908	O				0.35
14.167	0.00	1.96	0.895	O				0.34
14.250	0.00	1.96	0.881	O				0.34
14.333	0.00	1.96	0.868	O				0.33
14.417	0.00	1.96	0.854	O				0.32
14.500	0.00	1.96	0.841	O				0.32

14.583	0.00	1.96	0.827	O	|	|	|	0.31
14.667	0.00	1.96	0.814	O	|	|	|	0.31
14.750	0.00	1.96	0.800	O	|	|	|	0.30
14.833	0.00	1.95	0.787	O	|	|	|	0.30
14.917	0.00	1.92	0.774	O	|	|	|	0.29
15.000	0.00	1.89	0.761	O	|	|	|	0.29
15.083	0.00	1.85	0.748	O	|	|	|	0.28
15.167	0.00	1.82	0.735	O	|	|	|	0.28
15.250	0.00	1.79	0.723	O	|	|	|	0.27
15.333	0.00	1.76	0.710	O	|	|	|	0.27
15.417	0.00	1.73	0.698	O	|	|	|	0.27
15.500	0.00	1.70	0.686	O	|	|	|	0.26
15.583	0.00	1.67	0.675	O	|	|	|	0.26
15.667	0.00	1.65	0.663	O	|	|	|	0.25
15.750	0.00	1.62	0.652	O	|	|	|	0.25
15.833	0.00	1.59	0.641	O	|	|	|	0.24
15.917	0.00	1.56	0.630	O	|	|	|	0.24
16.000	0.00	1.54	0.620	O	|	|	|	0.24
16.083	0.00	1.51	0.609	O	|	|	|	0.23
16.167	0.00	1.49	0.599	O	|	|	|	0.23
16.250	0.00	1.46	0.589	O	|	|	|	0.22
16.333	0.00	1.44	0.579	O	|	|	|	0.22
16.417	0.00	1.41	0.569	O	|	|	|	0.22
16.500	0.00	1.39	0.559	O	|	|	|	0.21
16.583	0.00	1.36	0.550	O	|	|	|	0.21
16.667	0.00	1.34	0.540	O	|	|	|	0.21
16.750	0.00	1.32	0.531	O	|	|	|	0.20
16.833	0.00	1.30	0.522	O	|	|	|	0.20
16.917	0.00	1.27	0.513	O	|	|	|	0.19
17.000	0.00	1.25	0.505	O	|	|	|	0.19
17.083	0.00	1.23	0.496	O	|	|	|	0.19
17.167	0.00	1.21	0.488	O	|	|	|	0.19
17.250	0.00	1.19	0.479	O	|	|	|	0.18
17.333	0.00	1.17	0.471	O	|	|	|	0.18
17.417	0.00	1.15	0.463	O	|	|	|	0.18
17.500	0.00	1.13	0.455	O	|	|	|	0.17
17.583	0.00	1.11	0.448	O	|	|	|	0.17
17.667	0.00	1.09	0.440	O	|	|	|	0.17
17.750	0.00	1.07	0.433	O	|	|	|	0.16
17.833	0.00	1.06	0.425	O	|	|	|	0.16
17.917	0.00	1.04	0.418	O	|	|	|	0.16
18.000	0.00	1.02	0.411	O	|	|	|	0.16
18.083	0.00	1.00	0.404	O	|	|	|	0.15
18.167	0.00	0.99	0.397	O	|	|	|	0.15
18.250	0.00	0.97	0.391	O	|	|	|	0.15
18.333	0.00	0.95	0.384	O	|	|	|	0.15
18.417	0.00	0.94	0.377	O	|	|	|	0.14
18.500	0.00	0.92	0.371	O	|	|	|	0.14
18.583	0.00	0.90	0.365	O	|	|	|	0.14
18.667	0.00	0.89	0.359	O	|	|	|	0.14

18.750	0.00	0.87	0.353	O	|	|	|	0.13
18.833	0.00	0.86	0.347	O	|	|	|	0.13
18.917	0.00	0.85	0.341	O	|	|	|	0.13
19.000	0.00	0.83	0.335	O	|	|	|	0.13
19.083	0.00	0.82	0.329	O	|	|	|	0.13
19.167	0.00	0.80	0.324	O	|	|	|	0.12
19.250	0.00	0.79	0.318	O	|	|	|	0.12
19.333	0.00	0.78	0.313	O	|	|	|	0.12
19.417	0.00	0.76	0.307	O	|	|	|	0.12
19.500	0.00	0.75	0.302	O	|	|	|	0.11
19.583	0.00	0.74	0.297	O	|	|	|	0.11
19.667	0.00	0.72	0.292	O	|	|	|	0.11
19.750	0.00	0.71	0.287	O	|	|	|	0.11
19.833	0.00	0.70	0.282	O	|	|	|	0.11
19.917	0.00	0.69	0.278	O	|	|	|	0.11
20.000	0.00	0.68	0.273	O	|	|	|	0.10
20.083	0.00	0.67	0.268	O	|	|	|	0.10
20.167	0.00	0.65	0.264	O	|	|	|	0.10
20.250	0.00	0.64	0.259	O	|	|	|	0.10
20.333	0.00	0.63	0.255	O	|	|	|	0.10
20.417	0.00	0.62	0.250	O	|	|	|	0.10
20.500	0.00	0.61	0.246	O	|	|	|	0.09
20.583	0.00	0.60	0.242	O	|	|	|	0.09
20.667	0.00	0.59	0.238	O	|	|	|	0.09
20.750	0.00	0.58	0.234	O	|	|	|	0.09
20.833	0.00	0.57	0.230	O	|	|	|	0.09
20.917	0.00	0.56	0.226	O	|	|	|	0.09
21.000	0.00	0.55	0.222	O	|	|	|	0.08
21.083	0.00	0.54	0.218	O	|	|	|	0.08
21.167	0.00	0.53	0.215	O	|	|	|	0.08
21.250	0.00	0.52	0.211	O	|	|	|	0.08
21.333	0.00	0.51	0.208	O	|	|	|	0.08
21.417	0.00	0.51	0.204	O	|	|	|	0.08
21.500	0.00	0.50	0.201	O	|	|	|	0.08
21.583	0.00	0.49	0.197	O	|	|	|	0.07
21.667	0.00	0.48	0.194	O	|	|	|	0.07
21.750	0.00	0.47	0.191	O	|	|	|	0.07
21.833	0.00	0.46	0.187	O	|	|	|	0.07
21.917	0.00	0.46	0.184	O	|	|	|	0.07
22.000	0.00	0.45	0.181	O	|	|	|	0.07
22.083	0.00	0.44	0.178	O	|	|	|	0.07
22.167	0.00	0.43	0.175	O	|	|	|	0.07
22.250	0.00	0.43	0.172	O	|	|	|	0.07
22.333	0.00	0.42	0.169	O	|	|	|	0.06
22.417	0.00	0.41	0.166	O	|	|	|	0.06
22.500	0.00	0.41	0.163	O	|	|	|	0.06
22.583	0.00	0.40	0.161	O	|	|	|	0.06
22.667	0.00	0.39	0.158	O	|	|	|	0.06
22.750	0.00	0.39	0.155	O	|	|	|	0.06
22.833	0.00	0.38	0.153	O	|	|	|	0.06

22.917	0.00	0.37	0.150	O	|	|	|	0.06
23.000	0.00	0.37	0.147	O	|	|	|	0.06
23.083	0.00	0.36	0.145	O	|	|	|	0.06
23.167	0.00	0.35	0.143	O	|	|	|	0.05
23.250	0.00	0.35	0.140	O	|	|	|	0.05
23.333	0.00	0.34	0.138	O	|	|	|	0.05
23.417	0.00	0.34	0.135	O	|	|	|	0.05
23.500	0.00	0.33	0.133	O	|	|	|	0.05
23.583	0.00	0.32	0.131	O	|	|	|	0.05
23.667	0.00	0.32	0.129	O	|	|	|	0.05
23.750	0.00	0.31	0.126	O	|	|	|	0.05
23.833	0.00	0.31	0.124	O	|	|	|	0.05
23.917	0.00	0.30	0.122	O	|	|	|	0.05
24.000	0.00	0.30	0.120	O	|	|	|	0.05
24.083	0.00	0.29	0.118	O	|	|	|	0.04
24.167	0.00	0.29	0.116	O	|	|	|	0.04
24.250	0.00	0.28	0.114	O	|	|	|	0.04
24.333	0.00	0.28	0.112	O	|	|	|	0.04
24.417	0.00	0.27	0.110	O	|	|	|	0.04
24.500	0.00	0.27	0.108	O	|	|	|	0.04
24.583	0.00	0.26	0.107	O	|	|	|	0.04
24.667	0.00	0.26	0.105	O	|	|	|	0.04
24.750	0.00	0.26	0.103	O	|	|	|	0.04
24.833	0.00	0.25	0.101	O	|	|	|	0.04
24.917	0.00	0.25	0.100	O	|	|	|	0.04
25.000	0.00	0.24	0.098	O	|	|	|	0.04
25.083	0.00	0.24	0.096	O	|	|	|	0.04
25.167	0.00	0.23	0.095	O	|	|	|	0.04
25.250	0.00	0.23	0.093	O	|	|	|	0.04
25.333	0.00	0.23	0.091	O	|	|	|	0.03
25.417	0.00	0.22	0.090	O	|	|	|	0.03
25.500	0.00	0.22	0.088	O	|	|	|	0.03
25.583	0.00	0.22	0.087	O	|	|	|	0.03
25.667	0.00	0.21	0.085	O	|	|	|	0.03
25.750	0.00	0.21	0.084	O	|	|	|	0.03
25.833	0.00	0.20	0.082	O	|	|	|	0.03
25.917	0.00	0.20	0.081	O	|	|	|	0.03
26.000	0.00	0.20	0.080	O	|	|	|	0.03
26.083	0.00	0.19	0.078	O	|	|	|	0.03
26.167	0.00	0.19	0.077	O	|	|	|	0.03
26.250	0.00	0.19	0.076	O	|	|	|	0.03
26.333	0.00	0.18	0.074	O	|	|	|	0.03
26.417	0.00	0.18	0.073	O	|	|	|	0.03
26.500	0.00	0.18	0.072	O	|	|	|	0.03
26.583	0.00	0.18	0.071	O	|	|	|	0.03
26.667	0.00	0.17	0.070	O	|	|	|	0.03
26.750	0.00	0.17	0.068	O	|	|	|	0.03
26.833	0.00	0.17	0.067	O	|	|	|	0.03
26.917	0.00	0.16	0.066	O	|	|	|	0.03
27.000	0.00	0.16	0.065	O	|	|	|	0.02

27.083	0.00	0.16	0.064	O				0.02
27.167	0.00	0.16	0.063	O				0.02
27.250	0.00	0.15	0.062	O				0.02
27.333	0.00	0.15	0.061	O				0.02
27.417	0.00	0.15	0.060	O				0.02
27.500	0.00	0.15	0.059	O				0.02
27.583	0.00	0.14	0.058	O				0.02
27.667	0.00	0.14	0.057	O				0.02
27.750	0.00	0.14	0.056	O				0.02
27.833	0.00	0.14	0.055	O				0.02
27.917	0.00	0.13	0.054	O				0.02
28.000	0.00	0.13	0.053	O				0.02
28.083	0.00	0.13	0.052	O				0.02
28.167	0.00	0.13	0.051	O				0.02
28.250	0.00	0.12	0.050	O				0.02
28.333	0.00	0.12	0.049	O				0.02
28.417	0.00	0.12	0.049	O				0.02
28.500	0.00	0.12	0.048	O				0.02
28.583	0.00	0.12	0.047	O				0.02
28.667	0.00	0.11	0.046	O				0.02
28.750	0.00	0.11	0.045	O				0.02
28.833	0.00	0.11	0.045	O				0.02
28.917	0.00	0.11	0.044	O				0.02
29.000	0.00	0.11	0.043	O				0.02
29.083	0.00	0.11	0.042	O				0.02
29.167	0.00	0.10	0.042	O				0.02
29.250	0.00	0.10	0.041	O				0.02
29.333	0.00	0.10	0.040	O				0.02
29.417	0.00	0.10	0.040	O				0.02
29.500	0.00	0.10	0.039	O				0.01
29.583	0.00	0.09	0.038	O				0.01
29.667	0.00	0.09	0.038	O				0.01
29.750	0.00	0.09	0.037	O				0.01
29.833	0.00	0.09	0.036	O				0.01
29.917	0.00	0.09	0.036	O				0.01
30.000	0.00	0.09	0.035	O				0.01
30.083	0.00	0.09	0.035	O				0.01
30.167	0.00	0.08	0.034	O				0.01
30.250	0.00	0.08	0.033	O				0.01
30.333	0.00	0.08	0.033	O				0.01
30.417	0.00	0.08	0.032	O				0.01
30.500	0.00	0.08	0.032	O				0.01
30.583	0.00	0.08	0.031	O				0.01
30.667	0.00	0.08	0.031	O				0.01
30.750	0.00	0.07	0.030	O				0.01
30.833	0.00	0.07	0.030	O				0.01
30.917	0.00	0.07	0.029	O				0.01
31.000	0.00	0.07	0.029	O				0.01
31.083	0.00	0.07	0.028	O				0.01
31.167	0.00	0.07	0.028	O				0.01

31.250	0.00	0.07	0.027	O	|	|	|	0.01
31.333	0.00	0.07	0.027	O	|	|	|	0.01
31.417	0.00	0.07	0.026	O	|	|	|	0.01
31.500	0.00	0.06	0.026	O	|	|	|	0.01
31.583	0.00	0.06	0.025	O	|	|	|	0.01
31.667	0.00	0.06	0.025	O	|	|	|	0.01
31.750	0.00	0.06	0.025	O	|	|	|	0.01
31.833	0.00	0.06	0.024	O	|	|	|	0.01
31.917	0.00	0.06	0.024	O	|	|	|	0.01
32.000	0.00	0.06	0.023	O	|	|	|	0.01
32.083	0.00	0.06	0.023	O	|	|	|	0.01
32.167	0.00	0.06	0.023	O	|	|	|	0.01
32.250	0.00	0.05	0.022	O	|	|	|	0.01
32.333	0.00	0.05	0.022	O	|	|	|	0.01
32.417	0.00	0.05	0.021	O	|	|	|	0.01
32.500	0.00	0.05	0.021	O	|	|	|	0.01
32.583	0.00	0.05	0.021	O	|	|	|	0.01
32.667	0.00	0.05	0.020	O	|	|	|	0.01
32.750	0.00	0.05	0.020	O	|	|	|	0.01
32.833	0.00	0.05	0.020	O	|	|	|	0.01
32.917	0.00	0.05	0.019	O	|	|	|	0.01
33.000	0.00	0.05	0.019	O	|	|	|	0.01
33.083	0.00	0.05	0.019	O	|	|	|	0.01
33.167	0.00	0.05	0.018	O	|	|	|	0.01
33.250	0.00	0.04	0.018	O	|	|	|	0.01
33.333	0.00	0.04	0.018	O	|	|	|	0.01
33.417	0.00	0.04	0.017	O	|	|	|	0.01
33.500	0.00	0.04	0.017	O	|	|	|	0.01
33.583	0.00	0.04	0.017	O	|	|	|	0.01
33.667	0.00	0.04	0.017	O	|	|	|	0.01
33.750	0.00	0.04	0.016	O	|	|	|	0.01
33.833	0.00	0.04	0.016	O	|	|	|	0.01
33.917	0.00	0.04	0.016	O	|	|	|	0.01
34.000	0.00	0.04	0.015	O	|	|	|	0.01
34.083	0.00	0.04	0.015	O	|	|	|	0.01
34.167	0.00	0.04	0.015	O	|	|	|	0.01
34.250	0.00	0.04	0.015	O	|	|	|	0.01
34.333	0.00	0.04	0.014	O	|	|	|	0.01
34.417	0.00	0.04	0.014	O	|	|	|	0.01
34.500	0.00	0.03	0.014	O	|	|	|	0.01
34.583	0.00	0.03	0.014	O	|	|	|	0.01
34.667	0.00	0.03	0.013	O	|	|	|	0.01
34.750	0.00	0.03	0.013	O	|	|	|	0.01
34.833	0.00	0.03	0.013	O	|	|	|	0.00
34.917	0.00	0.03	0.013	O	|	|	|	0.00
35.000	0.00	0.03	0.013	O	|	|	|	0.00
35.083	0.00	0.03	0.012	O	|	|	|	0.00
35.167	0.00	0.03	0.012	O	|	|	|	0.00
35.250	0.00	0.03	0.012	O	|	|	|	0.00
35.333	0.00	0.03	0.012	O	|	|	|	0.00

35.417	0.00	0.03	0.012	O				0.00
35.500	0.00	0.03	0.011	O				0.00
35.583	0.00	0.03	0.011	O				0.00
35.667	0.00	0.03	0.011	O				0.00
35.750	0.00	0.03	0.011	O				0.00
35.833	0.00	0.03	0.011	O				0.00
35.917	0.00	0.03	0.010	O				0.00
36.000	0.00	0.03	0.010	O				0.00
36.083	0.00	0.03	0.010	O				0.00
36.167	0.00	0.02	0.010	O				0.00
36.250	0.00	0.02	0.010	O				0.00
36.333	0.00	0.02	0.010	O				0.00
36.417	0.00	0.02	0.009	O				0.00
36.500	0.00	0.02	0.009	O				0.00
36.583	0.00	0.02	0.009	O				0.00
36.667	0.00	0.02	0.009	O				0.00
36.750	0.00	0.02	0.009	O				0.00
36.833	0.00	0.02	0.009	O				0.00
36.917	0.00	0.02	0.008	O				0.00
37.000	0.00	0.02	0.008	O				0.00
37.083	0.00	0.02	0.008	O				0.00
37.167	0.00	0.02	0.008	O				0.00
37.250	0.00	0.02	0.008	O				0.00
37.333	0.00	0.02	0.008	O				0.00
37.417	0.00	0.02	0.008	O				0.00
37.500	0.00	0.02	0.008	O				0.00
37.583	0.00	0.02	0.007	O				0.00
37.667	0.00	0.02	0.007	O				0.00
37.750	0.00	0.02	0.007	O				0.00
37.833	0.00	0.02	0.007	O				0.00
37.917	0.00	0.02	0.007	O				0.00
38.000	0.00	0.02	0.007	O				0.00
38.083	0.00	0.02	0.007	O				0.00
38.167	0.00	0.02	0.007	O				0.00
38.250	0.00	0.02	0.006	O				0.00
38.333	0.00	0.02	0.006	O				0.00
38.417	0.00	0.02	0.006	O				0.00
38.500	0.00	0.02	0.006	O				0.00
38.583	0.00	0.01	0.006	O				0.00
38.667	0.00	0.01	0.006	O				0.00
38.750	0.00	0.01	0.006	O				0.00
38.833	0.00	0.01	0.006	O				0.00
38.917	0.00	0.01	0.006	O				0.00
39.000	0.00	0.01	0.006	O				0.00
39.083	0.00	0.01	0.005	O				0.00
39.167	0.00	0.01	0.005	O				0.00
39.250	0.00	0.01	0.005	O				0.00
39.333	0.00	0.01	0.005	O				0.00
39.417	0.00	0.01	0.005	O				0.00
39.500	0.00	0.01	0.005	O				0.00

39.583	0.00	0.01	0.005	O	|	|	|	|	0.00
39.667	0.00	0.01	0.005	O	|	|	|	|	0.00
39.750	0.00	0.01	0.005	O	|	|	|	|	0.00
39.833	0.00	0.01	0.005	O	|	|	|	|	0.00
39.917	0.00	0.01	0.005	O	|	|	|	|	0.00
40.000	0.00	0.01	0.005	O	|	|	|	|	0.00
40.083	0.00	0.01	0.004	O	|	|	|	|	0.00
40.167	0.00	0.01	0.004	O	|	|	|	|	0.00
40.250	0.00	0.01	0.004	O	|	|	|	|	0.00
40.333	0.00	0.01	0.004	O	|	|	|	|	0.00
40.417	0.00	0.01	0.004	O	|	|	|	|	0.00
40.500	0.00	0.01	0.004	O	|	|	|	|	0.00
40.583	0.00	0.01	0.004	O	|	|	|	|	0.00
40.667	0.00	0.01	0.004	O	|	|	|	|	0.00
40.750	0.00	0.01	0.004	O	|	|	|	|	0.00
40.833	0.00	0.01	0.004	O	|	|	|	|	0.00
40.917	0.00	0.01	0.004	O	|	|	|	|	0.00
41.000	0.00	0.01	0.004	O	|	|	|	|	0.00
41.083	0.00	0.01	0.004	O	|	|	|	|	0.00
41.167	0.00	0.01	0.004	O	|	|	|	|	0.00
41.250	0.00	0.01	0.003	O	|	|	|	|	0.00
41.333	0.00	0.01	0.003	O	|	|	|	|	0.00
41.417	0.00	0.01	0.003	O	|	|	|	|	0.00
41.500	0.00	0.01	0.003	O	|	|	|	|	0.00
41.583	0.00	0.01	0.003	O	|	|	|	|	0.00
41.667	0.00	0.01	0.003	O	|	|	|	|	0.00
41.750	0.00	0.01	0.003	O	|	|	|	|	0.00
41.833	0.00	0.01	0.003	O	|	|	|	|	0.00
41.917	0.00	0.01	0.003	O	|	|	|	|	0.00
42.000	0.00	0.01	0.003	O	|	|	|	|	0.00
42.083	0.00	0.01	0.003	O	|	|	|	|	0.00
42.167	0.00	0.01	0.003	O	|	|	|	|	0.00
42.250	0.00	0.01	0.003	O	|	|	|	|	0.00
42.333	0.00	0.01	0.003	O	|	|	|	|	0.00
42.417	0.00	0.01	0.003	O	|	|	|	|	0.00
42.500	0.00	0.01	0.003	O	|	|	|	|	0.00
42.583	0.00	0.01	0.003	O	|	|	|	|	0.00
42.667	0.00	0.01	0.003	O	|	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

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

Number of intervals = 512
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.000 (CFS)
Total volume = 6.693 (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: 03/15/24

HILLWOOD-CAJALCO COMMERCE CENTER
100-YR 6-HR CHAMBER ROUTING
22-0192
2024-03-15 RSB

Program License Serial Number 6586

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

From study/file name: ONSITEPOST6100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 74
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 75.369 (CFS)
Total volume = 9.168 (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 100.000 to Point/Station 101.000
**** 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
0.300	0.790	1.960	0.783	0.797
0.700	1.830	1.960	1.823	1.837
1.000	2.620	10.000	2.586	2.654
2.000	5.240	10.000	5.206	5.274
3.000	7.860	10.000	7.826	7.894
4.000	10.480	10.000	10.446	10.514
5.000	13.090	10.000	13.056	13.124
6.000	15.710	10.000	15.676	15.744
7.000	18.330	10.000	18.296	18.364
8.000	20.950	10.000	20.916	20.984
9.000	23.570	10.000	23.536	23.604

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 18.8 37.68 56.53 75.37	Depth (Ft.)
0.083	3.57	0.03	0.012	OI | | | |	0.00
0.167	6.56	0.12	0.047	O I | | | |	0.02
0.250	7.38	0.23	0.093	O I | | | |	0.04
0.333	7.45	0.35	0.142	O I | | | |	0.05
0.417	7.45	0.47	0.191	O I | | | |	0.07
0.500	8.16	0.60	0.241	O I | | | |	0.09
0.583	8.62	0.73	0.294	O I | | | |	0.11
0.667	8.69	0.86	0.348	O I | | | |	0.13
0.750	8.69	1.00	0.402	O I | | | |	0.15
0.833	8.69	1.13	0.454	O I | | | |	0.17
0.917	8.69	1.26	0.506	O I | | | |	0.19
1.000	9.41	1.39	0.559	O I | | | |	0.21
1.083	9.86	1.53	0.615	O I | | | |	0.23
1.167	9.93	1.67	0.673	O I | | | |	0.26
1.250	9.93	1.81	0.729	O I | | | |	0.28
1.333	9.93	1.95	0.785	O I | | | |	0.30
1.417	9.93	1.96	0.839	O I | | | |	0.32
1.500	9.93	1.96	0.894	O I | | | |	0.34
1.583	9.93	1.96	0.949	O I | | | |	0.36
1.667	9.93	1.96	1.004	O I | | | |	0.38
1.750	9.93	1.96	1.059	O I | | | |	0.40
1.833	9.93	1.96	1.114	O I | | | |	0.42
1.917	9.93	1.96	1.169	O I | | | |	0.45
2.000	10.65	1.96	1.226	O I | | | |	0.47

2.083	10.39	1.96	1.285	O I	|	|	|	0.49
2.167	10.72	1.96	1.344	O I	|	|	|	0.51
2.250	11.10	1.96	1.406	O I	|	|	|	0.54
2.333	11.17	1.96	1.469	O I	|	|	|	0.56
2.417	11.17	1.96	1.533	O I	|	|	|	0.59
2.500	11.17	1.96	1.596	O I	|	|	|	0.61
2.583	11.17	1.96	1.660	O I	|	|	|	0.63
2.667	11.17	1.96	1.723	O I	|	|	|	0.66
2.750	11.89	1.96	1.789	O I	|	|	|	0.68
2.833	12.34	2.25	1.858	O I	|	|	|	0.71
2.917	12.42	2.93	1.925	|O I	|	|	|	0.74
3.000	12.42	3.57	1.989	|O I	|	|	|	0.76
3.083	12.42	4.17	2.047	|O I	|	|	|	0.78
3.167	13.13	4.76	2.105	| O I	|	|	|	0.80
3.250	13.59	5.34	2.162	| O I	|	|	|	0.83
3.333	13.66	5.90	2.217	| O I	|	|	|	0.85
3.417	14.42	6.45	2.271	| O I |	|	|	|	0.87
3.500	15.77	7.04	2.329	| O I |	|	|	|	0.89
3.583	17.27	7.68	2.392	| O I|	|	|	|	0.91
3.667	17.92	8.35	2.458	| O I|	|	|	|	0.94
3.750	18.88	9.03	2.525	| O I	|	|	|	0.96
3.833	19.43	9.72	2.592	| O I	|	|	|	0.99
3.917	20.39	10.00	2.661	| O I	|	|	|	1.02
4.000	20.95	10.00	2.735	| O I	|	|	|	1.04
4.083	21.91	10.00	2.813	| O |I	|	|	|	1.07
4.167	23.33	10.00	2.900	| O |I	|	|	|	1.11
4.250	24.85	10.00	2.997	| O | I	|	|	|	1.14
4.333	26.36	10.00	3.105	| O | I	|	|	|	1.19
4.417	27.87	10.00	3.223	| O | I	|	|	|	1.23
4.500	28.52	10.00	3.348	| O | I	|	|	|	1.28
4.583	29.48	10.00	3.479	| O | I	|	|	|	1.33
4.667	30.90	10.00	3.618	| O | I	|	|	|	1.38
4.750	32.42	10.00	3.767	| O | I	|	|	|	1.44
4.833	33.06	10.00	3.924	| O | I	|	|	|	1.50
4.917	34.02	10.00	4.086	| O | I	|	|	|	1.56
5.000	35.44	10.00	4.256	| O | I|	|	|	|	1.62
5.083	40.44	10.00	4.449	| O | |I	|	|	|	1.70
5.167	47.66	10.00	4.683	| O | | I	|	|	|	1.79
5.250	53.49	10.00	4.963	| O | | I	|	|	|	1.89
5.333	58.21	10.00	5.278	| O | | I	|	|	|	2.01
5.417	64.49	10.00	5.632	| O | | I	|	|	|	2.15
5.500	75.37	10.00	6.045	| O | | I	|	|	|	2.31
5.583	48.60	10.00	6.403	| O | | I	|	|	|	2.44
5.667	20.56	10.00	6.572	| O | I	|	|	|	2.51
5.750	9.87	10.00	6.608	| O |	|	|	|	2.52
5.833	6.95	10.00	6.597	| I O |	|	|	|	2.52
5.917	4.85	10.00	6.569	| I O |	|	|	|	2.51
6.000	3.16	10.00	6.527	|I O |	|	|	|	2.49
6.083	1.13	10.00	6.473	I O |	|	|	|	2.47
6.167	0.14	10.00	6.409	I O |	|	|	|	2.45

6.250	0.00	10.00	6.340	I	O	|	|	|	|	2.42
6.333	0.00	10.00	6.272	I	O	|	|	|	|	2.39
6.417	0.00	10.00	6.203	I	O	|	|	|	|	2.37
6.500	0.00	10.00	6.134	I	O	|	|	|	|	2.34
6.583	0.00	10.00	6.065	I	O	|	|	|	|	2.31
6.667	0.00	10.00	5.996	I	O	|	|	|	|	2.29
6.750	0.00	10.00	5.927	I	O	|	|	|	|	2.26
6.833	0.00	10.00	5.858	I	O	|	|	|	|	2.24
6.917	0.00	10.00	5.790	I	O	|	|	|	|	2.21
7.000	0.00	10.00	5.721	I	O	|	|	|	|	2.18
7.083	0.00	10.00	5.652	I	O	|	|	|	|	2.16
7.167	0.00	10.00	5.583	I	O	|	|	|	|	2.13
7.250	0.00	10.00	5.514	I	O	|	|	|	|	2.10
7.333	0.00	10.00	5.445	I	O	|	|	|	|	2.08
7.417	0.00	10.00	5.376	I	O	|	|	|	|	2.05
7.500	0.00	10.00	5.307	I	O	|	|	|	|	2.03
7.583	0.00	10.00	5.239	I	O	|	|	|	|	2.00
7.667	0.00	10.00	5.170	I	O	|	|	|	|	1.97
7.750	0.00	10.00	5.101	I	O	|	|	|	|	1.95
7.833	0.00	10.00	5.032	I	O	|	|	|	|	1.92
7.917	0.00	10.00	4.963	I	O	|	|	|	|	1.89
8.000	0.00	10.00	4.894	I	O	|	|	|	|	1.87
8.083	0.00	10.00	4.825	I	O	|	|	|	|	1.84
8.167	0.00	10.00	4.756	I	O	|	|	|	|	1.82
8.250	0.00	10.00	4.688	I	O	|	|	|	|	1.79
8.333	0.00	10.00	4.619	I	O	|	|	|	|	1.76
8.417	0.00	10.00	4.550	I	O	|	|	|	|	1.74
8.500	0.00	10.00	4.481	I	O	|	|	|	|	1.71
8.583	0.00	10.00	4.412	I	O	|	|	|	|	1.68
8.667	0.00	10.00	4.343	I	O	|	|	|	|	1.66
8.750	0.00	10.00	4.274	I	O	|	|	|	|	1.63
8.833	0.00	10.00	4.205	I	O	|	|	|	|	1.61
8.917	0.00	10.00	4.137	I	O	|	|	|	|	1.58
9.000	0.00	10.00	4.068	I	O	|	|	|	|	1.55
9.083	0.00	10.00	3.999	I	O	|	|	|	|	1.53
9.167	0.00	10.00	3.930	I	O	|	|	|	|	1.50
9.250	0.00	10.00	3.861	I	O	|	|	|	|	1.47
9.333	0.00	10.00	3.792	I	O	|	|	|	|	1.45
9.417	0.00	10.00	3.723	I	O	|	|	|	|	1.42
9.500	0.00	10.00	3.655	I	O	|	|	|	|	1.39
9.583	0.00	10.00	3.586	I	O	|	|	|	|	1.37
9.667	0.00	10.00	3.517	I	O	|	|	|	|	1.34
9.750	0.00	10.00	3.448	I	O	|	|	|	|	1.32
9.833	0.00	10.00	3.379	I	O	|	|	|	|	1.29
9.917	0.00	10.00	3.310	I	O	|	|	|	|	1.26
10.000	0.00	10.00	3.241	I	O	|	|	|	|	1.24
10.083	0.00	10.00	3.172	I	O	|	|	|	|	1.21
10.167	0.00	10.00	3.104	I	O	|	|	|	|	1.18
10.250	0.00	10.00	3.035	I	O	|	|	|	|	1.16
10.333	0.00	10.00	2.966	I	O	|	|	|	|	1.13

10.417	0.00	10.00	2.897	I O				1.11
10.500	0.00	10.00	2.828	I O				1.08
10.583	0.00	10.00	2.759	I O				1.05
10.667	0.00	10.00	2.690	I O				1.03
10.750	0.00	10.00	2.621	I O				1.00
10.833	0.00	9.34	2.555	I O				0.98
10.917	0.00	8.70	2.493	I O				0.95
11.000	0.00	8.12	2.435	I O				0.93
11.083	0.00	7.57	2.381	I O				0.91
11.167	0.00	7.05	2.330	I O				0.89
11.250	0.00	6.58	2.284	I O				0.87
11.333	0.00	6.13	2.240	I O				0.86
11.417	0.00	5.72	2.199	I O				0.84
11.500	0.00	5.33	2.161	I O				0.83
11.583	0.00	4.97	2.126	I O				0.81
11.667	0.00	4.63	2.092	IO				0.80
11.750	0.00	4.32	2.062	IO				0.79
11.833	0.00	4.03	2.033	IO				0.78
11.917	0.00	3.75	2.006	IO				0.77
12.000	0.00	3.50	1.981	IO				0.76
12.083	0.00	3.26	1.958	IO				0.75
12.167	0.00	3.04	1.936	IO				0.74
12.250	0.00	2.83	1.916	IO				0.73
12.333	0.00	2.64	1.897	IO				0.73
12.417	0.00	2.46	1.880	IO				0.72
12.500	0.00	2.30	1.863	O				0.71
12.583	0.00	2.14	1.848	O				0.71
12.667	0.00	2.00	1.834	O				0.70
12.750	0.00	1.96	1.820	O				0.70
12.833	0.00	1.96	1.806	O				0.69
12.917	0.00	1.96	1.793	O				0.69
13.000	0.00	1.96	1.779	O				0.68
13.083	0.00	1.96	1.766	O				0.68
13.167	0.00	1.96	1.752	O				0.67
13.250	0.00	1.96	1.739	O				0.66
13.333	0.00	1.96	1.725	O				0.66
13.417	0.00	1.96	1.712	O				0.65
13.500	0.00	1.96	1.698	O				0.65
13.583	0.00	1.96	1.685	O				0.64
13.667	0.00	1.96	1.671	O				0.64
13.750	0.00	1.96	1.658	O				0.63
13.833	0.00	1.96	1.644	O				0.63
13.917	0.00	1.96	1.631	O				0.62
14.000	0.00	1.96	1.617	O				0.62
14.083	0.00	1.96	1.604	O				0.61
14.167	0.00	1.96	1.590	O				0.61
14.250	0.00	1.96	1.577	O				0.60
14.333	0.00	1.96	1.563	O				0.60
14.417	0.00	1.96	1.550	O				0.59
14.500	0.00	1.96	1.536	O				0.59

14.583	0.00	1.96	1.523	O				0.58
14.667	0.00	1.96	1.509	O				0.58
14.750	0.00	1.96	1.496	O				0.57
14.833	0.00	1.96	1.482	O				0.57
14.917	0.00	1.96	1.469	O				0.56
15.000	0.00	1.96	1.455	O				0.56
15.083	0.00	1.96	1.442	O				0.55
15.167	0.00	1.96	1.428	O				0.55
15.250	0.00	1.96	1.415	O				0.54
15.333	0.00	1.96	1.402	O				0.54
15.417	0.00	1.96	1.388	O				0.53
15.500	0.00	1.96	1.375	O				0.52
15.583	0.00	1.96	1.361	O				0.52
15.667	0.00	1.96	1.348	O				0.51
15.750	0.00	1.96	1.334	O				0.51
15.833	0.00	1.96	1.321	O				0.50
15.917	0.00	1.96	1.307	O				0.50
16.000	0.00	1.96	1.294	O				0.49
16.083	0.00	1.96	1.280	O				0.49
16.167	0.00	1.96	1.267	O				0.48
16.250	0.00	1.96	1.253	O				0.48
16.333	0.00	1.96	1.240	O				0.47
16.417	0.00	1.96	1.226	O				0.47
16.500	0.00	1.96	1.213	O				0.46
16.583	0.00	1.96	1.199	O				0.46
16.667	0.00	1.96	1.186	O				0.45
16.750	0.00	1.96	1.172	O				0.45
16.833	0.00	1.96	1.159	O				0.44
16.917	0.00	1.96	1.145	O				0.44
17.000	0.00	1.96	1.132	O				0.43
17.083	0.00	1.96	1.118	O				0.43
17.167	0.00	1.96	1.105	O				0.42
17.250	0.00	1.96	1.091	O				0.42
17.333	0.00	1.96	1.078	O				0.41
17.417	0.00	1.96	1.064	O				0.41
17.500	0.00	1.96	1.051	O				0.40
17.583	0.00	1.96	1.037	O				0.40
17.667	0.00	1.96	1.024	O				0.39
17.750	0.00	1.96	1.010	O				0.38
17.833	0.00	1.96	0.997	O				0.38
17.917	0.00	1.96	0.983	O				0.37
18.000	0.00	1.96	0.970	O				0.37
18.083	0.00	1.96	0.956	O				0.36
18.167	0.00	1.96	0.943	O				0.36
18.250	0.00	1.96	0.929	O				0.35
18.333	0.00	1.96	0.916	O				0.35
18.417	0.00	1.96	0.902	O				0.34
18.500	0.00	1.96	0.889	O				0.34
18.583	0.00	1.96	0.875	O				0.33
18.667	0.00	1.96	0.862	O				0.33

18.750	0.00	1.96	0.848	O	|	|	|	|	0.32
18.833	0.00	1.96	0.835	O	|	|	|	|	0.32
18.917	0.00	1.96	0.821	O	|	|	|	|	0.31
19.000	0.00	1.96	0.808	O	|	|	|	|	0.31
19.083	0.00	1.96	0.794	O	|	|	|	|	0.30
19.167	0.00	1.94	0.781	O	|	|	|	|	0.30
19.250	0.00	1.90	0.767	O	|	|	|	|	0.29
19.333	0.00	1.87	0.754	O	|	|	|	|	0.29
19.417	0.00	1.84	0.742	O	|	|	|	|	0.28
19.500	0.00	1.81	0.729	O	|	|	|	|	0.28
19.583	0.00	1.78	0.717	O	|	|	|	|	0.27
19.667	0.00	1.75	0.705	O	|	|	|	|	0.27
19.750	0.00	1.72	0.693	O	|	|	|	|	0.26
19.833	0.00	1.69	0.681	O	|	|	|	|	0.26
19.917	0.00	1.66	0.669	O	|	|	|	|	0.25
20.000	0.00	1.63	0.658	O	|	|	|	|	0.25
20.083	0.00	1.60	0.647	O	|	|	|	|	0.25
20.167	0.00	1.58	0.636	O	|	|	|	|	0.24
20.250	0.00	1.55	0.625	O	|	|	|	|	0.24
20.333	0.00	1.52	0.615	O	|	|	|	|	0.23
20.417	0.00	1.50	0.604	O	|	|	|	|	0.23
20.500	0.00	1.47	0.594	O	|	|	|	|	0.23
20.583	0.00	1.45	0.584	O	|	|	|	|	0.22
20.667	0.00	1.42	0.574	O	|	|	|	|	0.22
20.750	0.00	1.40	0.564	O	|	|	|	|	0.21
20.833	0.00	1.38	0.555	O	|	|	|	|	0.21
20.917	0.00	1.35	0.545	O	|	|	|	|	0.21
21.000	0.00	1.33	0.536	O	|	|	|	|	0.20
21.083	0.00	1.31	0.527	O	|	|	|	|	0.20
21.167	0.00	1.29	0.518	O	|	|	|	|	0.20
21.250	0.00	1.26	0.509	O	|	|	|	|	0.19
21.333	0.00	1.24	0.501	O	|	|	|	|	0.19
21.417	0.00	1.22	0.492	O	|	|	|	|	0.19
21.500	0.00	1.20	0.484	O	|	|	|	|	0.18
21.583	0.00	1.18	0.476	O	|	|	|	|	0.18
21.667	0.00	1.16	0.468	O	|	|	|	|	0.18
21.750	0.00	1.14	0.460	O	|	|	|	|	0.17
21.833	0.00	1.12	0.452	O	|	|	|	|	0.17
21.917	0.00	1.10	0.444	O	|	|	|	|	0.17
22.000	0.00	1.08	0.437	O	|	|	|	|	0.17
22.083	0.00	1.07	0.429	O	|	|	|	|	0.16
22.167	0.00	1.05	0.422	O	|	|	|	|	0.16
22.250	0.00	1.03	0.415	O	|	|	|	|	0.16
22.333	0.00	1.01	0.408	O	|	|	|	|	0.15
22.417	0.00	0.99	0.401	O	|	|	|	|	0.15
22.500	0.00	0.98	0.394	O	|	|	|	|	0.15
22.583	0.00	0.96	0.387	O	|	|	|	|	0.15
22.667	0.00	0.94	0.381	O	|	|	|	|	0.14
22.750	0.00	0.93	0.374	O	|	|	|	|	0.14
22.833	0.00	0.91	0.368	O	|	|	|	|	0.14

22.917	0.00	0.90	0.362	O	|	|	|	0.14
23.000	0.00	0.88	0.356	O	|	|	|	0.14
23.083	0.00	0.87	0.350	O	|	|	|	0.13
23.167	0.00	0.85	0.344	O	|	|	|	0.13
23.250	0.00	0.84	0.338	O	|	|	|	0.13
23.333	0.00	0.82	0.332	O	|	|	|	0.13
23.417	0.00	0.81	0.327	O	|	|	|	0.12
23.500	0.00	0.80	0.321	O	|	|	|	0.12
23.583	0.00	0.78	0.316	O	|	|	|	0.12
23.667	0.00	0.77	0.310	O	|	|	|	0.12
23.750	0.00	0.76	0.305	O	|	|	|	0.12
23.833	0.00	0.74	0.300	O	|	|	|	0.11
23.917	0.00	0.73	0.295	O	|	|	|	0.11
24.000	0.00	0.72	0.290	O	|	|	|	0.11
24.083	0.00	0.71	0.285	O	|	|	|	0.11
24.167	0.00	0.69	0.280	O	|	|	|	0.11
24.250	0.00	0.68	0.275	O	|	|	|	0.10
24.333	0.00	0.67	0.271	O	|	|	|	0.10
24.417	0.00	0.66	0.266	O	|	|	|	0.10
24.500	0.00	0.65	0.262	O	|	|	|	0.10
24.583	0.00	0.64	0.257	O	|	|	|	0.10
24.667	0.00	0.63	0.253	O	|	|	|	0.10
24.750	0.00	0.62	0.248	O	|	|	|	0.09
24.833	0.00	0.61	0.244	O	|	|	|	0.09
24.917	0.00	0.60	0.240	O	|	|	|	0.09
25.000	0.00	0.59	0.236	O	|	|	|	0.09
25.083	0.00	0.58	0.232	O	|	|	|	0.09
25.167	0.00	0.57	0.228	O	|	|	|	0.09
25.250	0.00	0.56	0.224	O	|	|	|	0.09
25.333	0.00	0.55	0.220	O	|	|	|	0.08
25.417	0.00	0.54	0.217	O	|	|	|	0.08
25.500	0.00	0.53	0.213	O	|	|	|	0.08
25.583	0.00	0.52	0.209	O	|	|	|	0.08
25.667	0.00	0.51	0.206	O	|	|	|	0.08
25.750	0.00	0.50	0.202	O	|	|	|	0.08
25.833	0.00	0.49	0.199	O	|	|	|	0.08
25.917	0.00	0.49	0.196	O	|	|	|	0.07
26.000	0.00	0.48	0.192	O	|	|	|	0.07
26.083	0.00	0.47	0.189	O	|	|	|	0.07
26.167	0.00	0.46	0.186	O	|	|	|	0.07
26.250	0.00	0.45	0.183	O	|	|	|	0.07
26.333	0.00	0.45	0.180	O	|	|	|	0.07
26.417	0.00	0.44	0.177	O	|	|	|	0.07
26.500	0.00	0.43	0.174	O	|	|	|	0.07
26.583	0.00	0.42	0.171	O	|	|	|	0.06
26.667	0.00	0.42	0.168	O	|	|	|	0.06
26.750	0.00	0.41	0.165	O	|	|	|	0.06
26.833	0.00	0.40	0.162	O	|	|	|	0.06
26.917	0.00	0.40	0.159	O	|	|	|	0.06
27.000	0.00	0.39	0.157	O	|	|	|	0.06

27.083	0.00	0.38	0.154	O				0.06
27.167	0.00	0.38	0.151	O				0.06
27.250	0.00	0.37	0.149	O				0.06
27.333	0.00	0.36	0.146	O				0.06
27.417	0.00	0.36	0.144	O				0.05
27.500	0.00	0.35	0.141	O				0.05
27.583	0.00	0.34	0.139	O				0.05
27.667	0.00	0.34	0.137	O				0.05
27.750	0.00	0.33	0.134	O				0.05
27.833	0.00	0.33	0.132	O				0.05
27.917	0.00	0.32	0.130	O				0.05
28.000	0.00	0.32	0.128	O				0.05
28.083	0.00	0.31	0.125	O				0.05
28.167	0.00	0.31	0.123	O				0.05
28.250	0.00	0.30	0.121	O				0.05
28.333	0.00	0.30	0.119	O				0.05
28.417	0.00	0.29	0.117	O				0.04
28.500	0.00	0.29	0.115	O				0.04
28.583	0.00	0.28	0.113	O				0.04
28.667	0.00	0.28	0.111	O				0.04
28.750	0.00	0.27	0.109	O				0.04
28.833	0.00	0.27	0.108	O				0.04
28.917	0.00	0.26	0.106	O				0.04
29.000	0.00	0.26	0.104	O				0.04
29.083	0.00	0.25	0.102	O				0.04
29.167	0.00	0.25	0.100	O				0.04
29.250	0.00	0.24	0.099	O				0.04
29.333	0.00	0.24	0.097	O				0.04
29.417	0.00	0.24	0.095	O				0.04
29.500	0.00	0.23	0.094	O				0.04
29.583	0.00	0.23	0.092	O				0.04
29.667	0.00	0.22	0.091	O				0.03
29.750	0.00	0.22	0.089	O				0.03
29.833	0.00	0.22	0.088	O				0.03
29.917	0.00	0.21	0.086	O				0.03
30.000	0.00	0.21	0.085	O				0.03
30.083	0.00	0.21	0.083	O				0.03
30.167	0.00	0.20	0.082	O				0.03
30.250	0.00	0.20	0.080	O				0.03
30.333	0.00	0.20	0.079	O				0.03
30.417	0.00	0.19	0.078	O				0.03
30.500	0.00	0.19	0.076	O				0.03
30.583	0.00	0.19	0.075	O				0.03
30.667	0.00	0.18	0.074	O				0.03
30.750	0.00	0.18	0.073	O				0.03
30.833	0.00	0.18	0.071	O				0.03
30.917	0.00	0.17	0.070	O				0.03
31.000	0.00	0.17	0.069	O				0.03
31.083	0.00	0.17	0.068	O				0.03
31.167	0.00	0.17	0.067	O				0.03

31.250	0.00	0.16	0.066	O	|	|	|	0.02
31.333	0.00	0.16	0.064	O	|	|	|	0.02
31.417	0.00	0.16	0.063	O	|	|	|	0.02
31.500	0.00	0.15	0.062	O	|	|	|	0.02
31.583	0.00	0.15	0.061	O	|	|	|	0.02
31.667	0.00	0.15	0.060	O	|	|	|	0.02
31.750	0.00	0.15	0.059	O	|	|	|	0.02
31.833	0.00	0.14	0.058	O	|	|	|	0.02
31.917	0.00	0.14	0.057	O	|	|	|	0.02
32.000	0.00	0.14	0.056	O	|	|	|	0.02
32.083	0.00	0.14	0.055	O	|	|	|	0.02
32.167	0.00	0.13	0.054	O	|	|	|	0.02
32.250	0.00	0.13	0.053	O	|	|	|	0.02
32.333	0.00	0.13	0.052	O	|	|	|	0.02
32.417	0.00	0.13	0.052	O	|	|	|	0.02
32.500	0.00	0.13	0.051	O	|	|	|	0.02
32.583	0.00	0.12	0.050	O	|	|	|	0.02
32.667	0.00	0.12	0.049	O	|	|	|	0.02
32.750	0.00	0.12	0.048	O	|	|	|	0.02
32.833	0.00	0.12	0.047	O	|	|	|	0.02
32.917	0.00	0.12	0.047	O	|	|	|	0.02
33.000	0.00	0.11	0.046	O	|	|	|	0.02
33.083	0.00	0.11	0.045	O	|	|	|	0.02
33.167	0.00	0.11	0.044	O	|	|	|	0.02
33.250	0.00	0.11	0.043	O	|	|	|	0.02
33.333	0.00	0.11	0.043	O	|	|	|	0.02
33.417	0.00	0.10	0.042	O	|	|	|	0.02
33.500	0.00	0.10	0.041	O	|	|	|	0.02
33.583	0.00	0.10	0.041	O	|	|	|	0.02
33.667	0.00	0.10	0.040	O	|	|	|	0.02
33.750	0.00	0.10	0.039	O	|	|	|	0.01
33.833	0.00	0.10	0.039	O	|	|	|	0.01
33.917	0.00	0.09	0.038	O	|	|	|	0.01
34.000	0.00	0.09	0.037	O	|	|	|	0.01
34.083	0.00	0.09	0.037	O	|	|	|	0.01
34.167	0.00	0.09	0.036	O	|	|	|	0.01
34.250	0.00	0.09	0.035	O	|	|	|	0.01
34.333	0.00	0.09	0.035	O	|	|	|	0.01
34.417	0.00	0.08	0.034	O	|	|	|	0.01
34.500	0.00	0.08	0.034	O	|	|	|	0.01
34.583	0.00	0.08	0.033	O	|	|	|	0.01
34.667	0.00	0.08	0.033	O	|	|	|	0.01
34.750	0.00	0.08	0.032	O	|	|	|	0.01
34.833	0.00	0.08	0.031	O	|	|	|	0.01
34.917	0.00	0.08	0.031	O	|	|	|	0.01
35.000	0.00	0.08	0.030	O	|	|	|	0.01
35.083	0.00	0.07	0.030	O	|	|	|	0.01
35.167	0.00	0.07	0.029	O	|	|	|	0.01
35.250	0.00	0.07	0.029	O	|	|	|	0.01
35.333	0.00	0.07	0.028	O	|	|	|	0.01

35.417	0.00	0.07	0.028	O				0.01
35.500	0.00	0.07	0.027	O				0.01
35.583	0.00	0.07	0.027	O				0.01
35.667	0.00	0.07	0.026	O				0.01
35.750	0.00	0.06	0.026	O				0.01
35.833	0.00	0.06	0.026	O				0.01
35.917	0.00	0.06	0.025	O				0.01
36.000	0.00	0.06	0.025	O				0.01
36.083	0.00	0.06	0.024	O				0.01
36.167	0.00	0.06	0.024	O				0.01
36.250	0.00	0.06	0.024	O				0.01
36.333	0.00	0.06	0.023	O				0.01
36.417	0.00	0.06	0.023	O				0.01
36.500	0.00	0.06	0.022	O				0.01
36.583	0.00	0.05	0.022	O				0.01
36.667	0.00	0.05	0.022	O				0.01
36.750	0.00	0.05	0.021	O				0.01
36.833	0.00	0.05	0.021	O				0.01
36.917	0.00	0.05	0.021	O				0.01
37.000	0.00	0.05	0.020	O				0.01
37.083	0.00	0.05	0.020	O				0.01
37.167	0.00	0.05	0.019	O				0.01
37.250	0.00	0.05	0.019	O				0.01
37.333	0.00	0.05	0.019	O				0.01
37.417	0.00	0.05	0.019	O				0.01
37.500	0.00	0.05	0.018	O				0.01
37.583	0.00	0.04	0.018	O				0.01
37.667	0.00	0.04	0.018	O				0.01
37.750	0.00	0.04	0.017	O				0.01
37.833	0.00	0.04	0.017	O				0.01
37.917	0.00	0.04	0.017	O				0.01
38.000	0.00	0.04	0.016	O				0.01
38.083	0.00	0.04	0.016	O				0.01
38.167	0.00	0.04	0.016	O				0.01
38.250	0.00	0.04	0.016	O				0.01
38.333	0.00	0.04	0.015	O				0.01
38.417	0.00	0.04	0.015	O				0.01
38.500	0.00	0.04	0.015	O				0.01
38.583	0.00	0.04	0.015	O				0.01
38.667	0.00	0.04	0.014	O				0.01
38.750	0.00	0.03	0.014	O				0.01
38.833	0.00	0.03	0.014	O				0.01
38.917	0.00	0.03	0.014	O				0.01
39.000	0.00	0.03	0.013	O				0.01
39.083	0.00	0.03	0.013	O				0.00
39.167	0.00	0.03	0.013	O				0.00
39.250	0.00	0.03	0.013	O				0.00
39.333	0.00	0.03	0.012	O				0.00
39.417	0.00	0.03	0.012	O				0.00
39.500	0.00	0.03	0.012	O				0.00

39.583	0.00	0.03	0.012	O				0.00
39.667	0.00	0.03	0.012	O				0.00
39.750	0.00	0.03	0.011	O				0.00
39.833	0.00	0.03	0.011	O				0.00
39.917	0.00	0.03	0.011	O				0.00
40.000	0.00	0.03	0.011	O				0.00
40.083	0.00	0.03	0.011	O				0.00
40.167	0.00	0.03	0.011	O				0.00
40.250	0.00	0.03	0.010	O				0.00
40.333	0.00	0.03	0.010	O				0.00
40.417	0.00	0.02	0.010	O				0.00
40.500	0.00	0.02	0.010	O				0.00
40.583	0.00	0.02	0.010	O				0.00
40.667	0.00	0.02	0.010	O				0.00
40.750	0.00	0.02	0.009	O				0.00
40.833	0.00	0.02	0.009	O				0.00
40.917	0.00	0.02	0.009	O				0.00
41.000	0.00	0.02	0.009	O				0.00
41.083	0.00	0.02	0.009	O				0.00
41.167	0.00	0.02	0.009	O				0.00
41.250	0.00	0.02	0.008	O				0.00
41.333	0.00	0.02	0.008	O				0.00
41.417	0.00	0.02	0.008	O				0.00
41.500	0.00	0.02	0.008	O				0.00
41.583	0.00	0.02	0.008	O				0.00
41.667	0.00	0.02	0.008	O				0.00
41.750	0.00	0.02	0.008	O				0.00
41.833	0.00	0.02	0.007	O				0.00
41.917	0.00	0.02	0.007	O				0.00
42.000	0.00	0.02	0.007	O				0.00
42.083	0.00	0.02	0.007	O				0.00
42.167	0.00	0.02	0.007	O				0.00
42.250	0.00	0.02	0.007	O				0.00
42.333	0.00	0.02	0.007	O				0.00
42.417	0.00	0.02	0.007	O				0.00
42.500	0.00	0.02	0.007	O				0.00
42.583	0.00	0.02	0.006	O				0.00
42.667	0.00	0.02	0.006	O				0.00
42.750	0.00	0.02	0.006	O				0.00
42.833	0.00	0.02	0.006	O				0.00
42.917	0.00	0.01	0.006	O				0.00
43.000	0.00	0.01	0.006	O				0.00
43.083	0.00	0.01	0.006	O				0.00
43.167	0.00	0.01	0.006	O				0.00
43.250	0.00	0.01	0.006	O				0.00
43.333	0.00	0.01	0.006	O				0.00
43.417	0.00	0.01	0.005	O				0.00
43.500	0.00	0.01	0.005	O				0.00
43.583	0.00	0.01	0.005	O				0.00
43.667	0.00	0.01	0.005	O				0.00

43.750	0.00	0.01	0.005	O	|	|	|	0.00
43.833	0.00	0.01	0.005	O	|	|	|	0.00
43.917	0.00	0.01	0.005	O	|	|	|	0.00
44.000	0.00	0.01	0.005	O	|	|	|	0.00
44.083	0.00	0.01	0.005	O	|	|	|	0.00
44.167	0.00	0.01	0.005	O	|	|	|	0.00
44.250	0.00	0.01	0.005	O	|	|	|	0.00
44.333	0.00	0.01	0.004	O	|	|	|	0.00
44.417	0.00	0.01	0.004	O	|	|	|	0.00
44.500	0.00	0.01	0.004	O	|	|	|	0.00
44.583	0.00	0.01	0.004	O	|	|	|	0.00
44.667	0.00	0.01	0.004	O	|	|	|	0.00
44.750	0.00	0.01	0.004	O	|	|	|	0.00
44.833	0.00	0.01	0.004	O	|	|	|	0.00
44.917	0.00	0.01	0.004	O	|	|	|	0.00
45.000	0.00	0.01	0.004	O	|	|	|	0.00
45.083	0.00	0.01	0.004	O	|	|	|	0.00
45.167	0.00	0.01	0.004	O	|	|	|	0.00
45.250	0.00	0.01	0.004	O	|	|	|	0.00
45.333	0.00	0.01	0.004	O	|	|	|	0.00
45.417	0.00	0.01	0.004	O	|	|	|	0.00
45.500	0.00	0.01	0.004	O	|	|	|	0.00
45.583	0.00	0.01	0.003	O	|	|	|	0.00
45.667	0.00	0.01	0.003	O	|	|	|	0.00
45.750	0.00	0.01	0.003	O	|	|	|	0.00
45.833	0.00	0.01	0.003	O	|	|	|	0.00
45.917	0.00	0.01	0.003	O	|	|	|	0.00
46.000	0.00	0.01	0.003	O	|	|	|	0.00
46.083	0.00	0.01	0.003	O	|	|	|	0.00
46.167	0.00	0.01	0.003	O	|	|	|	0.00
46.250	0.00	0.01	0.003	O	|	|	|	0.00
46.333	0.00	0.01	0.003	O	|	|	|	0.00
46.417	0.00	0.01	0.003	O	|	|	|	0.00
46.500	0.00	0.01	0.003	O	|	|	|	0.00
46.583	0.00	0.01	0.003	O	|	|	|	0.00
46.667	0.00	0.01	0.003	O	|	|	|	0.00
46.750	0.00	0.01	0.003	O	|	|	|	0.00
46.833	0.00	0.01	0.003	O	|	|	|	0.00
46.917	0.00	0.01	0.003	O	|	|	|	0.00
47.000	0.00	0.01	0.003	O	|	|	|	0.00

Remaining water in basin = 0.00 (Ac.Ft)

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

Number of intervals = 564
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 10.000 (CFS)
Total volume = 9.166 (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: 03/15/24

HILLWOOD-CAJALCO COMMERCE CENTER
100-YR 24-HR CHAMBER ROUTING
22-0192
2024-03-15 RSB

Program License Serial Number 6586

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

From study/file name: ONSITEPOST24100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 290
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 30.357 (CFS)
Total volume = 17.143 (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 100.000 to Point/Station 101.000
**** 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
0.300	0.790	1.960	0.783	0.797
0.700	1.830	1.960	1.823	1.837
1.000	2.620	10.000	2.586	2.654
2.000	5.240	10.000	5.206	5.274
3.000	7.860	10.000	7.826	7.894
4.000	10.480	10.000	10.446	10.514
5.000	13.090	10.000	13.056	13.124
6.000	15.710	10.000	15.676	15.744
7.000	18.330	10.000	18.296	18.364
8.000	20.950	10.000	20.916	20.984
9.000	23.570	10.000	23.536	23.604

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 7.6 15.18 22.77 30.36	Depth (Ft.)
0.083	0.92	0.01	0.003	O	0.00
0.167	1.50	0.03	0.011	OI	0.00
0.250	1.60	0.05	0.022	OI	0.01
0.333	2.06	0.08	0.034	O I	0.01
0.417	2.35	0.12	0.048	O I	0.02
0.500	2.39	0.16	0.064	O I	0.02
0.583	2.39	0.20	0.079	O I	0.03
0.667	2.39	0.23	0.094	O I	0.04
0.750	2.39	0.27	0.109	O I	0.04
0.833	2.85	0.31	0.125	O I	0.05
0.917	3.15	0.36	0.143	O I	0.05
1.000	3.19	0.40	0.162	O I	0.06
1.083	2.73	0.45	0.180	O I	0.07
1.167	2.44	0.48	0.195	O I	0.07
1.250	2.39	0.52	0.208	O I	0.08
1.333	2.39	0.55	0.221	O I	0.08
1.417	2.39	0.58	0.233	O I	0.09
1.500	2.39	0.61	0.246	O I	0.09
1.583	2.39	0.64	0.258	O I	0.10
1.667	2.39	0.67	0.270	O I	0.10
1.750	2.39	0.70	0.282	O I	0.11
1.833	2.85	0.73	0.295	O I	0.11
1.917	3.15	0.77	0.310	O I	0.12
2.000	3.19	0.81	0.327	O I	0.12

2.083	3.19	0.85	0.343	O I |	|	|	|	0.13
2.167	3.19	0.89	0.359	O I |	|	|	|	0.14
2.250	3.19	0.93	0.375	O I |	|	|	|	0.14
2.333	3.19	0.97	0.390	|O I |	|	|	|	0.15
2.417	3.19	1.01	0.405	|O I |	|	|	|	0.15
2.500	3.19	1.04	0.420	|O I |	|	|	|	0.16
2.583	3.65	1.08	0.436	|O I |	|	|	|	0.17
2.667	3.94	1.13	0.455	|O I |	|	|	|	0.17
2.750	3.99	1.18	0.474	|O I |	|	|	|	0.18
2.833	3.99	1.22	0.494	|O I |	|	|	|	0.19
2.917	3.99	1.27	0.512	|O I |	|	|	|	0.19
3.000	3.99	1.32	0.531	|O I |	|	|	|	0.20
3.083	3.99	1.36	0.549	|O I |	|	|	|	0.21
3.167	3.99	1.41	0.567	|O I |	|	|	|	0.22
3.250	3.99	1.45	0.585	|O I |	|	|	|	0.22
3.333	3.99	1.49	0.602	|O I |	|	|	|	0.23
3.417	3.99	1.54	0.619	|O I |	|	|	|	0.24
3.500	3.99	1.58	0.636	|O I |	|	|	|	0.24
3.583	3.99	1.62	0.653	|O I |	|	|	|	0.25
3.667	3.99	1.66	0.669	|O I |	|	|	|	0.25
3.750	3.99	1.70	0.685	|O I |	|	|	|	0.26
3.833	4.45	1.74	0.702	|O I |	|	|	|	0.27
3.917	4.74	1.79	0.721	|O I |	|	|	|	0.27
4.000	4.79	1.84	0.742	|O I |	|	|	|	0.28
4.083	4.79	1.89	0.762	|O I |	|	|	|	0.29
4.167	4.79	1.94	0.782	| O I |	|	|	|	0.30
4.250	4.79	1.96	0.801	| O I |	|	|	|	0.30
4.333	5.25	1.96	0.822	| O I |	|	|	|	0.31
4.417	5.54	1.96	0.846	| O I |	|	|	|	0.32
4.500	5.59	1.96	0.871	| O I |	|	|	|	0.33
4.583	5.59	1.96	0.896	| O I |	|	|	|	0.34
4.667	5.59	1.96	0.921	| O I |	|	|	|	0.35
4.750	5.59	1.96	0.946	| O I |	|	|	|	0.36
4.833	6.05	1.96	0.972	| O I |	|	|	|	0.37
4.917	6.34	1.96	1.001	| O I |	|	|	|	0.38
5.000	6.39	1.96	1.032	| O I |	|	|	|	0.39
5.083	5.47	1.96	1.059	| O I |	|	|	|	0.40
5.167	4.88	1.96	1.081	| O I |	|	|	|	0.41
5.250	4.79	1.96	1.101	| O I |	|	|	|	0.42
5.333	5.25	1.96	1.122	| O I |	|	|	|	0.43
5.417	5.54	1.96	1.146	| O I |	|	|	|	0.44
5.500	5.59	1.96	1.171	| O I |	|	|	|	0.45
5.583	6.05	1.96	1.197	| O I |	|	|	|	0.46
5.667	6.34	1.96	1.226	| O I |	|	|	|	0.47
5.750	6.39	1.96	1.257	| O I |	|	|	|	0.48
5.833	6.39	1.96	1.287	| O I |	|	|	|	0.49
5.917	6.39	1.96	1.318	| O I |	|	|	|	0.50
6.000	6.39	1.96	1.348	| O I |	|	|	|	0.51
6.083	6.84	1.96	1.380	| O I|	|	|	|	0.53
6.167	7.14	1.96	1.415	| O I|	|	|	|	0.54

6.250	7.18	1.96	1.451	O I				0.55
6.333	7.18	1.96	1.487	O I				0.57
6.417	7.18	1.96	1.523	O I				0.58
6.500	7.18	1.96	1.559	O I				0.60
6.583	7.64	1.96	1.596	O I				0.61
6.667	7.94	1.96	1.636	O I				0.63
6.750	7.98	1.96	1.678	O I				0.64
6.833	7.98	1.96	1.719	O I				0.66
6.917	7.98	1.96	1.761	O I				0.67
7.000	7.98	1.96	1.802	O I				0.69
7.083	7.98	2.09	1.843	O I				0.70
7.167	7.98	2.49	1.882	O I				0.72
7.250	7.98	2.86	1.919	O I				0.73
7.333	8.44	3.23	1.954	O I				0.75
7.417	8.73	3.59	1.990	O I				0.76
7.500	8.78	3.94	2.024	O I				0.77
7.583	9.24	4.28	2.058	O I				0.79
7.667	9.53	4.63	2.092	O I				0.80
7.750	9.58	4.96	2.125	O I				0.81
7.833	10.04	5.29	2.157	O I				0.82
7.917	10.33	5.62	2.190	O I				0.84
8.000	10.38	5.94	2.221	O I				0.85
8.083	11.30	6.27	2.254	O I				0.86
8.167	11.88	6.63	2.289	O I				0.87
8.250	11.97	6.99	2.324	O I				0.89
8.333	11.97	7.33	2.358	O I				0.90
8.417	11.97	7.64	2.388	O I				0.91
8.500	11.97	7.94	2.417	O I				0.92
8.583	12.43	8.23	2.446	O I				0.93
8.667	12.73	8.52	2.475	O I				0.94
8.750	12.77	8.81	2.503	O I				0.96
8.833	13.23	9.09	2.531	O I				0.97
8.917	13.52	9.38	2.559	O I				0.98
9.000	13.57	9.66	2.587	O I				0.99
9.083	14.49	9.96	2.616	O I				1.00
9.167	15.07	10.00	2.649	O I				1.01
9.250	15.17	10.00	2.684	O I				1.02
9.333	15.63	10.00	2.721	O I				1.04
9.417	15.93	10.00	2.761	O I				1.05
9.500	15.99	10.00	2.802	O I				1.07
9.583	16.57	10.00	2.846	O I				1.09
9.667	16.94	10.00	2.892	O I				1.10
9.750	17.01	10.00	2.940	O I				1.12
9.833	17.59	10.00	2.990	O I				1.14
9.917	17.96	10.00	3.044	O I				1.16
10.000	18.04	10.00	3.099	O I				1.18
10.083	14.55	10.00	3.142	O I				1.20
10.167	12.33	10.00	3.166	O I				1.21
10.250	11.97	10.00	3.181	O I				1.21
10.333	11.97	10.00	3.195	O I				1.22

10.417	11.97	10.00	3.208	|	| O I	|	|	|	1.22
10.500	11.97	10.00	3.222	|	| O I	|	|	|	1.23
10.583	14.41	10.00	3.244	|	| O	I|	|	|	1.24
10.667	15.97	10.00	3.279	|	| O	I	|	|	1.25
10.750	16.24	10.00	3.322	|	| O	|I	|	|	1.27
10.833	16.25	10.00	3.365	|	| O	|I	|	|	1.28
10.917	16.27	10.00	3.408	|	| O	|I	|	|	1.30
11.000	16.28	10.00	3.451	|	| O	|I	|	|	1.32
11.083	15.74	10.00	3.492	|	| O	I	|	|	1.33
11.167	15.40	10.00	3.531	|	| O	I	|	|	1.35
11.250	15.36	10.00	3.568	|	| O	I	|	|	1.36
11.333	15.37	10.00	3.605	|	| O	I	|	|	1.38
11.417	15.39	10.00	3.642	|	| O	I	|	|	1.39
11.500	15.40	10.00	3.679	|	| O	I	|	|	1.40
11.583	14.35	10.00	3.712	|	| O	I|	|	|	1.42
11.667	13.68	10.00	3.740	|	| O	I |	|	|	1.43
11.750	13.57	10.00	3.765	|	| O	I |	|	|	1.44
11.833	14.10	10.00	3.791	|	| O	I |	|	|	1.45
11.917	14.45	10.00	3.821	|	| O	I|	|	|	1.46
12.000	14.52	10.00	3.852	|	| O	I|	|	|	1.47
12.083	18.45	10.00	3.896	|	| O	| I	|	|	1.49
12.167	20.97	10.00	3.963	|	| O	| I	|	|	1.51
12.250	21.38	10.00	4.040	|	| O	| I	|	|	1.54
12.333	21.95	10.00	4.121	|	| O	| I|	|	|	1.57
12.417	22.33	10.00	4.204	|	| O	| I|	|	|	1.60
12.500	22.40	10.00	4.289	|	| O	| I|	|	|	1.64
12.583	23.53	10.00	4.379	|	| O	| I	|	|	1.67
12.667	24.26	10.00	4.474	|	| O	| |I	|	|	1.71
12.750	24.39	10.00	4.573	|	| O	| |I	|	|	1.75
12.833	24.96	10.00	4.674	|	| O	| | I	|	|	1.78
12.917	25.33	10.00	4.778	|	| O	| | I	|	|	1.82
13.000	25.40	10.00	4.884	|	| O	| | I	|	|	1.86
13.083	28.22	10.00	5.000	|	| O	| |	I |	|	1.91
13.167	30.02	10.00	5.132	|	| O	| |	I|	|	1.96
13.250	30.31	10.00	5.271	|	| O	| |	I|	|	2.01
13.333	30.33	10.00	5.410	|	| O	| |	I|	|	2.07
13.417	30.34	10.00	5.551	|	| O	| |	I|	|	2.12
13.500	30.36	10.00	5.691	|	| O	| |	I	|	2.17
13.583	24.21	10.00	5.810	|	| O	| |I	|	|	2.22
13.667	20.30	10.00	5.894	|	| O	| I	|	|	2.25
13.750	19.69	10.00	5.963	|	| O	| I	|	|	2.28
13.833	19.70	10.00	6.030	|	| O	| I	|	|	2.30
13.917	19.72	10.00	6.097	|	| O	| I	|	|	2.33
14.000	19.73	10.00	6.164	|	| O	| I	|	|	2.35
14.083	21.98	10.00	6.238	|	| O	| I|	|	|	2.38
14.167	23.43	10.00	6.326	|	| O	| I	|	|	2.41
14.250	23.67	10.00	6.419	|	| O	| I	|	|	2.45
14.333	23.12	10.00	6.511	|	| O	| I	|	|	2.49
14.417	22.78	10.00	6.601	|	| O	| I	|	|	2.52
14.500	22.73	10.00	6.688	|	| O	| I|	|	|	2.55

14.583	22.75	10.00	6.776	|	| O	|	I|	|	2.59
14.667	22.76	10.00	6.864	|	| O	|	I|	|	2.62
14.750	22.77	10.00	6.952	|	| O	|	I	|	2.65
14.833	22.23	10.00	7.038	|	| O	|	I|	|	2.69
14.917	21.88	10.00	7.121	|	| O	|	I|	|	2.72
15.000	21.84	10.00	7.203	|	| O	|	I|	|	2.75
15.083	21.29	10.00	7.282	|	| O	|	I |	|	2.78
15.167	20.95	10.00	7.359	|	| O	|	I |	|	2.81
15.250	20.90	10.00	7.434	|	| O	|	I |	|	2.84
15.333	20.36	10.00	7.507	|	| O	|	I |	|	2.87
15.417	20.01	10.00	7.577	|	| O	|	I |	|	2.89
15.500	19.97	10.00	7.646	|	| O	|	I |	|	2.92
15.583	17.74	10.00	7.707	|	| O	| I	|	|	2.94
15.667	16.32	10.00	7.756	|	| O	|I	|	|	2.96
15.750	16.11	10.00	7.798	|	| O	I	|	|	2.98
15.833	16.12	10.00	7.841	|	| O	I	|	|	2.99
15.917	16.13	10.00	7.883	|	| O	|I	|	|	3.01
16.000	16.15	10.00	7.925	|	| O	|I	|	|	3.02
16.083	8.70	10.00	7.942	|	|IO	|	|	|	3.03
16.167	3.95	10.00	7.916	| I	| O	|	|	|	3.02
16.250	3.19	10.00	7.872	| I	| O	|	|	|	3.00
16.333	3.19	10.00	7.825	| I	| O	|	|	|	2.99
16.417	3.19	10.00	7.778	| I	| O	|	|	|	2.97
16.500	3.19	10.00	7.732	| I	| O	|	|	|	2.95
16.583	2.73	10.00	7.683	| I	| O	|	|	|	2.93
16.667	2.44	10.00	7.632	| I	| O	|	|	|	2.91
16.750	2.39	10.00	7.580	| I	| O	|	|	|	2.89
16.833	2.39	10.00	7.527	| I	| O	|	|	|	2.87
16.917	2.39	10.00	7.475	| I	| O	|	|	|	2.85
17.000	2.39	10.00	7.423	| I	| O	|	|	|	2.83
17.083	3.31	10.00	7.373	| I	| O	|	|	|	2.81
17.167	3.90	10.00	7.329	| I	| O	|	|	|	2.80
17.250	3.99	10.00	7.288	| I	| O	|	|	|	2.78
17.333	3.99	10.00	7.246	| I	| O	|	|	|	2.77
17.417	3.99	10.00	7.205	| I	| O	|	|	|	2.75
17.500	3.99	10.00	7.164	| I	| O	|	|	|	2.73
17.583	3.99	10.00	7.122	| I	| O	|	|	|	2.72
17.667	3.99	10.00	7.081	| I	| O	|	|	|	2.70
17.750	3.99	10.00	7.039	| I	| O	|	|	|	2.69
17.833	3.53	10.00	6.996	| I	| O	|	|	|	2.67
17.917	3.24	10.00	6.951	| I	| O	|	|	|	2.65
18.000	3.19	10.00	6.904	| I	| O	|	|	|	2.64
18.083	3.19	10.00	6.857	| I	| O	|	|	|	2.62
18.167	3.19	10.00	6.810	| I	| O	|	|	|	2.60
18.250	3.19	10.00	6.764	| I	| O	|	|	|	2.58
18.333	3.19	10.00	6.717	| I	| O	|	|	|	2.56
18.417	3.19	10.00	6.670	| I	| O	|	|	|	2.55
18.500	3.19	10.00	6.623	| I	| O	|	|	|	2.53
18.583	2.73	10.00	6.574	| I	| O	|	|	|	2.51
18.667	2.44	10.00	6.523	| I	| O	|	|	|	2.49

18.750	2.39	10.00	6.471	| I	| O	|	|	2.47
18.833	1.94	10.00	6.417	| I	| O	|	|	2.45
18.917	1.64	10.00	6.361	|I	| O	|	|	2.43
19.000	1.60	10.00	6.303	|I	| O	|	|	2.41
19.083	2.06	10.00	6.247	| I	| O	|	|	2.38
19.167	2.35	10.00	6.193	| I	| O	|	|	2.36
19.250	2.39	10.00	6.140	| I	| O	|	|	2.34
19.333	2.85	10.00	6.090	| I	| O	|	|	2.32
19.417	3.15	10.00	6.041	| I	| O	|	|	2.31
19.500	3.19	10.00	5.994	| I	| O	|	|	2.29
19.583	2.73	10.00	5.946	| I	| O	|	|	2.27
19.667	2.44	10.00	5.895	| I	| O	|	|	2.25
19.750	2.39	10.00	5.843	| I	| O	|	|	2.23
19.833	1.94	10.00	5.789	| I	| O	|	|	2.21
19.917	1.64	10.00	5.732	|I	| O	|	|	2.19
20.000	1.60	10.00	5.674	|I	| O	|	|	2.17
20.083	2.06	10.00	5.618	| I	| O	|	|	2.14
20.167	2.35	10.00	5.564	| I	| O	|	|	2.12
20.250	2.39	10.00	5.512	| I	| O	|	|	2.10
20.333	2.39	10.00	5.459	| I	| O	|	|	2.08
20.417	2.39	10.00	5.407	| I	| O	|	|	2.06
20.500	2.39	10.00	5.355	| I	| O	|	|	2.04
20.583	2.39	10.00	5.302	| I	| O	|	|	2.02
20.667	2.39	10.00	5.250	| I	| O	|	|	2.00
20.750	2.39	10.00	5.198	| I	| O	|	|	1.98
20.833	1.94	10.00	5.144	| I	| O	|	|	1.96
20.917	1.64	10.00	5.087	|I	| O	|	|	1.94
21.000	1.60	10.00	5.029	|I	| O	|	|	1.92
21.083	2.06	10.00	4.973	| I	| O	|	|	1.90
21.167	2.35	10.00	4.919	| I	| O	|	|	1.88
21.250	2.39	10.00	4.867	| I	| O	|	|	1.86
21.333	1.94	10.00	4.813	| I	| O	|	|	1.84
21.417	1.64	10.00	4.756	|I	| O	|	|	1.82
21.500	1.60	10.00	4.699	|I	| O	|	|	1.79
21.583	2.06	10.00	4.642	| I	| O	|	|	1.77
21.667	2.35	10.00	4.589	| I	| O	|	|	1.75
21.750	2.39	10.00	4.536	| I	| O	|	|	1.73
21.833	1.94	10.00	4.482	| I	| O	|	|	1.71
21.917	1.64	10.00	4.426	|I	| O	|	|	1.69
22.000	1.60	10.00	4.368	|I	| O	|	|	1.67
22.083	2.06	10.00	4.312	| I	| O	|	|	1.65
22.167	2.35	10.00	4.258	| I	| O	|	|	1.63
22.250	2.39	10.00	4.205	| I	| O	|	|	1.61
22.333	1.94	10.00	4.151	| I	| O	|	|	1.58
22.417	1.64	10.00	4.095	|I	| O	|	|	1.56
22.500	1.60	10.00	4.037	|I	| O	|	|	1.54
22.583	1.60	10.00	3.979	|I	| O	|	|	1.52
22.667	1.60	10.00	3.921	|I	| O	|	|	1.50
22.750	1.60	10.00	3.863	|I	| O	|	|	1.47
22.833	1.60	10.00	3.806	|I	| O	|	|	1.45

22.917	1.60	10.00	3.748	|I	O	|	|	1.43
23.000	1.60	10.00	3.690	|I	O	|	|	1.41
23.083	1.60	10.00	3.632	|I	O	|	|	1.39
23.167	1.60	10.00	3.574	|I	O	|	|	1.36
23.250	1.60	10.00	3.516	|I	O	|	|	1.34
23.333	1.60	10.00	3.458	|I	O	|	|	1.32
23.417	1.60	10.00	3.400	|I	O	|	|	1.30
23.500	1.60	10.00	3.343	|I	O	|	|	1.28
23.583	1.60	10.00	3.285	|I	O	|	|	1.25
23.667	1.60	10.00	3.227	|I	O	|	|	1.23
23.750	1.60	10.00	3.169	|I	O	|	|	1.21
23.833	1.60	10.00	3.111	|I	O	|	|	1.19
23.917	1.60	10.00	3.053	|I	O	|	|	1.17
24.000	1.60	10.00	2.995	|I	O	|	|	1.14
24.083	0.68	10.00	2.934	I	O	|	|	1.12
24.167	0.09	10.00	2.868	I	O	|	|	1.09
24.250	0.00	10.00	2.800	I	O	|	|	1.07
24.333	0.00	10.00	2.731	I	O	|	|	1.04
24.417	0.00	10.00	2.662	I	O	|	|	1.02
24.500	0.00	9.73	2.594	I	O	|	|	0.99
24.583	0.00	9.07	2.529	I	|O	|	|	0.97
24.667	0.00	8.46	2.469	I	O	|	|	0.94
24.750	0.00	7.89	2.412	I	O	|	|	0.92
24.833	0.00	7.35	2.360	I	O|	|	|	0.90
24.917	0.00	6.86	2.311	I	O|	|	|	0.88
25.000	0.00	6.39	2.265	I	O |	|	|	0.87
25.083	0.00	5.96	2.223	I	O |	|	|	0.85
25.167	0.00	5.55	2.183	I	O |	|	|	0.83
25.250	0.00	5.18	2.146	I	O |	|	|	0.82
25.333	0.00	4.83	2.112	I	O |	|	|	0.81
25.417	0.00	4.50	2.080	I	O |	|	|	0.79
25.500	0.00	4.20	2.050	I	O |	|	|	0.78
25.583	0.00	3.91	2.022	I	O |	|	|	0.77
25.667	0.00	3.65	1.996	I	O |	|	|	0.76
25.750	0.00	3.40	1.972	I	O |	|	|	0.75
25.833	0.00	3.17	1.949	I	O |	|	|	0.75
25.917	0.00	2.96	1.928	I	O |	|	|	0.74
26.000	0.00	2.76	1.908	I	O |	|	|	0.73
26.083	0.00	2.57	1.890	I	O |	|	|	0.72
26.167	0.00	2.39	1.873	I	O |	|	|	0.72
26.250	0.00	2.23	1.857	I	O |	|	|	0.71
26.333	0.00	2.08	1.842	I	O |	|	|	0.70
26.417	0.00	1.96	1.828	I	O |	|	|	0.70
26.500	0.00	1.96	1.815	I	O |	|	|	0.69
26.583	0.00	1.96	1.801	I	O |	|	|	0.69
26.667	0.00	1.96	1.788	I	O |	|	|	0.68
26.750	0.00	1.96	1.774	I	O |	|	|	0.68
26.833	0.00	1.96	1.761	I	O |	|	|	0.67
26.917	0.00	1.96	1.747	I	O |	|	|	0.67
27.000	0.00	1.96	1.734	I	O |	|	|	0.66

27.083	0.00	1.96	1.720	I O				0.66
27.167	0.00	1.96	1.707	I O				0.65
27.250	0.00	1.96	1.693	I O				0.65
27.333	0.00	1.96	1.680	I O				0.64
27.417	0.00	1.96	1.666	I O				0.64
27.500	0.00	1.96	1.653	I O				0.63
27.583	0.00	1.96	1.639	I O				0.63
27.667	0.00	1.96	1.626	I O				0.62
27.750	0.00	1.96	1.612	I O				0.62
27.833	0.00	1.96	1.599	I O				0.61
27.917	0.00	1.96	1.585	I O				0.61
28.000	0.00	1.96	1.572	I O				0.60
28.083	0.00	1.96	1.558	I O				0.60
28.167	0.00	1.96	1.545	I O				0.59
28.250	0.00	1.96	1.531	I O				0.59
28.333	0.00	1.96	1.518	I O				0.58
28.417	0.00	1.96	1.504	I O				0.57
28.500	0.00	1.96	1.491	I O				0.57
28.583	0.00	1.96	1.477	I O				0.56
28.667	0.00	1.96	1.464	I O				0.56
28.750	0.00	1.96	1.450	I O				0.55
28.833	0.00	1.96	1.437	I O				0.55
28.917	0.00	1.96	1.423	I O				0.54
29.000	0.00	1.96	1.410	I O				0.54
29.083	0.00	1.96	1.396	I O				0.53
29.167	0.00	1.96	1.383	I O				0.53
29.250	0.00	1.96	1.369	I O				0.52
29.333	0.00	1.96	1.356	I O				0.52
29.417	0.00	1.96	1.342	I O				0.51
29.500	0.00	1.96	1.329	I O				0.51
29.583	0.00	1.96	1.315	I O				0.50
29.667	0.00	1.96	1.302	I O				0.50
29.750	0.00	1.96	1.288	I O				0.49
29.833	0.00	1.96	1.275	I O				0.49
29.917	0.00	1.96	1.261	I O				0.48
30.000	0.00	1.96	1.248	I O				0.48
30.083	0.00	1.96	1.234	I O				0.47
30.167	0.00	1.96	1.221	I O				0.47
30.250	0.00	1.96	1.207	I O				0.46
30.333	0.00	1.96	1.194	I O				0.46
30.417	0.00	1.96	1.180	I O				0.45
30.500	0.00	1.96	1.167	I O				0.44
30.583	0.00	1.96	1.153	I O				0.44
30.667	0.00	1.96	1.140	I O				0.43
30.750	0.00	1.96	1.126	I O				0.43
30.833	0.00	1.96	1.113	I O				0.42
30.917	0.00	1.96	1.099	I O				0.42
31.000	0.00	1.96	1.086	I O				0.41
31.083	0.00	1.96	1.072	I O				0.41
31.167	0.00	1.96	1.059	I O				0.40

31.250	0.00	1.96	1.045	I O				0.40
31.333	0.00	1.96	1.032	I O				0.39
31.417	0.00	1.96	1.018	I O				0.39
31.500	0.00	1.96	1.005	I O				0.38
31.583	0.00	1.96	0.991	I O				0.38
31.667	0.00	1.96	0.978	I O				0.37
31.750	0.00	1.96	0.964	I O				0.37
31.833	0.00	1.96	0.951	I O				0.36
31.917	0.00	1.96	0.937	I O				0.36
32.000	0.00	1.96	0.924	I O				0.35
32.083	0.00	1.96	0.910	I O				0.35
32.167	0.00	1.96	0.897	I O				0.34
32.250	0.00	1.96	0.883	I O				0.34
32.333	0.00	1.96	0.870	I O				0.33
32.417	0.00	1.96	0.856	I O				0.33
32.500	0.00	1.96	0.843	I O				0.32
32.583	0.00	1.96	0.829	I O				0.32
32.667	0.00	1.96	0.816	I O				0.31
32.750	0.00	1.96	0.802	I O				0.30
32.833	0.00	1.96	0.789	I O				0.30
32.917	0.00	1.92	0.775	I O				0.29
33.000	0.00	1.89	0.762	IO				0.29
33.083	0.00	1.86	0.749	IO				0.28
33.167	0.00	1.83	0.737	IO				0.28
33.250	0.00	1.80	0.724	IO				0.27
33.333	0.00	1.77	0.712	IO				0.27
33.417	0.00	1.74	0.700	IO				0.27
33.500	0.00	1.71	0.688	IO				0.26
33.583	0.00	1.68	0.676	IO				0.26
33.667	0.00	1.65	0.665	IO				0.25
33.750	0.00	1.62	0.653	IO				0.25
33.833	0.00	1.59	0.642	IO				0.24
33.917	0.00	1.57	0.632	IO				0.24
34.000	0.00	1.54	0.621	IO				0.24
34.083	0.00	1.51	0.610	IO				0.23
34.167	0.00	1.49	0.600	IO				0.23
34.250	0.00	1.46	0.590	IO				0.22
34.333	0.00	1.44	0.580	IO				0.22
34.417	0.00	1.41	0.570	IO				0.22
34.500	0.00	1.39	0.560	IO				0.21
34.583	0.00	1.37	0.551	IO				0.21
34.667	0.00	1.34	0.542	IO				0.21
34.750	0.00	1.32	0.532	IO				0.20
34.833	0.00	1.30	0.523	IO				0.20
34.917	0.00	1.28	0.514	IO				0.20
35.000	0.00	1.25	0.506	IO				0.19
35.083	0.00	1.23	0.497	IO				0.19
35.167	0.00	1.21	0.489	IO				0.19
35.250	0.00	1.19	0.480	IO				0.18
35.333	0.00	1.17	0.472	IO				0.18

35.417	0.00	1.15	0.464	IO				0.18
35.500	0.00	1.13	0.456	IO				0.17
35.583	0.00	1.11	0.449	IO				0.17
35.667	0.00	1.09	0.441	IO				0.17
35.750	0.00	1.08	0.434	IO				0.16
35.833	0.00	1.06	0.426	IO				0.16
35.917	0.00	1.04	0.419	IO				0.16
36.000	0.00	1.02	0.412	IO				0.16
36.083	0.00	1.00	0.405	IO				0.15
36.167	0.00	0.99	0.398	IO				0.15
36.250	0.00	0.97	0.391	IO				0.15
36.333	0.00	0.95	0.385	IO				0.15
36.417	0.00	0.94	0.378	O				0.14
36.500	0.00	0.92	0.372	O				0.14
36.583	0.00	0.91	0.366	O				0.14
36.667	0.00	0.89	0.359	O				0.14
36.750	0.00	0.88	0.353	O				0.13
36.833	0.00	0.86	0.347	O				0.13
36.917	0.00	0.85	0.341	O				0.13
37.000	0.00	0.83	0.336	O				0.13
37.083	0.00	0.82	0.330	O				0.13
37.167	0.00	0.80	0.324	O				0.12
37.250	0.00	0.79	0.319	O				0.12
37.333	0.00	0.78	0.313	O				0.12
37.417	0.00	0.76	0.308	O				0.12
37.500	0.00	0.75	0.303	O				0.12
37.583	0.00	0.74	0.298	O				0.11
37.667	0.00	0.73	0.293	O				0.11
37.750	0.00	0.71	0.288	O				0.11
37.833	0.00	0.70	0.283	O				0.11
37.917	0.00	0.69	0.278	O				0.11
38.000	0.00	0.68	0.273	O				0.10
38.083	0.00	0.67	0.269	O				0.10
38.167	0.00	0.66	0.264	O				0.10
38.250	0.00	0.64	0.260	O				0.10
38.333	0.00	0.63	0.255	O				0.10
38.417	0.00	0.62	0.251	O				0.10
38.500	0.00	0.61	0.247	O				0.09
38.583	0.00	0.60	0.243	O				0.09
38.667	0.00	0.59	0.238	O				0.09
38.750	0.00	0.58	0.234	O				0.09
38.833	0.00	0.57	0.230	O				0.09
38.917	0.00	0.56	0.227	O				0.09
39.000	0.00	0.55	0.223	O				0.08
39.083	0.00	0.54	0.219	O				0.08
39.167	0.00	0.53	0.215	O				0.08
39.250	0.00	0.52	0.212	O				0.08
39.333	0.00	0.52	0.208	O				0.08
39.417	0.00	0.51	0.204	O				0.08
39.500	0.00	0.50	0.201	O				0.08

39.583	0.00	0.49	0.198	O	|	|	|	0.08
39.667	0.00	0.48	0.194	O	|	|	|	0.07
39.750	0.00	0.47	0.191	O	|	|	|	0.07
39.833	0.00	0.47	0.188	O	|	|	|	0.07
39.917	0.00	0.46	0.185	O	|	|	|	0.07
40.000	0.00	0.45	0.181	O	|	|	|	0.07
40.083	0.00	0.44	0.178	O	|	|	|	0.07
40.167	0.00	0.43	0.175	O	|	|	|	0.07
40.250	0.00	0.43	0.172	O	|	|	|	0.07
40.333	0.00	0.42	0.169	O	|	|	|	0.06
40.417	0.00	0.41	0.167	O	|	|	|	0.06
40.500	0.00	0.41	0.164	O	|	|	|	0.06
40.583	0.00	0.40	0.161	O	|	|	|	0.06
40.667	0.00	0.39	0.158	O	|	|	|	0.06
40.750	0.00	0.39	0.156	O	|	|	|	0.06
40.833	0.00	0.38	0.153	O	|	|	|	0.06
40.917	0.00	0.37	0.150	O	|	|	|	0.06
41.000	0.00	0.37	0.148	O	|	|	|	0.06
41.083	0.00	0.36	0.145	O	|	|	|	0.06
41.167	0.00	0.35	0.143	O	|	|	|	0.05
41.250	0.00	0.35	0.140	O	|	|	|	0.05
41.333	0.00	0.34	0.138	O	|	|	|	0.05
41.417	0.00	0.34	0.136	O	|	|	|	0.05
41.500	0.00	0.33	0.133	O	|	|	|	0.05
41.583	0.00	0.33	0.131	O	|	|	|	0.05
41.667	0.00	0.32	0.129	O	|	|	|	0.05
41.750	0.00	0.31	0.127	O	|	|	|	0.05
41.833	0.00	0.31	0.125	O	|	|	|	0.05
41.917	0.00	0.30	0.122	O	|	|	|	0.05
42.000	0.00	0.30	0.120	O	|	|	|	0.05
42.083	0.00	0.29	0.118	O	|	|	|	0.04
42.167	0.00	0.29	0.116	O	|	|	|	0.04
42.250	0.00	0.28	0.114	O	|	|	|	0.04
42.333	0.00	0.28	0.112	O	|	|	|	0.04
42.417	0.00	0.27	0.111	O	|	|	|	0.04
42.500	0.00	0.27	0.109	O	|	|	|	0.04
42.583	0.00	0.27	0.107	O	|	|	|	0.04
42.667	0.00	0.26	0.105	O	|	|	|	0.04
42.750	0.00	0.26	0.103	O	|	|	|	0.04
42.833	0.00	0.25	0.101	O	|	|	|	0.04
42.917	0.00	0.25	0.100	O	|	|	|	0.04
43.000	0.00	0.24	0.098	O	|	|	|	0.04
43.083	0.00	0.24	0.096	O	|	|	|	0.04
43.167	0.00	0.24	0.095	O	|	|	|	0.04
43.250	0.00	0.23	0.093	O	|	|	|	0.04
43.333	0.00	0.23	0.092	O	|	|	|	0.03
43.417	0.00	0.22	0.090	O	|	|	|	0.03
43.500	0.00	0.22	0.089	O	|	|	|	0.03
43.583	0.00	0.22	0.087	O	|	|	|	0.03
43.667	0.00	0.21	0.086	O	|	|	|	0.03

43.750	0.00	0.21	0.084	O	|	|	|	0.03
43.833	0.00	0.21	0.083	O	|	|	|	0.03
43.917	0.00	0.20	0.081	O	|	|	|	0.03
44.000	0.00	0.20	0.080	O	|	|	|	0.03
44.083	0.00	0.19	0.079	O	|	|	|	0.03
44.167	0.00	0.19	0.077	O	|	|	|	0.03
44.250	0.00	0.19	0.076	O	|	|	|	0.03
44.333	0.00	0.19	0.075	O	|	|	|	0.03
44.417	0.00	0.18	0.073	O	|	|	|	0.03
44.500	0.00	0.18	0.072	O	|	|	|	0.03
44.583	0.00	0.18	0.071	O	|	|	|	0.03
44.667	0.00	0.17	0.070	O	|	|	|	0.03
44.750	0.00	0.17	0.068	O	|	|	|	0.03
44.833	0.00	0.17	0.067	O	|	|	|	0.03
44.917	0.00	0.16	0.066	O	|	|	|	0.03
45.000	0.00	0.16	0.065	O	|	|	|	0.02
45.083	0.00	0.16	0.064	O	|	|	|	0.02
45.167	0.00	0.16	0.063	O	|	|	|	0.02
45.250	0.00	0.15	0.062	O	|	|	|	0.02
45.333	0.00	0.15	0.061	O	|	|	|	0.02
45.417	0.00	0.15	0.060	O	|	|	|	0.02
45.500	0.00	0.15	0.059	O	|	|	|	0.02
45.583	0.00	0.14	0.058	O	|	|	|	0.02
45.667	0.00	0.14	0.057	O	|	|	|	0.02
45.750	0.00	0.14	0.056	O	|	|	|	0.02
45.833	0.00	0.14	0.055	O	|	|	|	0.02
45.917	0.00	0.13	0.054	O	|	|	|	0.02
46.000	0.00	0.13	0.053	O	|	|	|	0.02
46.083	0.00	0.13	0.052	O	|	|	|	0.02
46.167	0.00	0.13	0.051	O	|	|	|	0.02
46.250	0.00	0.12	0.050	O	|	|	|	0.02
46.333	0.00	0.12	0.050	O	|	|	|	0.02
46.417	0.00	0.12	0.049	O	|	|	|	0.02
46.500	0.00	0.12	0.048	O	|	|	|	0.02
46.583	0.00	0.12	0.047	O	|	|	|	0.02
46.667	0.00	0.11	0.046	O	|	|	|	0.02
46.750	0.00	0.11	0.045	O	|	|	|	0.02
46.833	0.00	0.11	0.045	O	|	|	|	0.02
46.917	0.00	0.11	0.044	O	|	|	|	0.02
47.000	0.00	0.11	0.043	O	|	|	|	0.02
47.083	0.00	0.11	0.042	O	|	|	|	0.02
47.167	0.00	0.10	0.042	O	|	|	|	0.02
47.250	0.00	0.10	0.041	O	|	|	|	0.02
47.333	0.00	0.10	0.040	O	|	|	|	0.02
47.417	0.00	0.10	0.040	O	|	|	|	0.02
47.500	0.00	0.10	0.039	O	|	|	|	0.01
47.583	0.00	0.10	0.038	O	|	|	|	0.01
47.667	0.00	0.09	0.038	O	|	|	|	0.01
47.750	0.00	0.09	0.037	O	|	|	|	0.01
47.833	0.00	0.09	0.036	O	|	|	|	0.01

47.917	0.00	0.09	0.036	O				0.01
48.000	0.00	0.09	0.035	O				0.01
48.083	0.00	0.09	0.035	O				0.01
48.167	0.00	0.08	0.034	O				0.01
48.250	0.00	0.08	0.033	O				0.01
48.333	0.00	0.08	0.033	O				0.01
48.417	0.00	0.08	0.032	O				0.01
48.500	0.00	0.08	0.032	O				0.01
48.583	0.00	0.08	0.031	O				0.01
48.667	0.00	0.08	0.031	O				0.01
48.750	0.00	0.07	0.030	O				0.01
48.833	0.00	0.07	0.030	O				0.01
48.917	0.00	0.07	0.029	O				0.01
49.000	0.00	0.07	0.029	O				0.01
49.083	0.00	0.07	0.028	O				0.01
49.167	0.00	0.07	0.028	O				0.01
49.250	0.00	0.07	0.027	O				0.01
49.333	0.00	0.07	0.027	O				0.01
49.417	0.00	0.07	0.026	O				0.01
49.500	0.00	0.06	0.026	O				0.01
49.583	0.00	0.06	0.025	O				0.01
49.667	0.00	0.06	0.025	O				0.01
49.750	0.00	0.06	0.025	O				0.01
49.833	0.00	0.06	0.024	O				0.01
49.917	0.00	0.06	0.024	O				0.01
50.000	0.00	0.06	0.023	O				0.01
50.083	0.00	0.06	0.023	O				0.01
50.167	0.00	0.06	0.023	O				0.01
50.250	0.00	0.06	0.022	O				0.01
50.333	0.00	0.05	0.022	O				0.01
50.417	0.00	0.05	0.021	O				0.01
50.500	0.00	0.05	0.021	O				0.01
50.583	0.00	0.05	0.021	O				0.01
50.667	0.00	0.05	0.020	O				0.01
50.750	0.00	0.05	0.020	O				0.01
50.833	0.00	0.05	0.020	O				0.01
50.917	0.00	0.05	0.019	O				0.01
51.000	0.00	0.05	0.019	O				0.01
51.083	0.00	0.05	0.019	O				0.01
51.167	0.00	0.05	0.018	O				0.01
51.250	0.00	0.04	0.018	O				0.01
51.333	0.00	0.04	0.018	O				0.01
51.417	0.00	0.04	0.017	O				0.01
51.500	0.00	0.04	0.017	O				0.01
51.583	0.00	0.04	0.017	O				0.01
51.667	0.00	0.04	0.017	O				0.01
51.750	0.00	0.04	0.016	O				0.01
51.833	0.00	0.04	0.016	O				0.01
51.917	0.00	0.04	0.016	O				0.01
52.000	0.00	0.04	0.015	O				0.01

52.083	0.00	0.04	0.015	O	|	|	|	0.01
52.167	0.00	0.04	0.015	O	|	|	|	0.01
52.250	0.00	0.04	0.015	O	|	|	|	0.01
52.333	0.00	0.04	0.014	O	|	|	|	0.01
52.417	0.00	0.04	0.014	O	|	|	|	0.01
52.500	0.00	0.03	0.014	O	|	|	|	0.01
52.583	0.00	0.03	0.014	O	|	|	|	0.01
52.667	0.00	0.03	0.014	O	|	|	|	0.01
52.750	0.00	0.03	0.013	O	|	|	|	0.01
52.833	0.00	0.03	0.013	O	|	|	|	0.00
52.917	0.00	0.03	0.013	O	|	|	|	0.00
53.000	0.00	0.03	0.013	O	|	|	|	0.00
53.083	0.00	0.03	0.012	O	|	|	|	0.00
53.167	0.00	0.03	0.012	O	|	|	|	0.00
53.250	0.00	0.03	0.012	O	|	|	|	0.00
53.333	0.00	0.03	0.012	O	|	|	|	0.00
53.417	0.00	0.03	0.012	O	|	|	|	0.00
53.500	0.00	0.03	0.011	O	|	|	|	0.00
53.583	0.00	0.03	0.011	O	|	|	|	0.00
53.667	0.00	0.03	0.011	O	|	|	|	0.00
53.750	0.00	0.03	0.011	O	|	|	|	0.00
53.833	0.00	0.03	0.011	O	|	|	|	0.00
53.917	0.00	0.03	0.010	O	|	|	|	0.00
54.000	0.00	0.03	0.010	O	|	|	|	0.00
54.083	0.00	0.03	0.010	O	|	|	|	0.00
54.167	0.00	0.02	0.010	O	|	|	|	0.00
54.250	0.00	0.02	0.010	O	|	|	|	0.00
54.333	0.00	0.02	0.010	O	|	|	|	0.00
54.417	0.00	0.02	0.009	O	|	|	|	0.00
54.500	0.00	0.02	0.009	O	|	|	|	0.00
54.583	0.00	0.02	0.009	O	|	|	|	0.00
54.667	0.00	0.02	0.009	O	|	|	|	0.00
54.750	0.00	0.02	0.009	O	|	|	|	0.00
54.833	0.00	0.02	0.009	O	|	|	|	0.00
54.917	0.00	0.02	0.009	O	|	|	|	0.00
55.000	0.00	0.02	0.008	O	|	|	|	0.00
55.083	0.00	0.02	0.008	O	|	|	|	0.00
55.167	0.00	0.02	0.008	O	|	|	|	0.00
55.250	0.00	0.02	0.008	O	|	|	|	0.00
55.333	0.00	0.02	0.008	O	|	|	|	0.00
55.417	0.00	0.02	0.008	O	|	|	|	0.00
55.500	0.00	0.02	0.008	O	|	|	|	0.00
55.583	0.00	0.02	0.007	O	|	|	|	0.00
55.667	0.00	0.02	0.007	O	|	|	|	0.00
55.750	0.00	0.02	0.007	O	|	|	|	0.00
55.833	0.00	0.02	0.007	O	|	|	|	0.00
55.917	0.00	0.02	0.007	O	|	|	|	0.00
56.000	0.00	0.02	0.007	O	|	|	|	0.00
56.083	0.00	0.02	0.007	O	|	|	|	0.00
56.167	0.00	0.02	0.007	O	|	|	|	0.00

56.250	0.00	0.02	0.006	O				0.00
56.333	0.00	0.02	0.006	O				0.00
56.417	0.00	0.02	0.006	O				0.00
56.500	0.00	0.02	0.006	O				0.00
56.583	0.00	0.02	0.006	O				0.00
56.667	0.00	0.01	0.006	O				0.00
56.750	0.00	0.01	0.006	O				0.00
56.833	0.00	0.01	0.006	O				0.00
56.917	0.00	0.01	0.006	O				0.00
57.000	0.00	0.01	0.006	O				0.00
57.083	0.00	0.01	0.005	O				0.00
57.167	0.00	0.01	0.005	O				0.00
57.250	0.00	0.01	0.005	O				0.00
57.333	0.00	0.01	0.005	O				0.00
57.417	0.00	0.01	0.005	O				0.00
57.500	0.00	0.01	0.005	O				0.00
57.583	0.00	0.01	0.005	O				0.00
57.667	0.00	0.01	0.005	O				0.00
57.750	0.00	0.01	0.005	O				0.00
57.833	0.00	0.01	0.005	O				0.00
57.917	0.00	0.01	0.005	O				0.00
58.000	0.00	0.01	0.005	O				0.00
58.083	0.00	0.01	0.004	O				0.00
58.167	0.00	0.01	0.004	O				0.00
58.250	0.00	0.01	0.004	O				0.00
58.333	0.00	0.01	0.004	O				0.00
58.417	0.00	0.01	0.004	O				0.00
58.500	0.00	0.01	0.004	O				0.00
58.583	0.00	0.01	0.004	O				0.00
58.667	0.00	0.01	0.004	O				0.00
58.750	0.00	0.01	0.004	O				0.00
58.833	0.00	0.01	0.004	O				0.00
58.917	0.00	0.01	0.004	O				0.00
59.000	0.00	0.01	0.004	O				0.00
59.083	0.00	0.01	0.004	O				0.00
59.167	0.00	0.01	0.004	O				0.00
59.250	0.00	0.01	0.004	O				0.00
59.333	0.00	0.01	0.003	O				0.00
59.417	0.00	0.01	0.003	O				0.00
59.500	0.00	0.01	0.003	O				0.00
59.583	0.00	0.01	0.003	O				0.00
59.667	0.00	0.01	0.003	O				0.00
59.750	0.00	0.01	0.003	O				0.00
59.833	0.00	0.01	0.003	O				0.00
59.917	0.00	0.01	0.003	O				0.00
60.000	0.00	0.01	0.003	O				0.00
60.083	0.00	0.01	0.003	O				0.00
60.167	0.00	0.01	0.003	O				0.00
60.250	0.00	0.01	0.003	O				0.00
60.333	0.00	0.01	0.003	O				0.00

```
60.417    0.00    0.01      0.003  O       |       |       |       |     0.00
60.500    0.00    0.01      0.003  O       |       |       |       |     0.00
60.583    0.00    0.01      0.003  O       |       |       |       |     0.00
60.667    0.00    0.01      0.003  O       |       |       |       |     0.00

       Remaining water in basin =    0.00 (Ac.Ft)

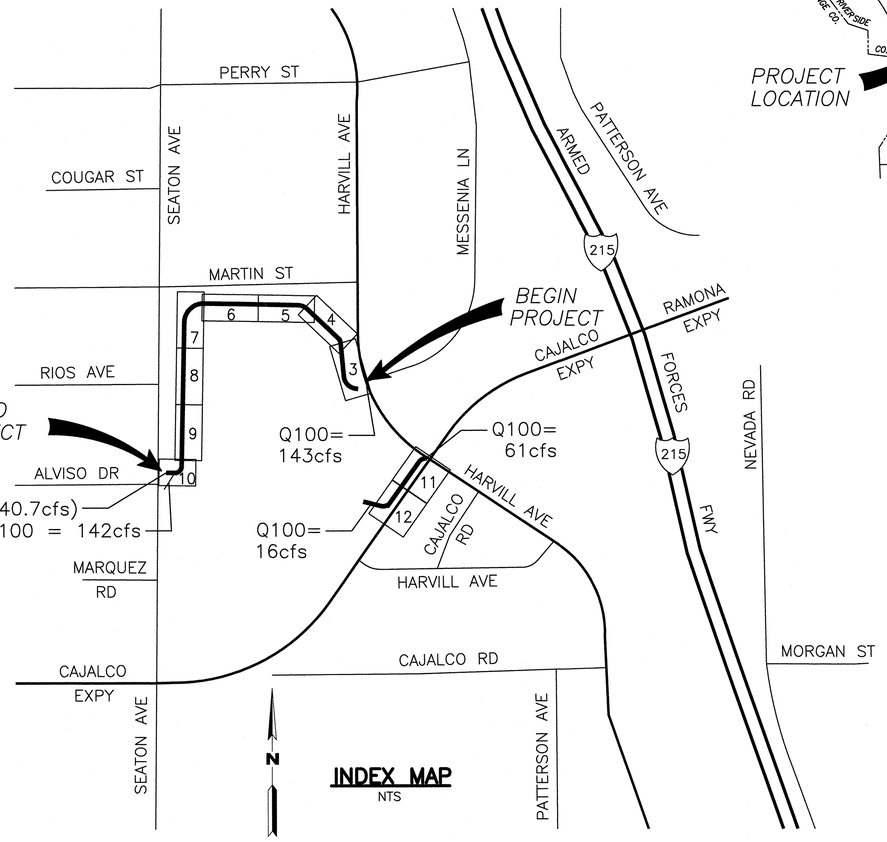

       ****************************HYDROGRAPH DATA****************************
                      Number of intervals =   728
                      Time interval =    5.0 (Min.)
                      Maximum/Peak flow rate =       10.000 (CFS)
                      Total volume =      17.140 (Ac.Ft)
              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
       ***********************************************************************

       -----------------------------------------------------------------------
```

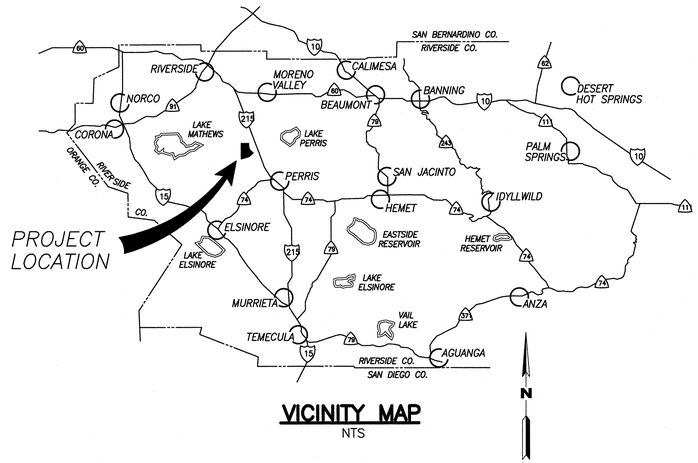
APPENDIX D – REFERENCES

PERRIS VALLEY MDP LATERAL E-9 STAGE 2&3, LATERAL E-9.1 STAGE 1, IP200029

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



INDEX MAP
NTS



VICINITY MAP
NTS

INDEX

TITLE SHEET	SHEET 1
INDEX MAP & QUANTITIES	SHEET 2
STORM DRAIN PLAN & PROFILE	SHEETS 3–12
STORM DRAIN PLAN	SHEET 13
LATERAL PROFILES	SHEET 14, 15

R.C.F.C. & W.C.D STANDARD DRAWINGS

MH251	MANHOLE NO 1
MH252	MANHOLE NO 2
MH254	MANHOLE NO 4
JS229	JUNCTION STRUCTURE NO 4
CB100	CATCH BASIN NO 1
M803	CONCRETE COLLAR
M816	CONCRETE BULKHEAD

COUNTY OF RIVERSIDE STANDARD DRAWINGS

818	UTILITY TRENCH BACKFILL

ENTRY PERMIT – CAL OSHA

An Entry Permit that meets Cal/OSHA standards in §5157 is required (https://www.dir.ca.gov/title8/5157.html)

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 MARCH 2020, AND THE DISTRICT'S STANDARD DRAWING MANUAL. FOR THE LATEST DRAWINGS OF THE STANDARD MANUAL, PLEASE REFER TO THE "PUBLICATIONS AND RECORDS" PAGE FOUND ON THE DISTRICT'S WEBSITE.
2. CONTACT THE ENCROACHMENT PERMIT ENGINEER AT 951.955.1266 IF AN ENCROACHMENT PERMIT IS REQUIRED FROM THE DISTRICT. AFTER THE PERMIT IS ISSUED THE DISTRICT MUST BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
3. CONTACT CONSTRUCTION MANAGEMENT AT 951.955.1288 IF CONSTRUCTION INSPECTION WILL BE PERFORMED BY THE DISTRICT. THE DISTRICT MUST BE NOTIFIED TWENTY (20) DAYS 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 (48) HOURS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT AT 811.
7. ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON THE VERTICAL DATUM IS DERIVED FROM NAVD 88. THE HORIZONTAL DATUM IS DERIVED FROM LOCAL CONTROL.
8. ALL COORDINATES ARE SHOWN IN FEET AND DECIMALS THEREOF.
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 INCHES TYPE "B" HOT MIX ASPHALT OVER 6 INCHES CLASS 2 AGGREGATE BASE 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 INCHES OF CLASS "B" CONCRETE.
13. PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO. 4 (JS229) UNLESS OTHERWISE NOTED.
14. PIPE BEDDING SHALL CONFORM TO THE DISTRICT'S STANDARD DRAWING NO. M815 EXCEPT FOR COVER <2 FEET. FOR COVER <2 FEET, CONCRETE SLURRY (2,000 PSI) SHALL BE USED. THE ENTIRE TRENCH SHALL BE SLURRY EXTENDING 4 INCHES MINIMUM AND 12 INCHES MAXIMUM ABOVE THE TOP OF THE PIPE.
15. BH–1 INDICATES SOIL BORING LOCATIONS BASED ON THE SOILS REPORT DATED JULY 16, 2013. 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 NOTED.
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 OTHERWISE NOTED.
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 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 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 CONCRETE PIPES AND STRUCTURES 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 CULVERT, 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 JOINTS FOR CALTRANS STANDARD REINFORCED CONCRETE BOX SHALL BE PLACED ACCORDING TO THE DISTRICT STANDARD DRAWING NO. BOX 401.

RECMD | COUNTY OVERSIGHT ENGINEER | REGISTRATION NUMBER | DATE SIGNED
| | | 6.24.21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9842 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

Don't Dig... Until You Call U.S.A Toll Free 811 or 1-800-422-4133
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
BM# 30–A–92
FROM THE INT. OF I–215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23"x61" CONCRETE CULVERT. BRASS DISK STAMPED BM 30–A–92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: Edwin Quinonez
CHIEF, PLANNING
DATE: 6/28/2021

APPROVED BY:
GENERAL MANAGER-CHIEF ENGINEER
DATE: 6/29/2021

PPT 180028 / IP 200029

PERRIS VALLEY MDP LATERAL E-9 STAGE 2 & 3 LATERAL E-9.1 STAGE 1
TITLE SHEET

PROJECT NO. 4-0-00490 4-0-00495
DRAWING NO. 4-1152
SHEET NO. 1 OF 15

6/9/21
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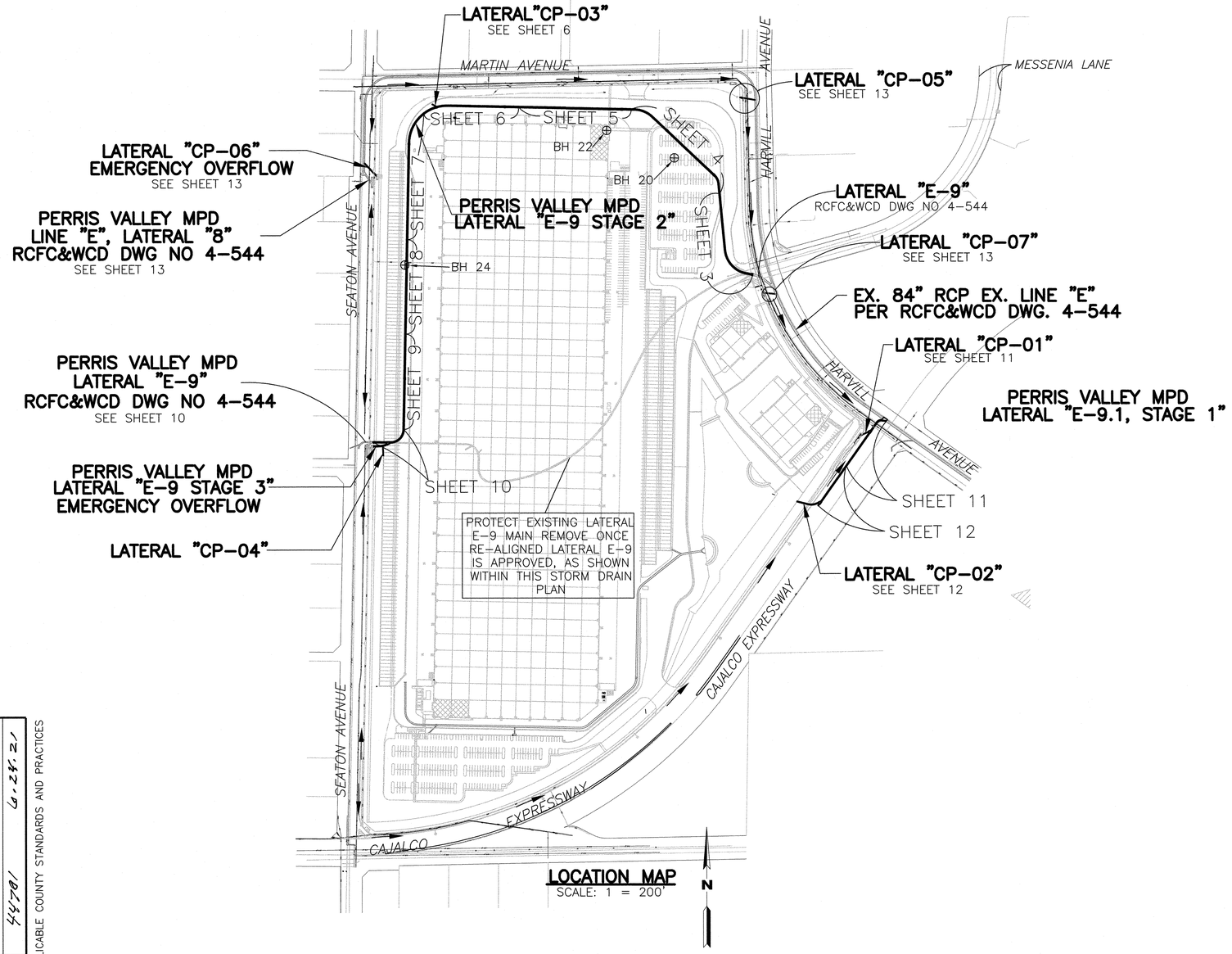

LOCATION MAP
SCALE: 1 = 200'

N

ESTIMATE OF QUANTITIES

NO.	DESCRIPTION	QUANTITY	
	STORM DRAIN	AMOUNT	UNITS
1	INSTALL 18" RCP (SEE PROFILE FOR D-LOAD)	164	LF
3	INSTALL 36" RCP (SEE PROFILE FOR D-LOAD)	138	LF
4	INSTALL 48" RCP (SEE PROFILE FOR D-LOAD)	440	LF
5	INSTALL 54" RCP (SEE PROFILE FOR D-LOAD)	2,596	LF
7	CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252	10	EA
8	CONST. MANHOLE NO 1 PER RCFC&WCD STD. MH251	1	EA
9	CONST. MANHOLE # 4 PER RCFC&WCD STD. MH254	3	EA
10	CONST. JUNCTION STRUCTURE # 4 PER RCFC&WCD STD. JS229	5	EA
11	CONST. CATCH BASIN # 1 PER RCFC&WCD STD. CB100	3	EA
12	CONST. 24"x18" BROOKS BOX INLET	1	EA
13	CONST. CONCRETE COLLAR PER RCFC&WCD STD. M803	3	EA
14	CONST. CONCRETE BULKHEAD PER RCFC&WCD STD. M816	3	EA
15	UTILITY TRENCH BACKFILL PER COUNTY OF RIVERSIDE STD. 818	1,108	SF
16	CONST. JUNCTION STRUCTURE # 2 PER RCFC&WCD STD. JS227	1	EA

RECMD COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER — DATE SIGNED
6.24.21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926 DATE 6/2/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
PB NUMBER: 231892

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EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL: DATE: 06-24-2021
APPROVED BY: Edwin Quintero DATE: 6/28/2021

PERRIS VALLEY MDP
LATERAL E-9 STAGE 2 & 3
LATERAL E-9.1 STAGE 1
INDEX MAP & QUANTITIES

PROJECT NO. 4-0-00490 4-0-00495
DRAWING NO. 4-1152
SHEET NO. 2 OF 15

PPT 180028 / IP 200029

6/16/21 6/2/21

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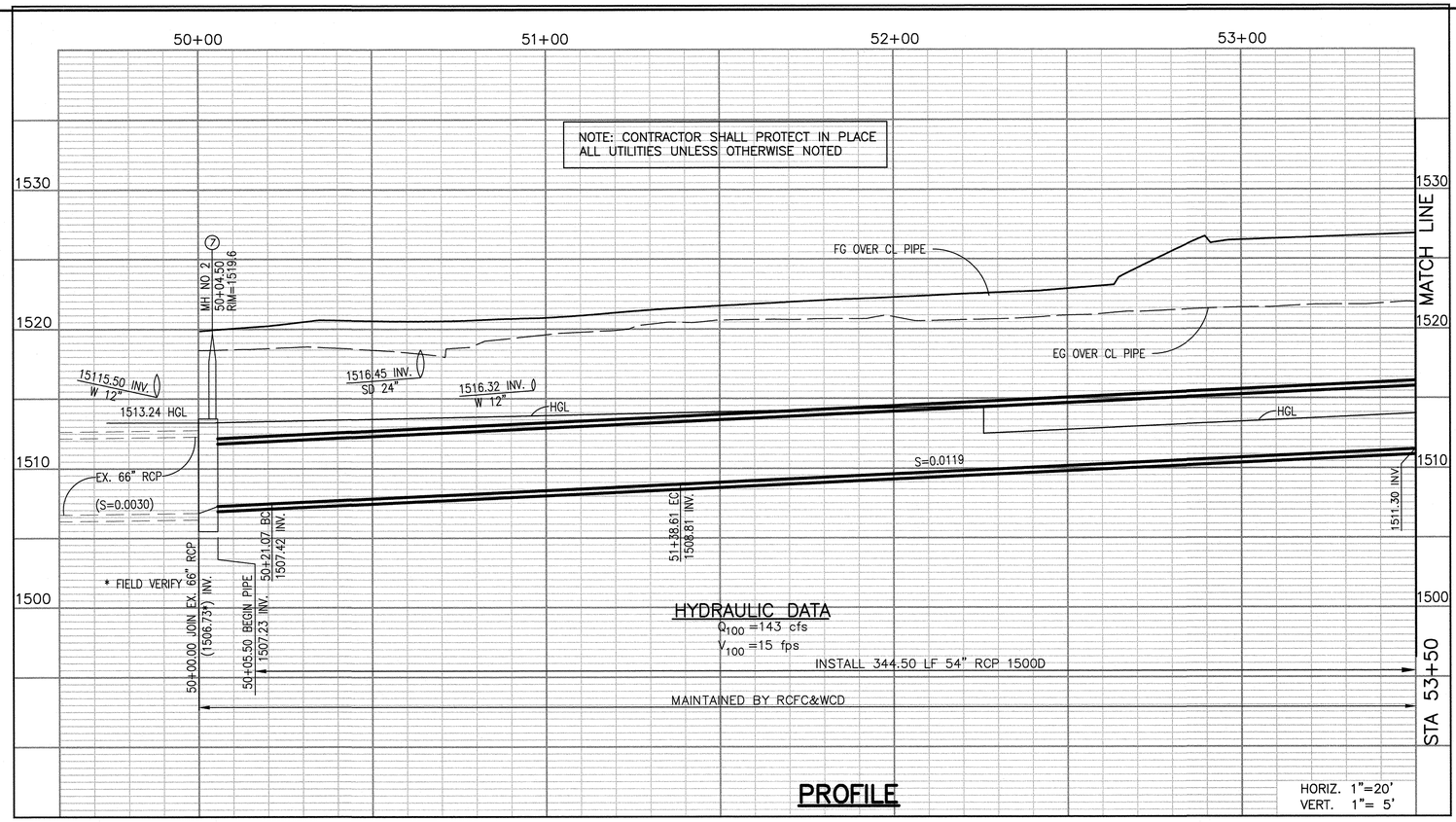
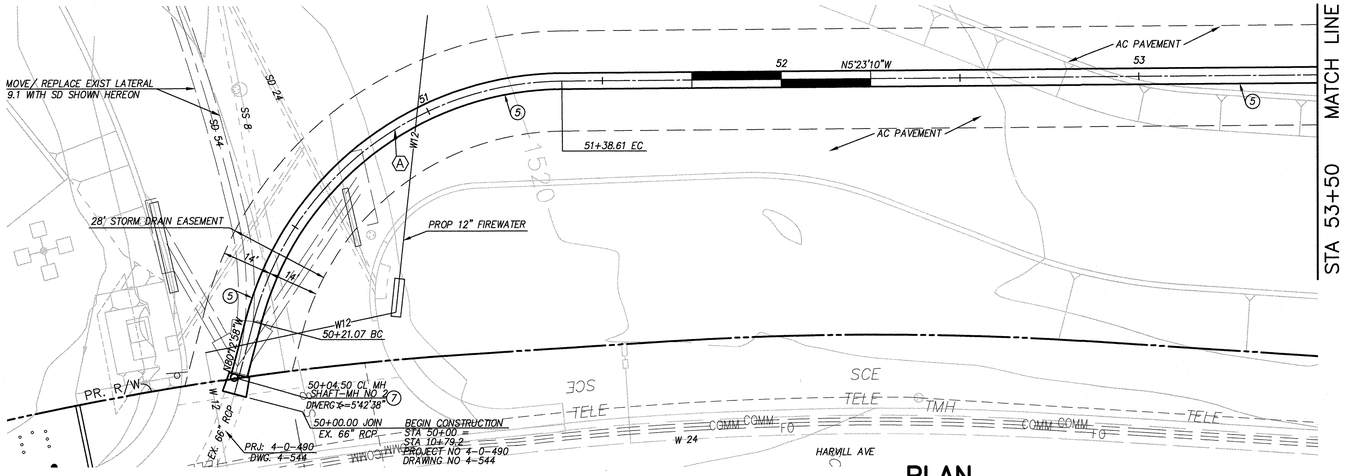
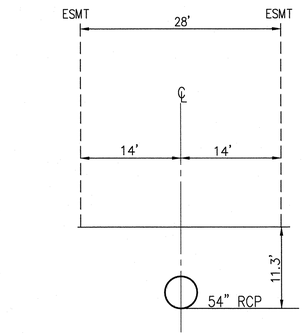




PLAN



SECTION AT STA. 52+00

TYPICAL FROM STA 50+10.43 TO STA 53+50

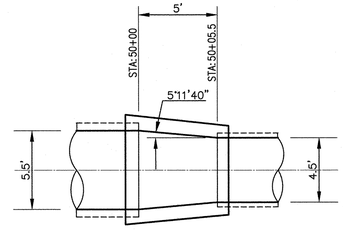
10 0 10

CURVE DATA	Ⓐ
R	90.00'
Δ	74°49'47"
L	117.54'
T	68.85'
B.C.	50+21.07
E.C.	51+38.61

NOTES

⑤— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

⑦— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252



MANHOLE NO 2

1"=5'

PLAN

20' 0 20'

PPT 180028 / IP 200029

6/16/21

6/9/21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

RECMD	COUNTY OVERSIGHT ENGINEER	REGISTRATION NUMBER	DATE SIGNED
	A. Scott Dushaw	14701	6.24.21

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PREPARED BY: R.C.E. NO. 45926

STEVEN D. LEVISEE EXP.: 12-31-22 DATE 6/9/21

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

Don't Dig... Until You Call U.S.A Toll Free
811 or 1-800-422-4133
for the location of buried utility lines.
Don't disrupt vital services.
BURIED CABLE
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23"x61" CONCRETE CULVERT, BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF ℄ OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021

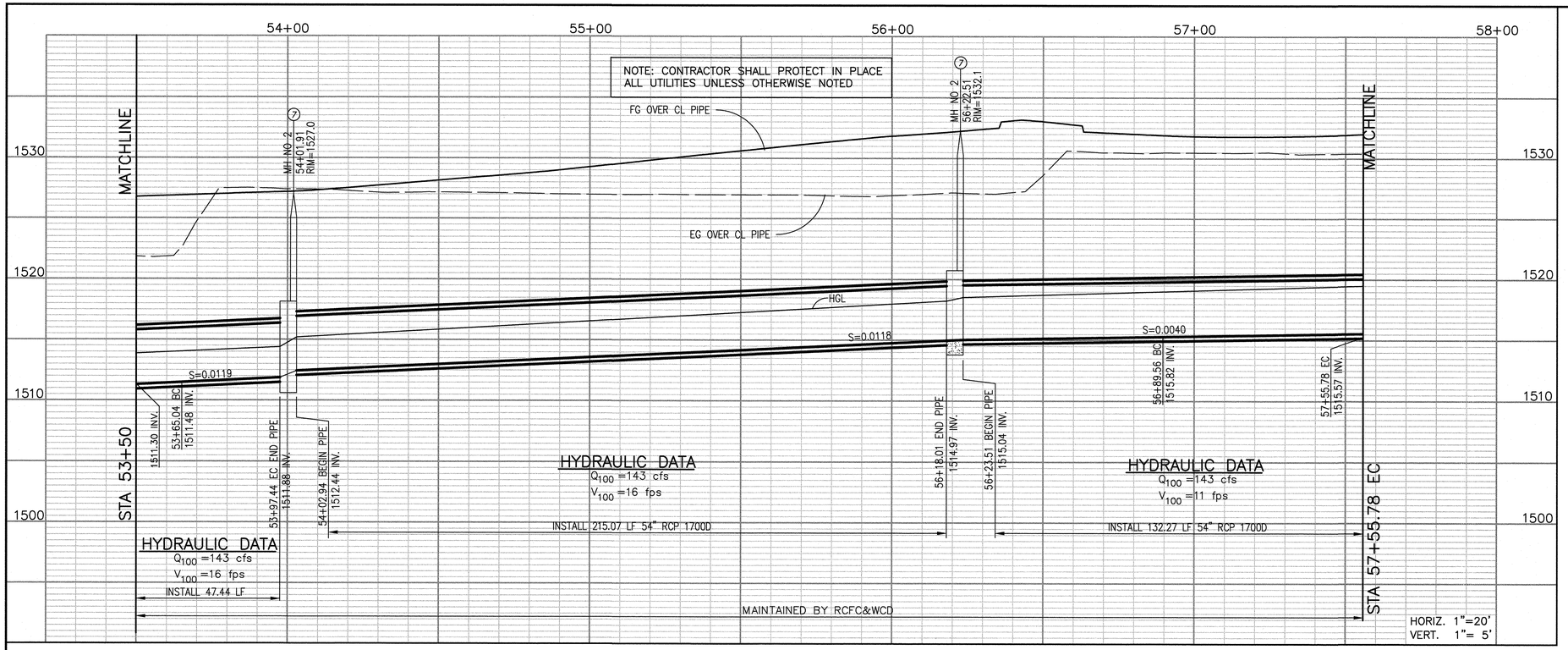
APPROVED BY: Edwin Quinonez DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

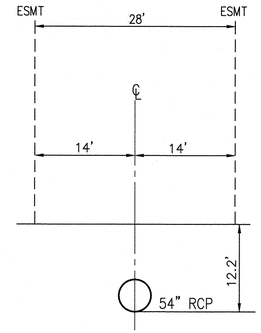
LINE "E-9" STA 50+00-STA 53+50

PROJECT NO.	4-0-00490
DRAWING NO.	4-1152
SHEET NO.	3 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



PROFILE

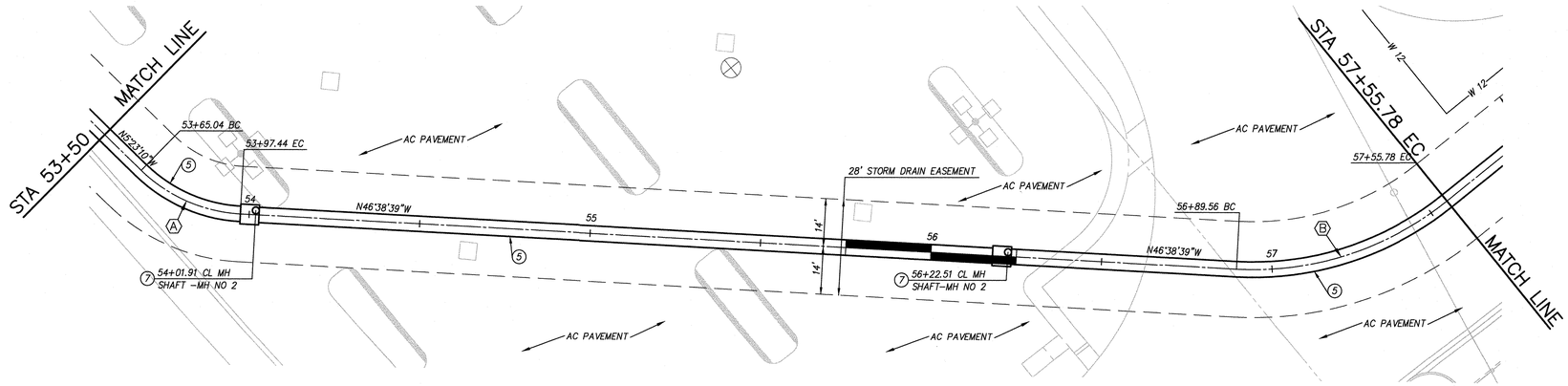


SECTION STA. 56+00

TYPICAL FROM STA 53+50 TO STA 57+55.78

10 0 10

CURVE DATA	Ⓐ	Ⓑ
R	45.00'	90.00'
Δ	41°15'18"	42°09'36"
L	32.40'	66.22'
T	16.94'	34.69'
B.C.	53+65.04	56+89.56
E.C.	53+97.44	57+55.78



PLAN

NOTES

(5)— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

(7)— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252



PLAN

PPT 180028 / IP 200029

6/23/21

6/9/21

RECMD COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER — DATE SIGNED
6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926 DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

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BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23"x61" CONCRETE CULVERT. BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: DATE: 06-24-2021

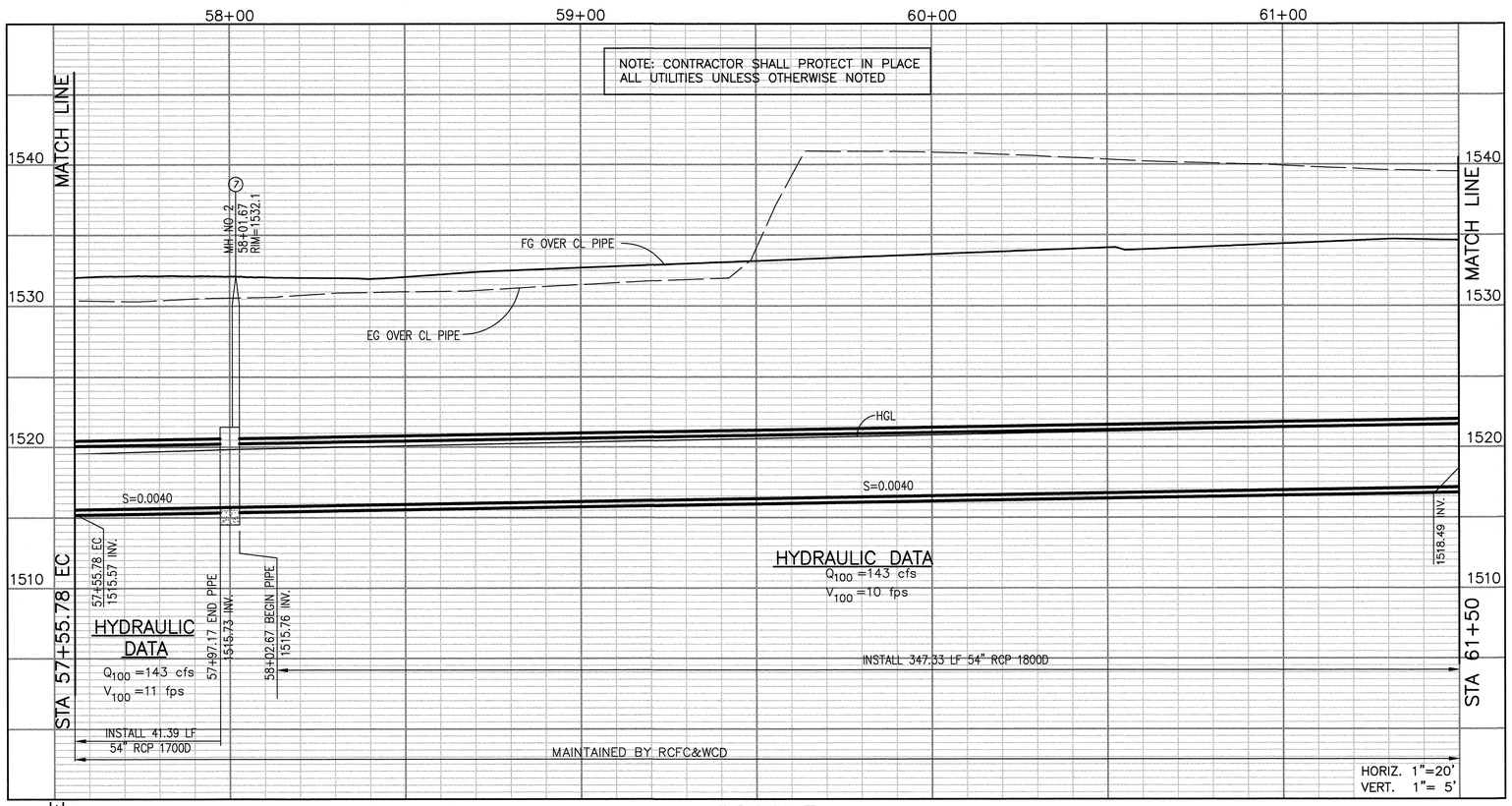
APPROVED BY: Edwin Quintero DATE: 6/28/2021

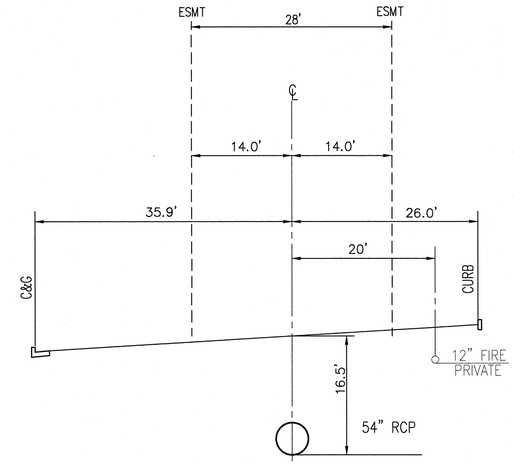
PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

LINE "E-9" STA 53+50-STA 57+55.78

PROJECT NO. 4-0-00490
DRAWING NO. 4-1152
SHEET NO. 4 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



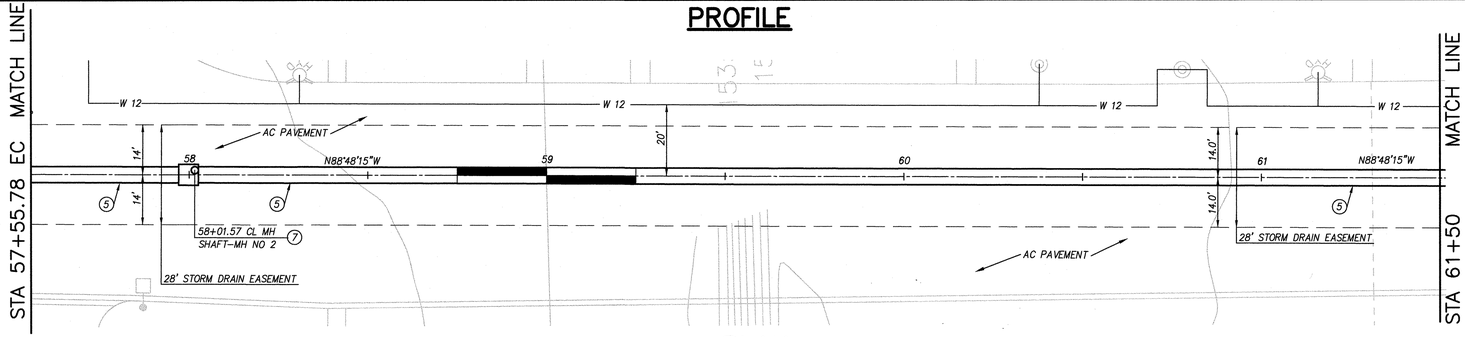


SECTION STA. 59+00

TYPICAL FROM STA 58+32.82 TO STA 61+50

10 0 10

PROFILE

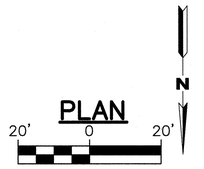


PLAN

NOTES

(5)— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

(7)— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252



PLAN

PPT 180028 / IP 200029

6/23/21

6/9/21

RECMD — COUNTY OVERSIGHT ENGINEER — DATE SIGNED 6.28.21

REGISTRATION NUMBER 44701

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-22 CIVIL STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926

STEVEN D. LEVISEE EXP.: 12-31-22 DATE 6/9/21

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
PB NUMBER: 231892

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EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 06-24-2021

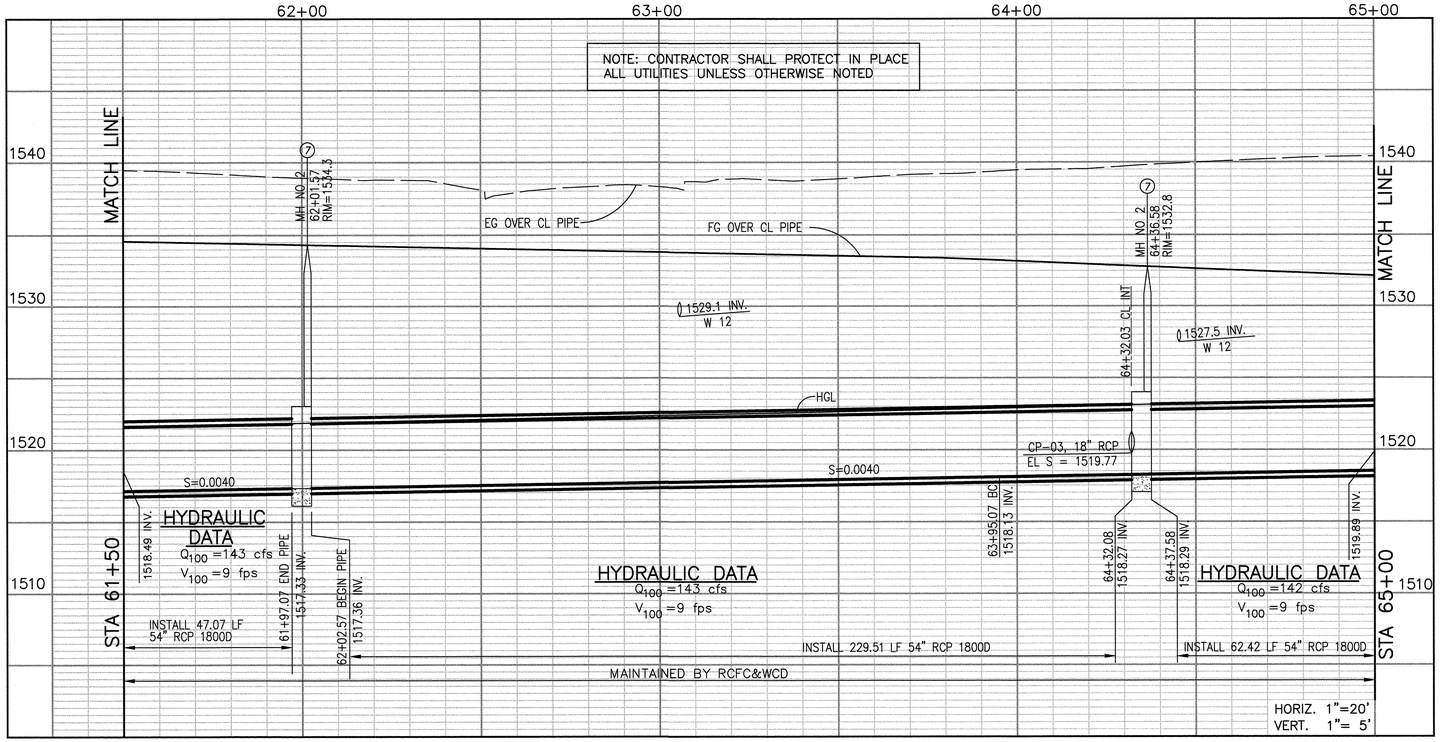
APPROVED BY: Edwin Quinonez DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

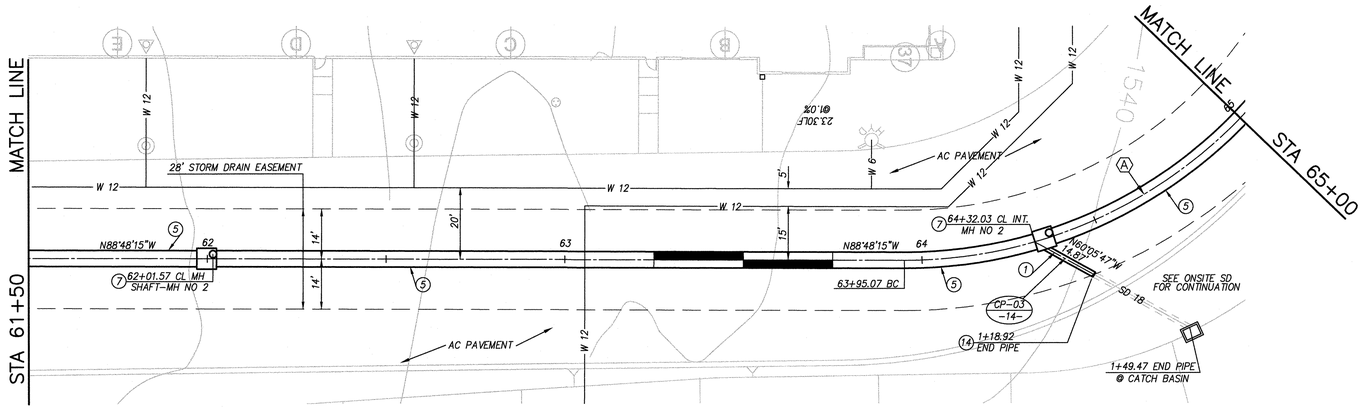
LINE "E-9" STA 57+55.78-STA 61+50

PROJECT NO. 4-0-00490
DRAWING NO. 4-1152
SHEET NO. 5 OF 15

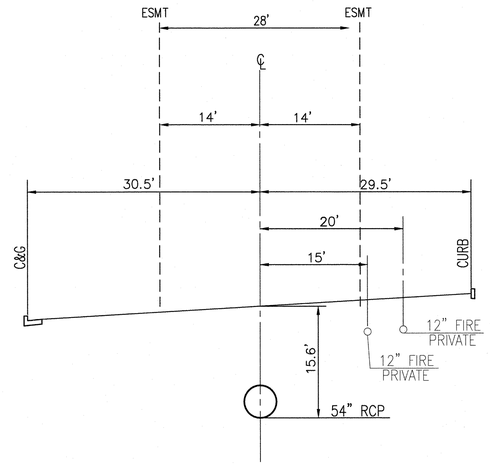
L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



PROFILE



PLAN



SECTION STA. 63+50

TYPICAL FROM STA 61+50 TO STA 63+78.10

10 0 10

MANHOLE / JUNCTION DATA

LATERAL	℄ STATION	WALL STATION	STRUCTURE	A	C
CP-03	64+32.03	64+34.22	JS NO. 2	45°	–

CURVE DATA	Ⓐ
R	130.00'
Δ	90°00'00"
L	204.20'
T	130.00'
B.C.	63+95.07
E.C.	65+99.27

NOTES

1. INSTALL 18" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815
5. INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815
7. CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252
8. CONST. MANHOLE NO 1 PER RCFC&WCD STD. MH251
10. CONST. JUNCTION STRUCTURE NO 4 PER RCFC&WCD STD. JS229
14. CONST. CONCRETE BULKHEAD PER RCFC&WCD STD. M816

PLAN

20' 0 20'

N

PPT 180028 / IP 200029

6/23/21

6/9/21

RECMD COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER — DATE SIGNED
4720 — 6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9942 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926 DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

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EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021

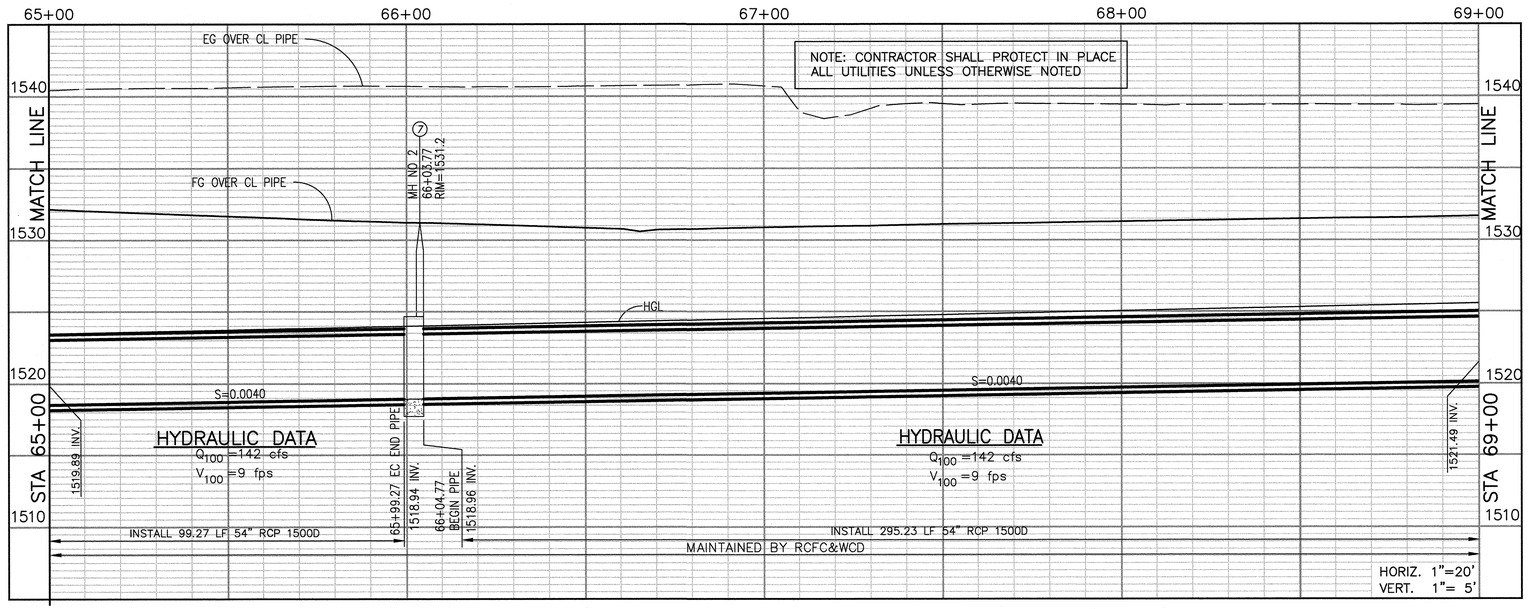
APPROVED BY: Edwin Quinonez DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

LINE "E-9" STA 61+50-STA 65+00

PROJECT NO.	4-0-00490
DRAWING NO.	4-1152
SHEET NO.	6 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



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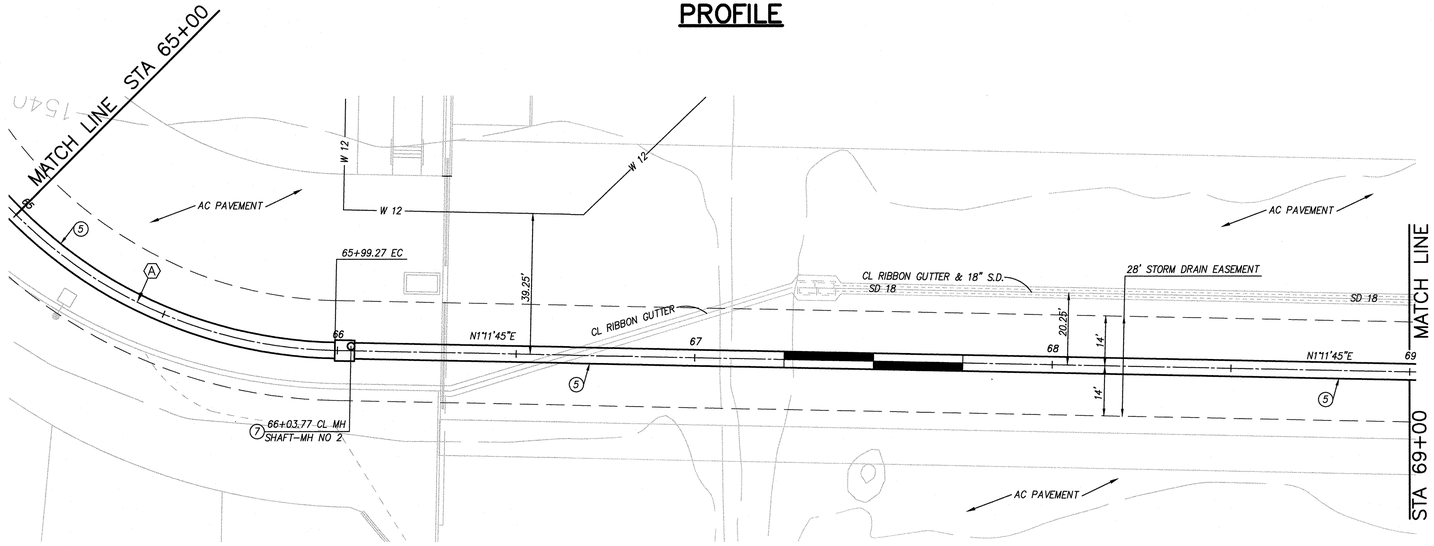
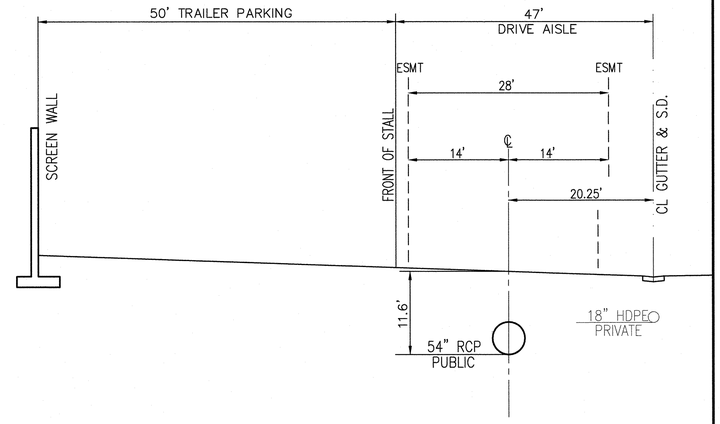


PLAN



SECTION STA. 67+50

TYPICAL FROM STA 66+30.44 TO STA 69+00

10 0 10

CURVE DATA	Ⓐ
R	130.00'
∆	90°00'00"
L	204.20'
T	130.00'
B.C.	63+95.07
E.C.	65+99.27

NOTES

⑤— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

⑦— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252

N

PLAN

20' 0 20'

PPT 180028 / IP 200029

6/23/21

6/9/21

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG

RECMD	COUNTY OVERSIGHT ENGINEER	REGISTRATION NUMBER	DATE SIGNED
		44701	6.24.21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-22 CIVIL STATE OF CALIFORNIA

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PREPARED BY: R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

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REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

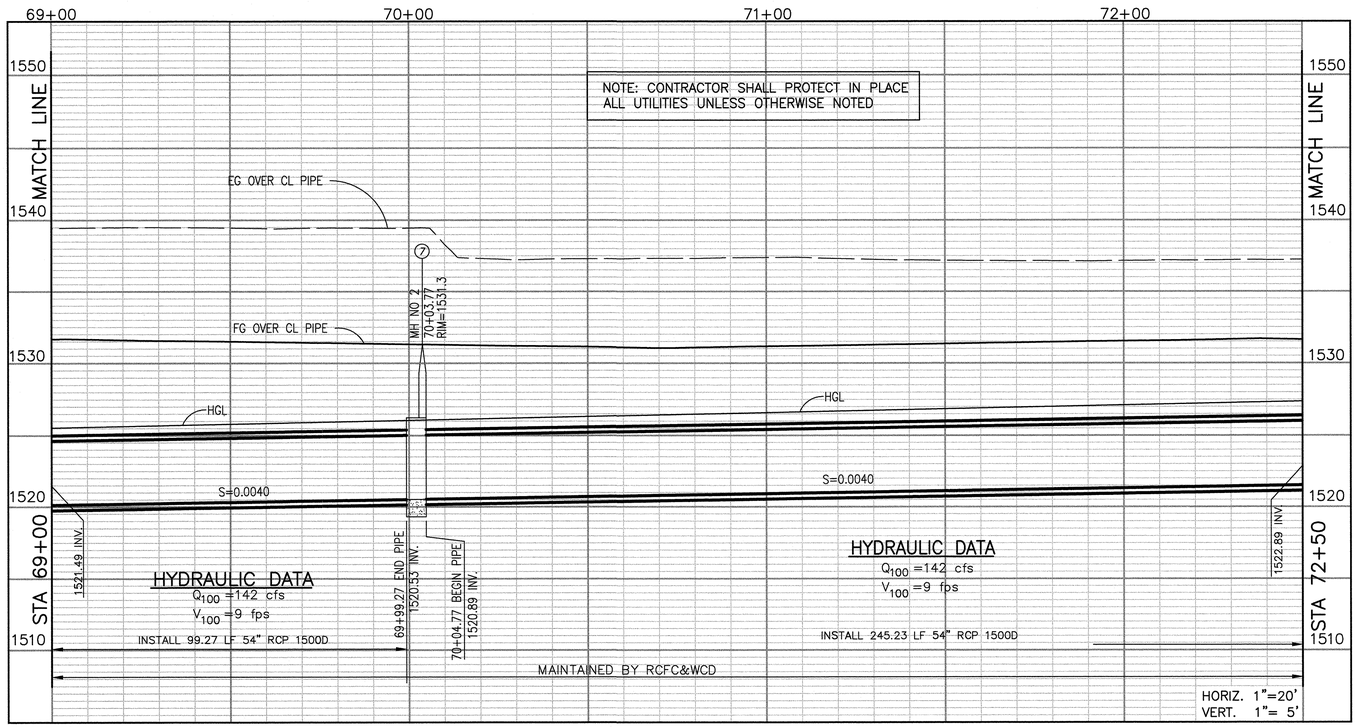
RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021

APPROVED BY: Edwin Quinong DATE: 6/28/2021

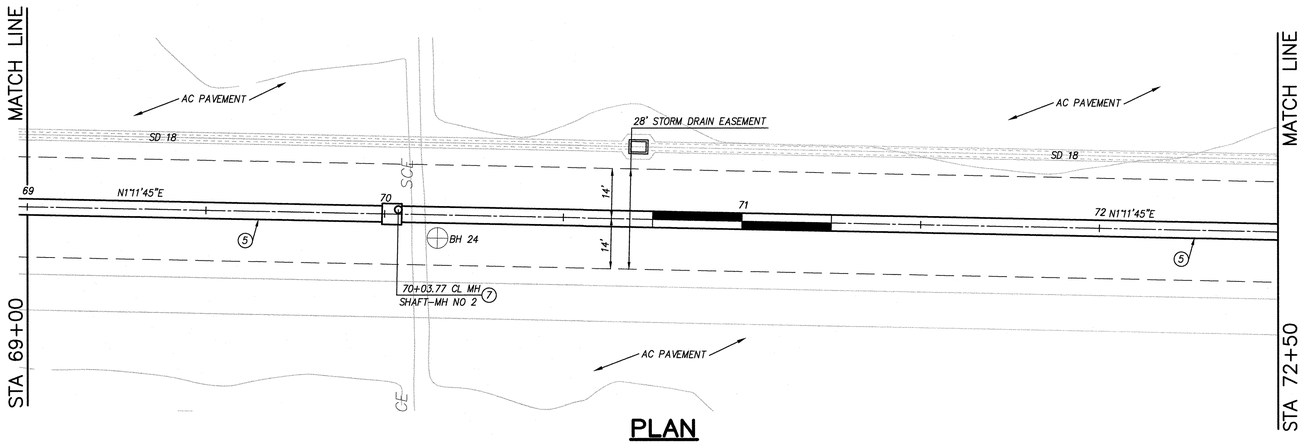
PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

LINE "E-9" STA 65+00-STA 69+00

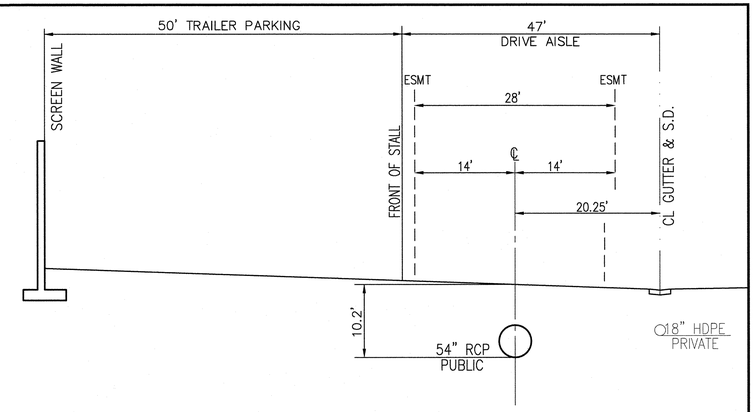
PROJECT NO. 4-0-00490
DRAWING NO. 4-1152
SHEET NO. 7 OF 15



PROFILE



PLAN



SECTION STA. 71+00

TYPICAL FROM STA 69+00 TO STA 72+50

10 0 10

NOTES

(5)– INSTALL 54" RCP (SEE PROFILE FOR D–LOAD). BEDDING PER RCFC&WCD STD. MH815

(7)– CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252

N

PLAN

20' 0 20'

PPT 180028 / IP 200029

6/9/21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

RECMD	COUNTY OVERSIGHT ENGINEER	REGISTRATION NUMBER	DATE SIGNED
		49701	6-24-21

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

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PREPARED BY: R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

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REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021

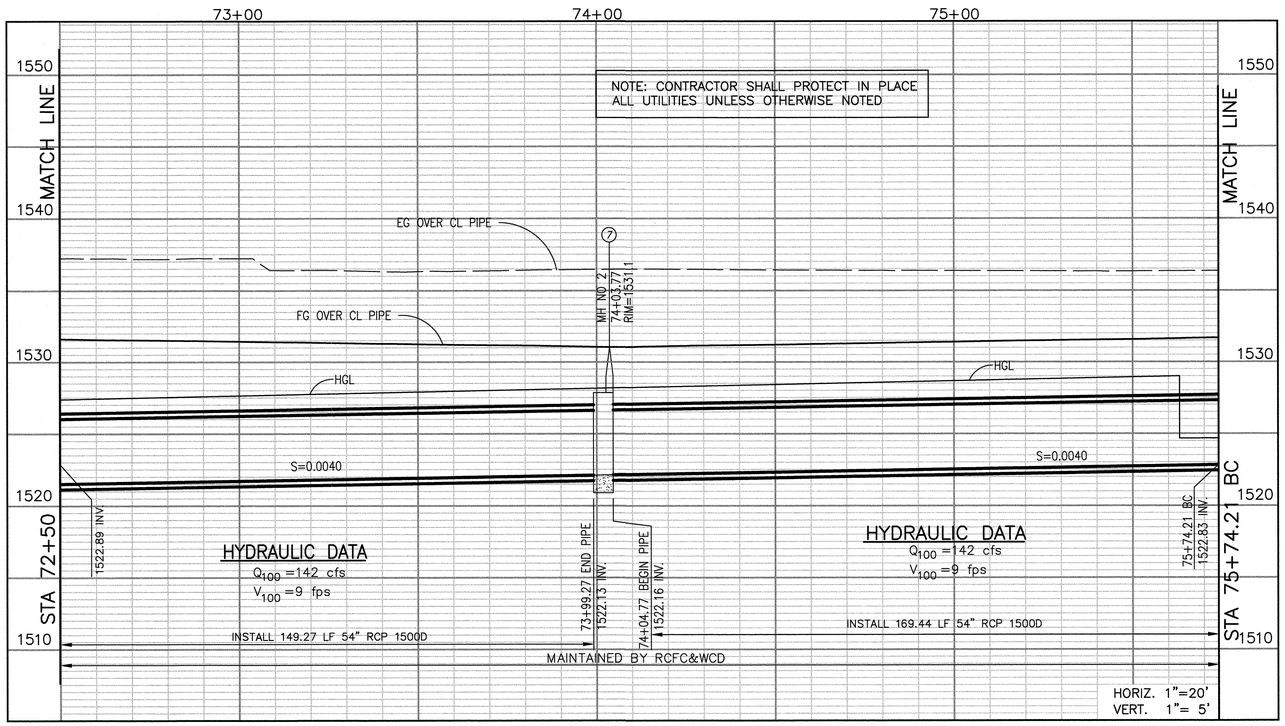
APPROVED BY: Edwin Quiroz DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E–9.1 STAGE 2

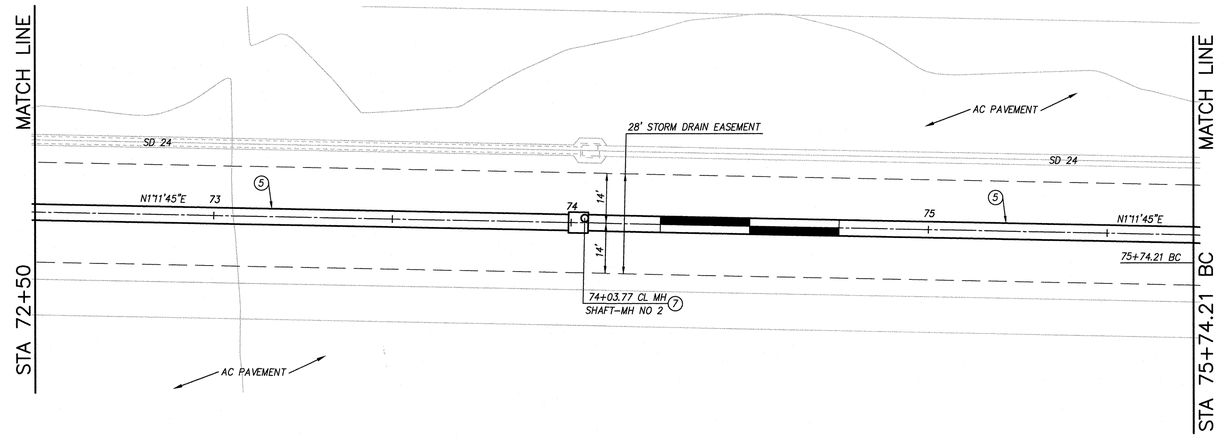
LINE "E–9" STA 69+00–STA 72+50

PROJECT NO.	4–0–00490
DRAWING NO.	4–1152
SHEET NO.	8 OF 15

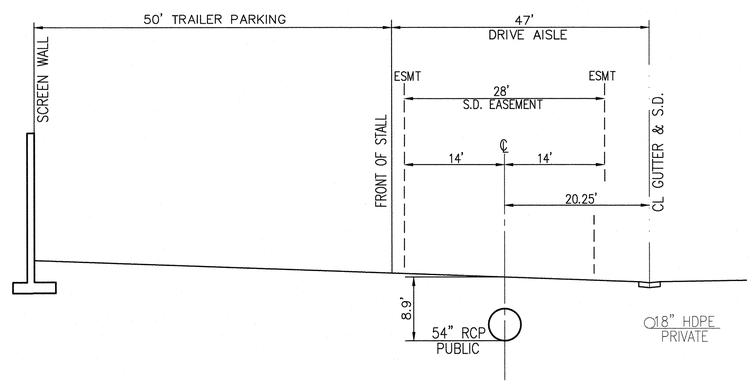
L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



PROFILE



PLAN



SECTION STA. 74+50

TYPICAL FROM STA 72+50 TO STA 75+74.21

10 0 10

NOTES

(5)— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

(7)— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252

N

PLAN

20' 0 20'

PPT 180028 / IP 200029

6/9/21

RECMD COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER — DATE SIGNED

6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9842 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926 DATE 6/9/21

STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

Don't Dig... Until You Call U.S.A Toll Free
811 or 1-800-422-4133



PERMANENT BENCH MARK
BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE. W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23'x61' CONCRETE CULVERT. BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL: DATE: 06-24-2021

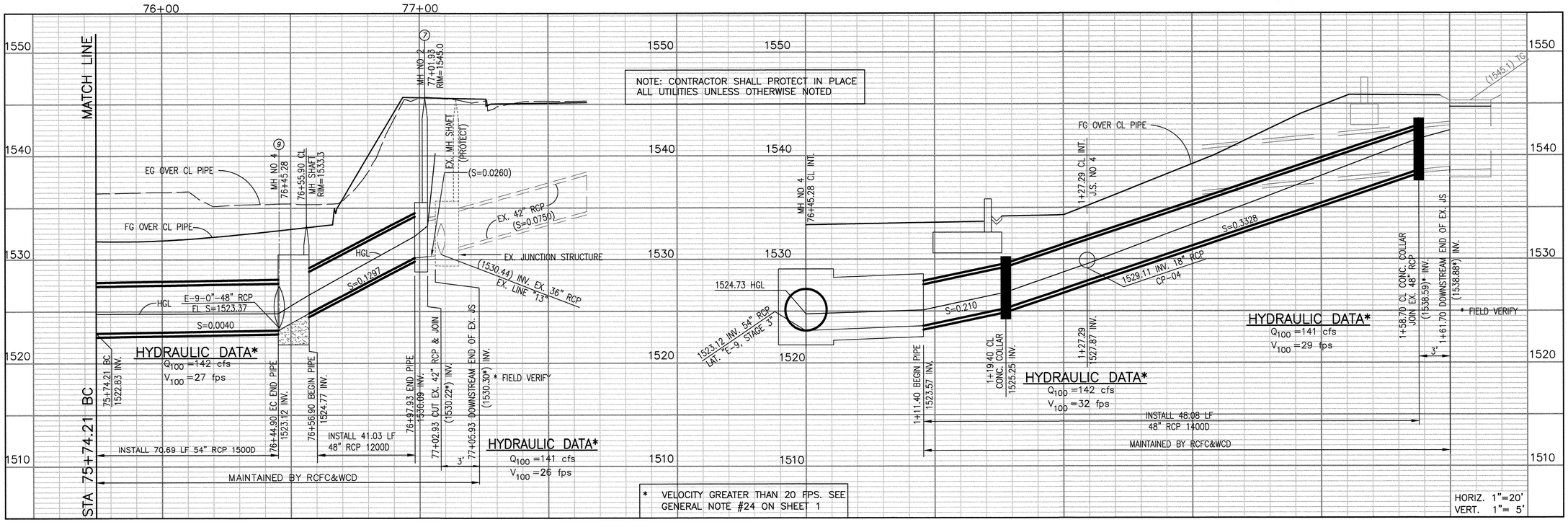
APPROVED BY: Edwin Quiroz DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1 STAGE 2

LINE "E-9" STA 72+50-STA 75+74.21

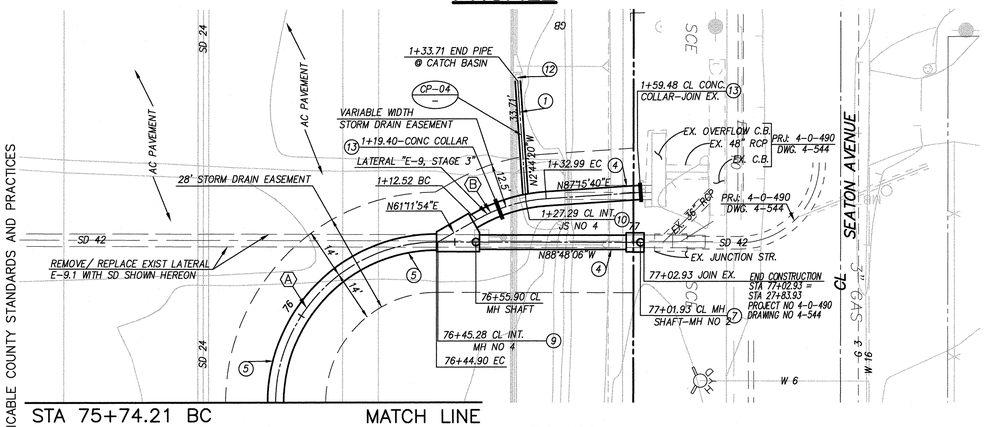
PROJECT NO. 4-0-00490
DRAWING NO. 4-1152
SHEET NO. 9 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



PROFILE

PROFILE LATERAL "E-9, STAGE 3"



PLAN

CURVE DATA	Ⓐ	Ⓑ
R	45.00'	45.00'
Δ	90°00'09"	26°03'46"
L	70.69'	20.47'
T	45.00'	10.42'
B.C.	75+74.21	1+12.52
E.C.	76+44.90	1+32.99

MANHOLE DATA

LATERAL	℄ STATION	WALL STATION	STRUCTURE	A	C
E-9-0	76+45.28	76+55.15	MH NO. 4	30°	11.4'

NOTES

(1)— INSTALL 18" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815

(4)— INSTALL 48" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815

(5)— INSTALL 54" RCP (SEE PROFILE FOR D-LOAD). BEDDING PER RCFC&WCD STD. MH815

(7)— CONST. MANHOLE NO 2 PER RCFC&WCD STD. MH252

(9)— CONST. MANHOLE NO 4 PER RCFC&WCD STD. MH254

(10)— CONST. JUNCTION STRUCTURE NO 4 PER RCFC&WCD STD. JS229

(12)— CONST. 24"x18" BROOKS BOX INLET

(13)— CONST. CONCRETE COLLAR PER RCFC&WCD STD. M803

N

PLAN
20' 0 20'

PPT 180028 / IP 200029

04 6/23/21 6/9/21

RECMD COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER 41701 — DATE SIGNED 6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

PREPARED BY: R.C.E. NO. 45926 DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

Don't Dig... Until You Call U.S.A Toll Free 811 or 1-800-422-4133
for the location of buried utility lines.
Don't disrupt vital services.
BURIED CABLE
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 2.5"x61 CONCRETE CULVERT, BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE., BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

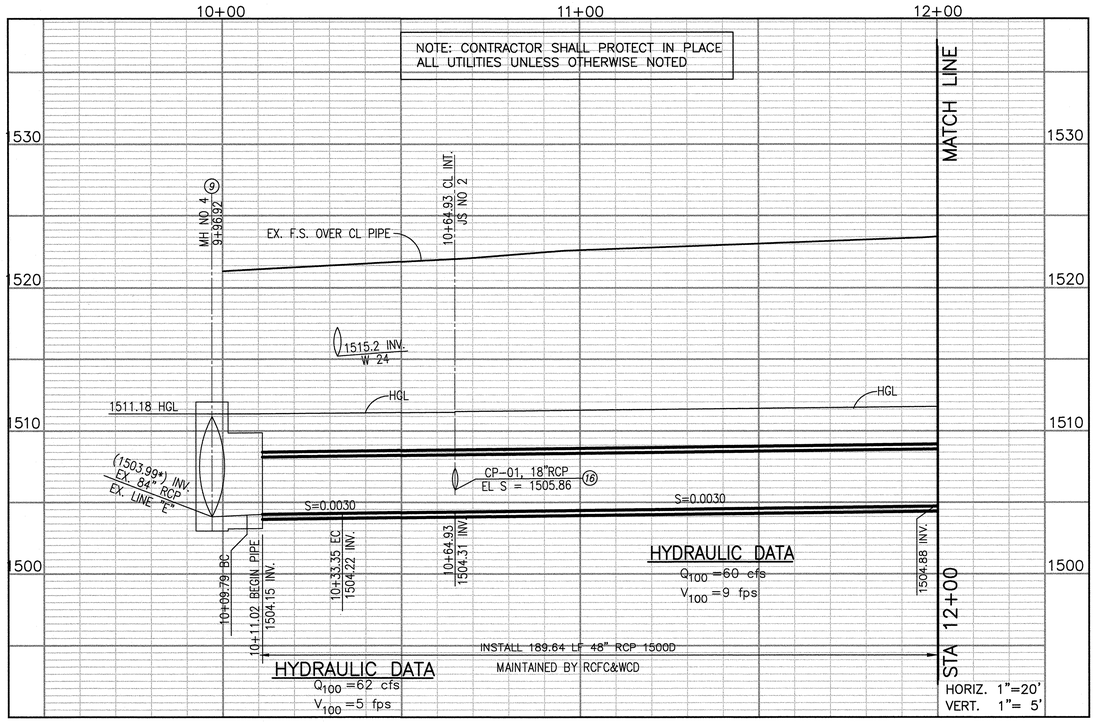
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021
APPROVED BY: Edwin Quintero DATE: 6/28/2021

PERRIS VALLEY MDP
LATERAL E-9.1
STAGES 2 & 3

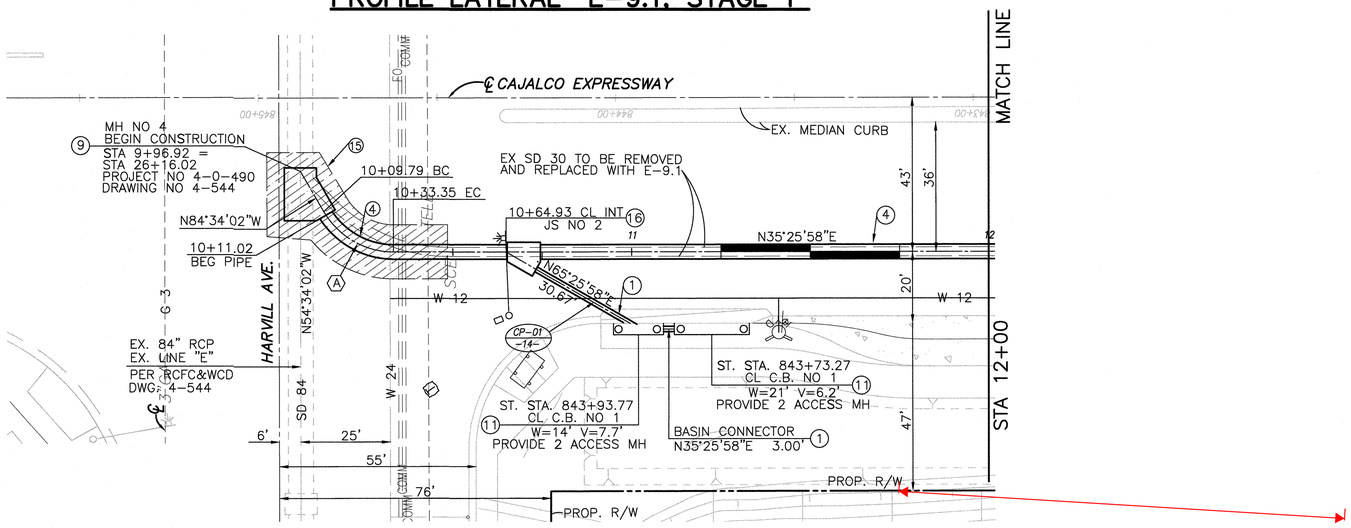
LINE "E-9" STA 78+74.21-STA 77+02.93
LATERAL "E-9, STAGE 3"

PROJECT NO.	4-0-00490
DRAWING NO.	4-1152
SHEET NO.	10 OF 15

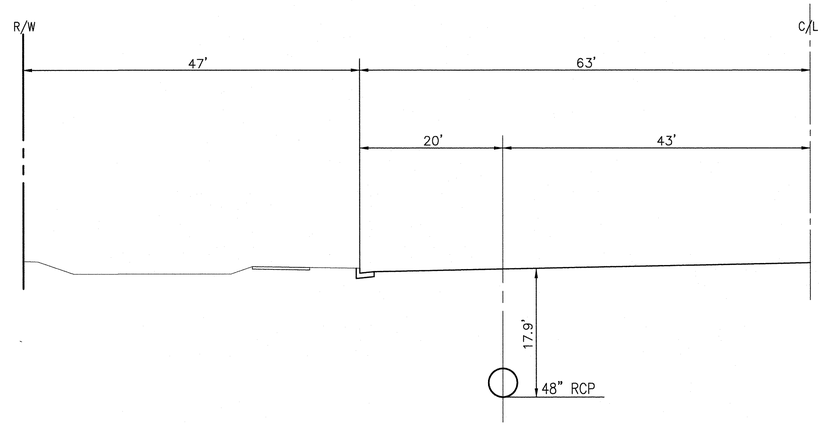
L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG



PROFILE LATERAL "E-9.1, STAGE 1"



PLAN LATERAL "E-9.1, STAGE 1"



SECTION STA. 11+50

TYPICAL FROM STA 10+91.38 TO STA 12+00

10 0 10

CURVE DATA	Ⓐ
R	22.50'
∆	60°00'00"
L	23.56'
T	12.99'
B.C.	10+09.79
E.C.	10+33.35

MANHOLE / JUNCTION DATA

LATERAL	℄ STATION	WALL STATION	STRUCTURE	A	C
E-9.1	26+16.02	26+16.02	MH NO. 4	30°	14.2'
CP-01	10+64.93	10+68.39	JS NO. 2	30°	–

NOTES

1. INSTALL 18" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815
4. INSTALL 48" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815
9. CONST. MANHOLE NO 4 PER RCFC&WCD STD. MH254
11. CONST. CATCH BASIN NO 1 PER RCFC&WCD STD. CB100
15. UTILITY TRENCH BACKFILL PER COUNTY OF RIVERSIDE STD. 818
16. CONST. JUNCTION STRUCTURE NO 2 PER RCFC&WCD STD. JS227

PLAN

20' 0 20'

PPT 180028 / IP 200029

4/23/21

6/9/21

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG

RECMD — COUNTY OVERSIGHT ENGINEER — REGISTRATION NUMBER — DATE SIGNED

J. Cauthen Duhnke — 14701 — 6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

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SANTA ANA, CALIF. 92705
(888) 714-9942 • (714)389-9191 FAX

PREPARED BY: _____ R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

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REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

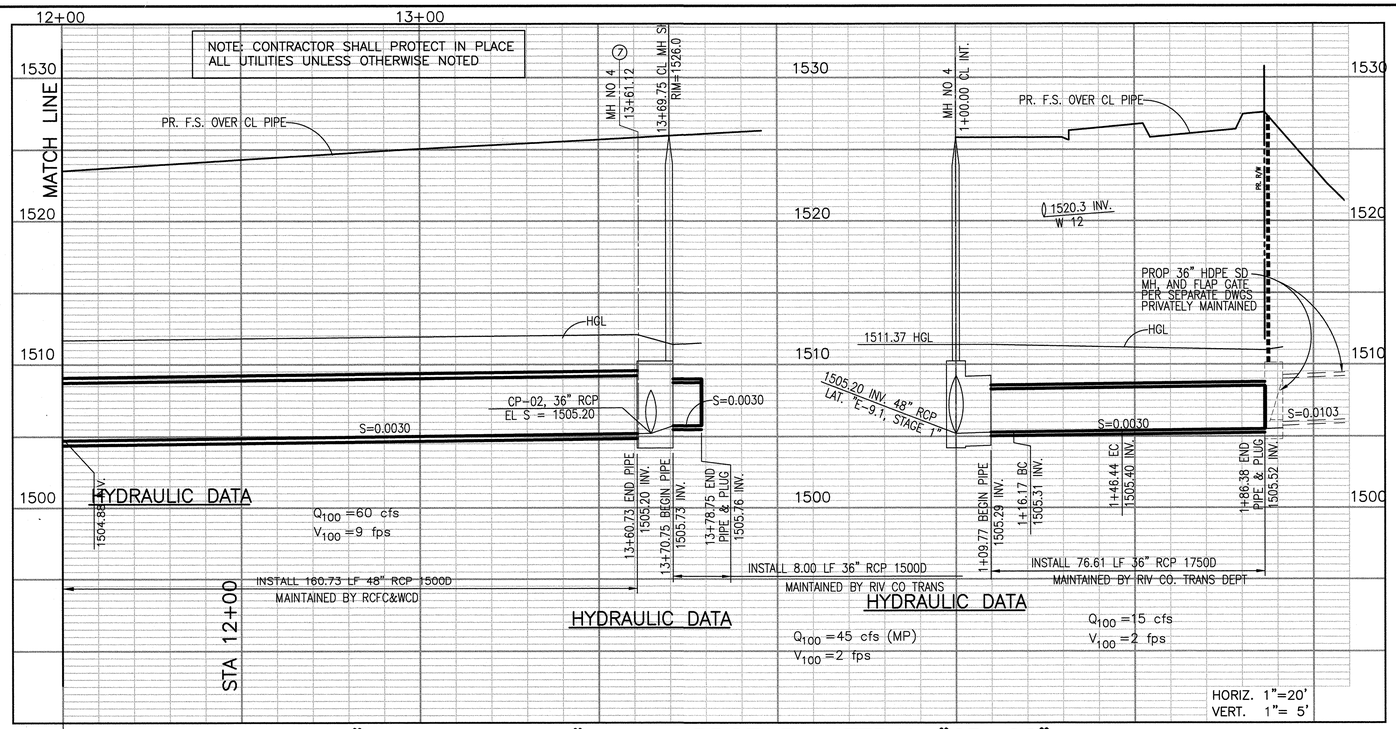
RECOMMENDED FOR APPROVAL BY: _____
DATE: 06-24-2021

APPROVED BY: Edwin Quinonez
DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1.1 STAGE 1

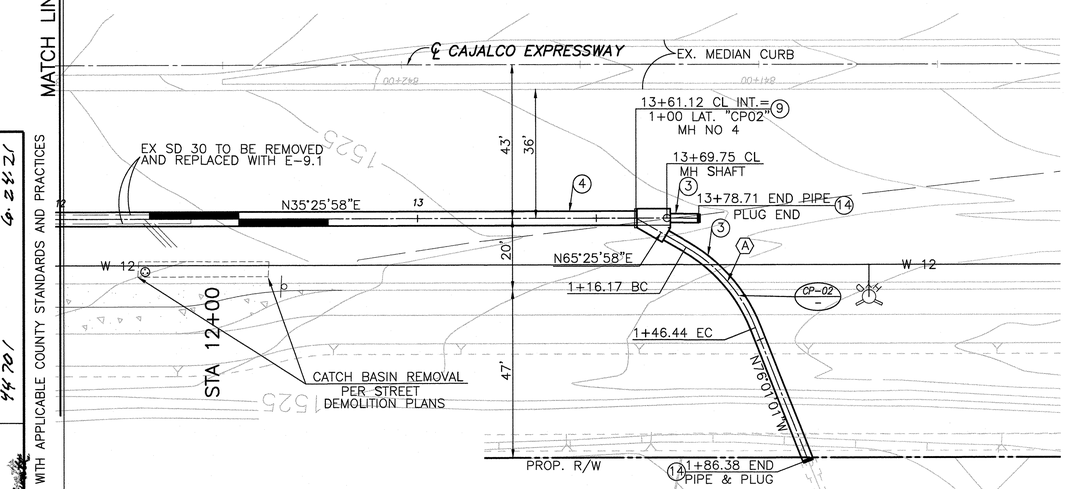
LINE "E-9.1, STAGE 1"
STA 10+00-STA 12+00

PROJECT NO. 4-0-00495
DRAWING NO. 4-1152
SHEET NO. 11 OF 15

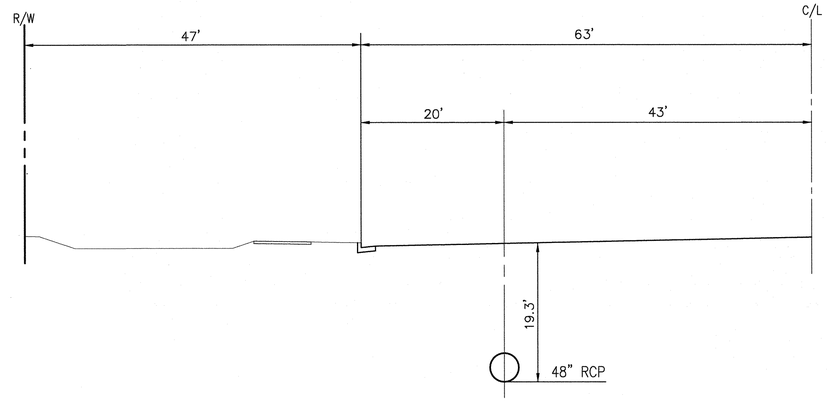


PROFILE LATERAL "E-9.1, STAGE 1"

PROFILE LATERAL "CP-02"



PLAN LATERAL "E-9.1, STAGE 1"



SECTION STA. 12+50

TYPICAL FROM STA 12+00 TO STA 13+60.73

10 0 10

CURVE DATA	Ⓓ
R	45.00'
Δ	38°33'01"
L	30.28'
T	15.74'
B.C.	1+16.17
E.C.	1+46.44

MANHOLE / JUNCTION DATA

LATERAL	℄ STATION	WALL STATION	STRUCTURE	A	C
CP-02	13+61.12	13+64.58	JS NO. 4	30°	–

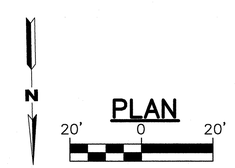
NOTES

③ — INSTALL 36" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815

④ — INSTALL 48" RCP (SEE PROFILE FOR D-LOAD) BEDDING PER RCFC&WCD STD. MH815

⑨ — CONST. MANHOLE NO 4 PER RCFC&WCD STD. MH254

⑭ — CONST. CONCRETE BULKHEAD PER RCFC&WCD STD. M816



PPT 180028 / IP 200029

RECMD | COUNTY OVERSIGHT ENGINEER | REGISTRATION NUMBER | DATE SIGNED
RECMD | | 44701 | 6.24.21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER — STEVEN D. LEVISEE — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

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(888) 714-9646 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926
STEVEN D. LEVISEE EXP.: 12-31-22 DATE 6/9/21

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
PB NUMBER: 231892

Don't Dig... Until You Call U.S.A Toll Free 811 or 1-800-422-4133


PERMANENT BENCH MARK
BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE. W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23"x61" CONCRETE CULVERT. BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: DATE: 06.24.2021

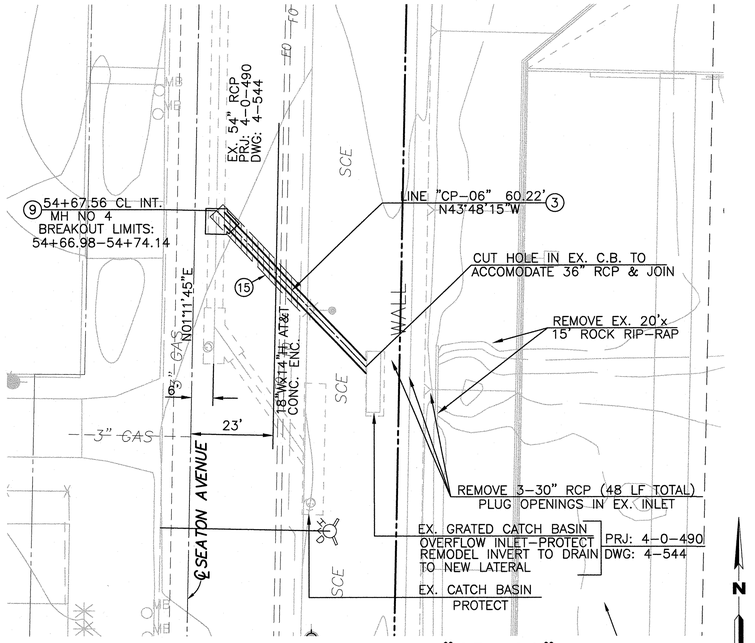
APPROVED BY: Edwin Quinonez DATE: 6/28/2021

PERRIS VALLEY MDP LATERAL E-9.1.1 STAGE 1

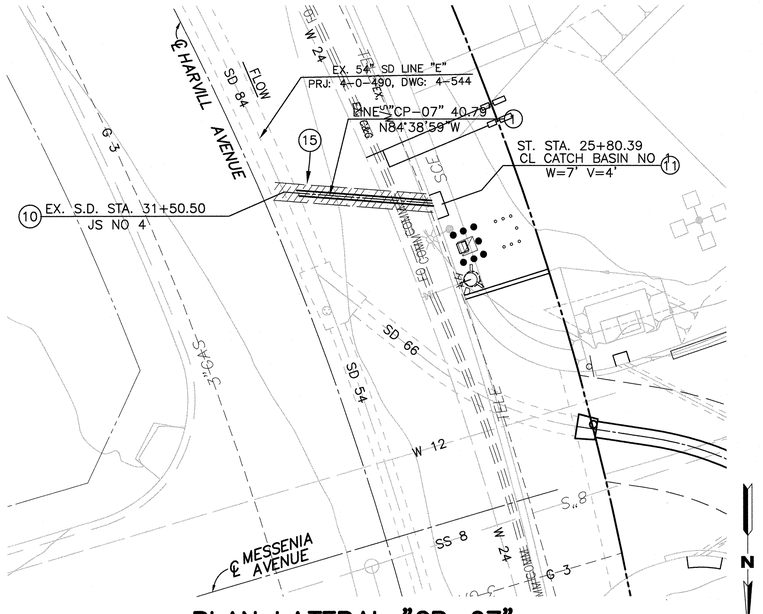
LINE "E-9.1, STAGE 1"
STA 12+00-STA 13+78.71

PROJECT NO. 4-0-00495
DRAWING NO. 4-1152
SHEET NO. 12 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG
6/9/21



PLAN LATERAL "CP–06"



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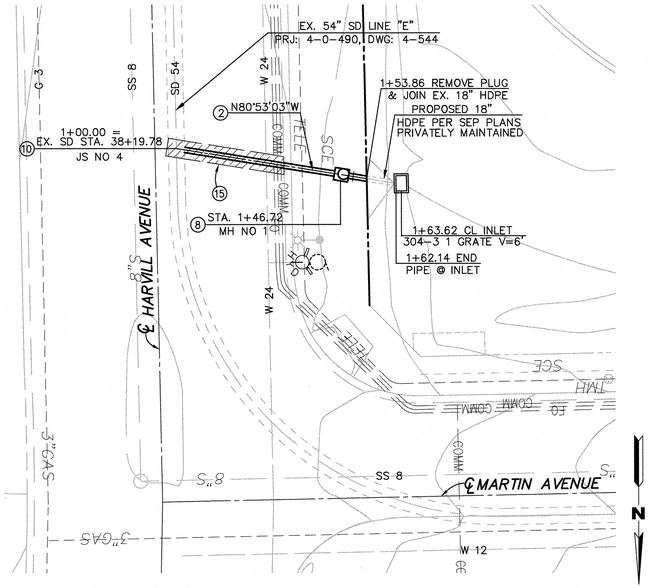

PLAN LATERAL "CP–05"

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES UNLESS OTHERWISE NOTED

MANHOLE / JUNCTION DATA

LATERAL	℄ STATION	WALL STATION	STRUCTURE	A	C
CP–06	54+67.56	54+69.80	MH NO. 4	45°	7.0'
CP–07	31+50.50	31+52.29	JS NO. 4	63°	–
D	38+19.78	38+20.19	JS NO. 4	63°	–

NOTES

1. INSTALL 18" RCP (SEE PROFILE FOR D–LOAD) BEDDING PER RCFC&WCD STD. MH815
2. INSTALL 24" RCP (SEE PROFILE FOR D–LOAD) BEDDING PER RCFC&WCD STD. MH815
3. INSTALL 36" RCP (SEE PROFILE FOR D–LOAD) BEDDING PER RCFC&WCD STD. MH815
8. CONST. MANHOLE NO 1 PER RCFC&WCD STD. MH251
9. CONST. MANHOLE NO 4 PER RCFC&WCD STD. MH254
10. CONST. JUNCTION STRUCTURE NO 4 PER RCFC&WCD STD. JS229
11. CONST. CATCH BASIN NO 1 PER RCFC&WCD STD. CB100
15. UTILITY TRENCH BACKFILL PER COUNTY OF RIVERSIDE STD. 818

PAVING LEGEND

PAVEMENT REPAIR

PLAN

20' 0 20'

PPT 180028 / IP 200029

6/9/21

RECMD | COUNTY OVERSIGHT ENGINEER | REGISTRATION NUMBER | DATE SIGNED
6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

STEVEN D. LEVISEE — REGISTERED PROFESSIONAL ENGINEER — NO. 45926 EXP. 12-31-22 — CIVIL — STATE OF CALIFORNIA

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PREPARED BY: R.C.E. NO. 45926
STEVEN D. LEVISEE EXP.: 12-31-22 DATE 6/9/21

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

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for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
BM# 30–A–92
FROM THE INT. OF I–215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23'x61' CONCRETE CULVERT. BRASS DISK STAMPED BM 30–A–92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

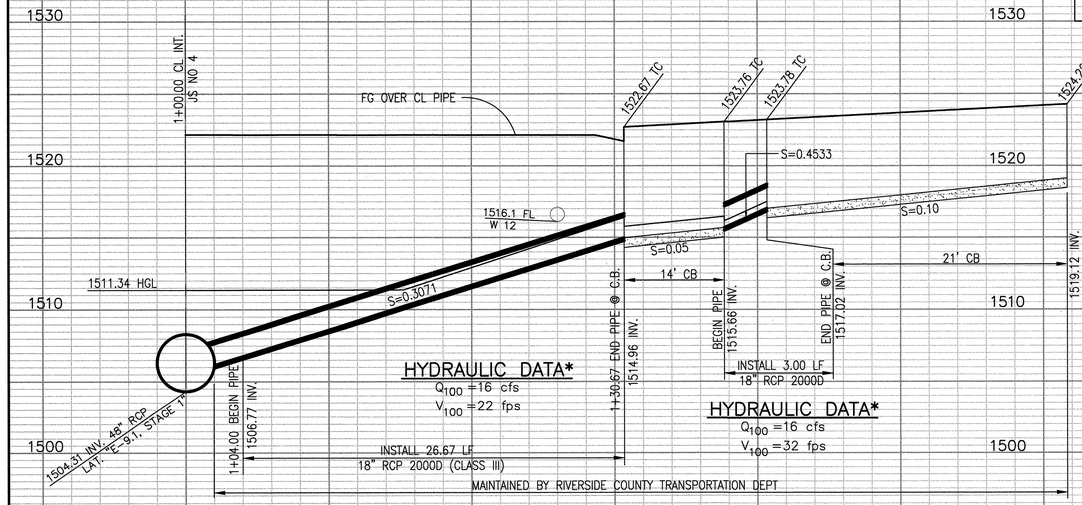
PERRIS VALLEY MDP LATERAL E–9.1 STAGE 2

LINE "CP–06", "E–9Z" & "CP–05"

PROJECT NO. 4–0–00490
DRAWING NO. 4–1152
SHEET NO. 13 OF 15

L:\100–90 MFBC PH 1 BLDG 1\LATERAL E–9 BYPASS\SD 03–015.DWG

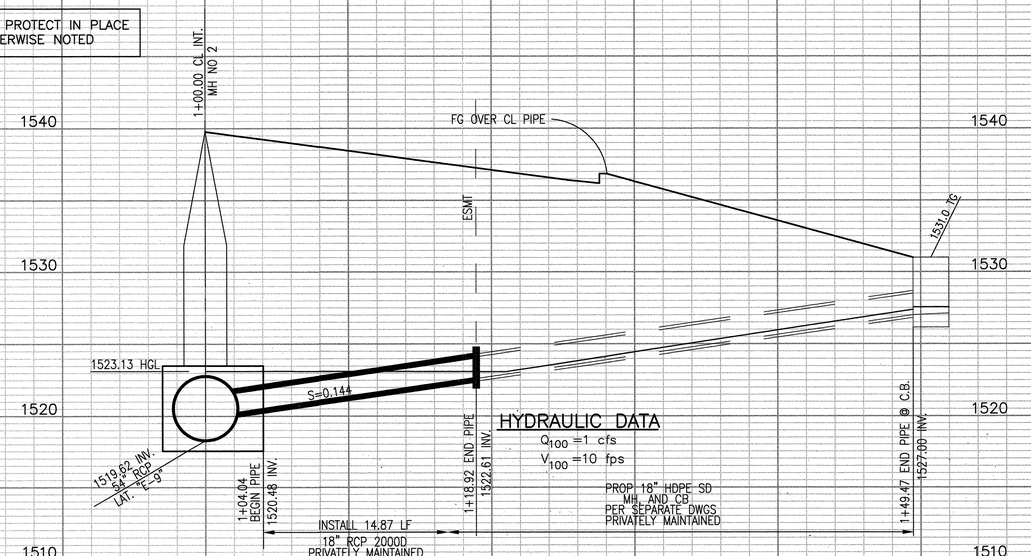
NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES UNLESS OTHERWISE NOTED



HYDRAULIC DATA*
Q_{100} =16 cfs
V_{100} =22 fps

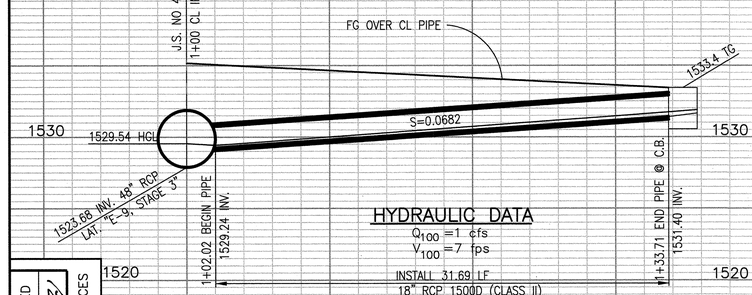
HYDRAULIC DATA*
Q_{100} =16 cfs
V_{100} =32 fps

PROFILE LATERAL "CP-01"
SEE SHEET 11 FOR PLAN



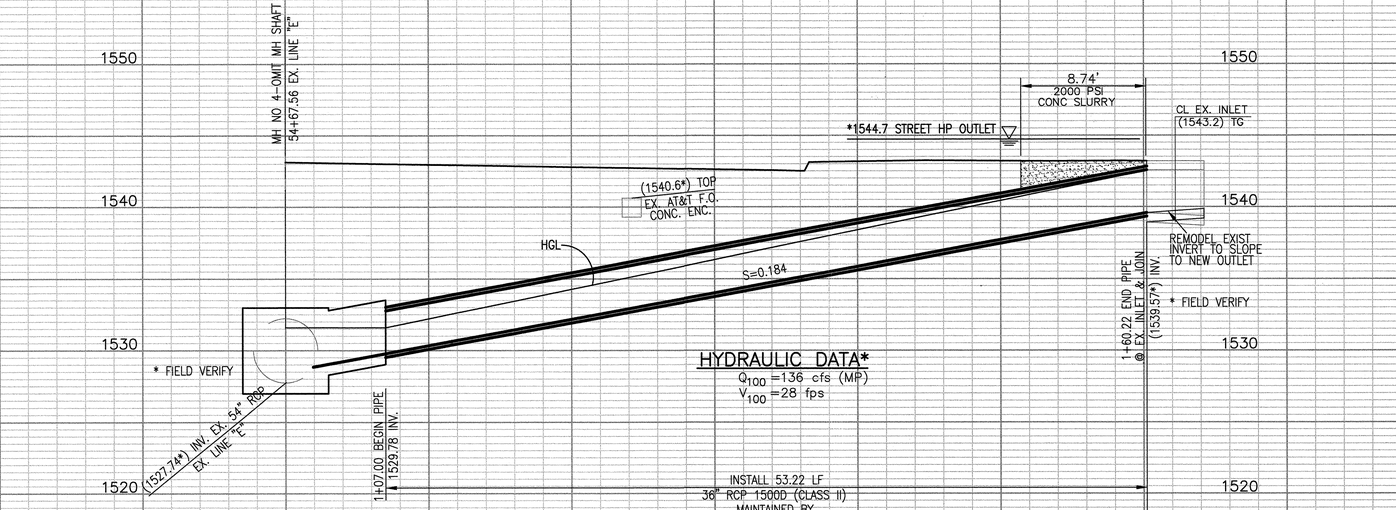
HYDRAULIC DATA
Q_{100} =1 cfs
V_{100} =10 fps

PROFILE LATERAL "CP-03"
SEE SHEET 6 FOR PLAN



HYDRAULIC DATA
Q_{100} =1 cfs
V_{100} =7 fps

PROFILE LATERAL "CP-04"
SEE SHEET 10 FOR PLAN



HYDRAULIC DATA*
Q_{100} =136 cfs (MP)
V_{100} =28 fps

PROFILE LATERAL "CP-06"
SEE SHEET 13 FOR PLAN

* VELOCITY GREATER THAN 20 FPS. SEE GENERAL NOTE #24 ON SHEET 1

RECMD | COUNTY OVERSIGHT ENGINEER | REGISTRATION NUMBER | DATE SIGNED
4478 | 6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-22 CIVIL STATE OF CALIFORNIA

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PREPARED BY: R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY:	M. LINDEMAN
DRAWN BY:	M. LINDEMAN
CONSTR. SET:	
CHECKED BY:	S. LEVISEE
PB NUMBER:	231892

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FROM THE INT. OF I-215 & OLEANDER AVE. W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23'x61' CONCRETE CULVERT. BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
EL=1517.08 ADJ. OCT. 1996

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

PPT 180028 / IP 200029

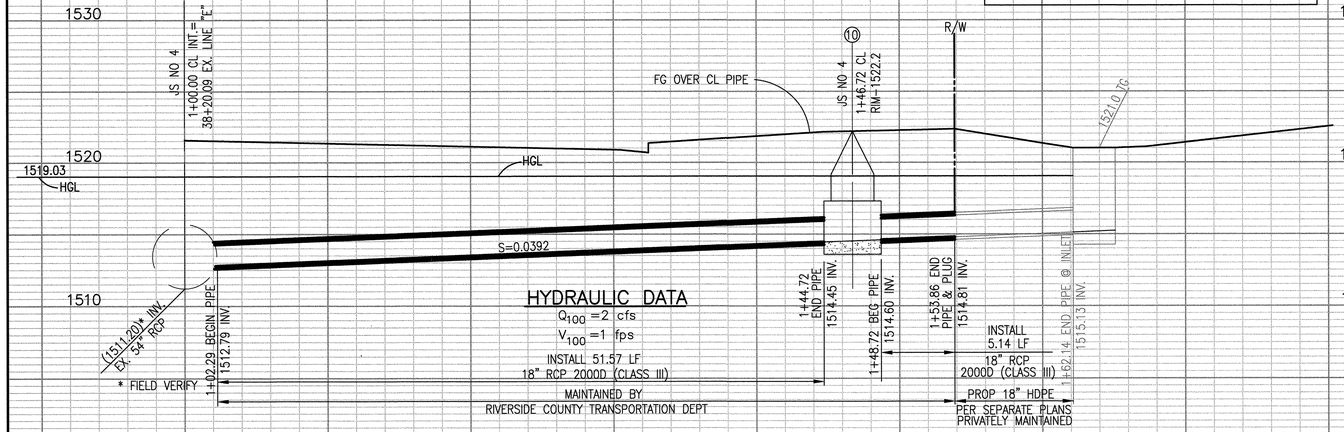
HORIZ. 1"=5'
VERT. 1"=5'
6/9/21

PERRIS VALLEY MDP
LATERAL E-9.1
STAGE 2
LATERAL PROFILES
LINES "CP-01" "CP-03"
CP-04 & "E-9S"

PROJECT NO.	4-0-00490
DRAWING NO.	4-1152
SHEET NO.	14 OF 15

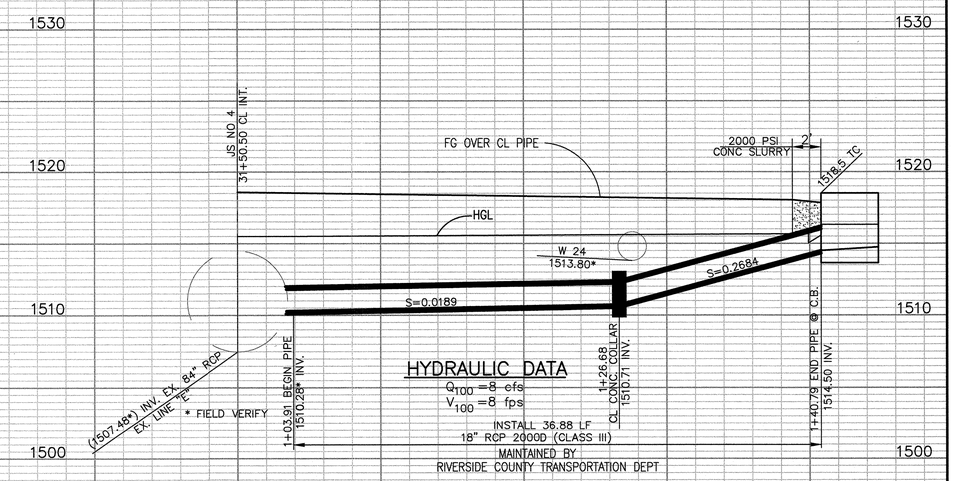
L:\Y00-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES UNLESS OTHERWISE NOTED



PROFILE LATERAL "CP-05"

SEE SHEET 13 FOR PLAN



PROFILE LATERAL "~~E-9Z~~" CP-07

SEE SHEET 13 FOR PLAN

RECMD	COUNTY OVERSIGHT ENGINEER	REGISTRATION NUMBER	DATE SIGNED
	L. Cunningham	44701	6-24-21

APPROVED AS TO COMPLIANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES

REGISTERED PROFESSIONAL ENGINEER STEVEN D. LEVISEE NO. 45926 EXP. 12-31-22 CIVIL STATE OF CALIFORNIA

PBLA ENGINEERING, INC.
Planning • Engineering • Surveying
1809 E. DYER ROAD, STE 301
SANTA ANA, CALIF. 92705
(888) 714-9642 • (714)389-9191 FAX

PREPARED BY: R.C.E. NO. 45926
DATE 6/9/21
STEVEN D. LEVISEE EXP.: 12-31-22

DESIGNED BY: M. LINDEMAN
DRAWN BY: M. LINDEMAN
CONSTR. SET:
CHECKED BY: S. LEVISEE
P8 NUMBER: 231892

Don't Dig... Until You Call U.S.A Toll Free
811 or 1-800-422-4133
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

PERMANENT BENCH MARK
BM# 30-A-92
FROM THE INT. OF I-215 & OLEANDER AVE., W'LY ALONG OLEANDER 0.1 MI. TO A DIRT RD. GOING N'LY 0.25 MI. TO A 23'x61' CONCRETE CULVERT. BRASS DISK STAMPED BM 30-A-92 RECESSED 1 IN. IN TOP OF CONC. HEADWALL 0.2 MI. N'LY ALONG RAILROAD TRACKS FROM THE INT. OF RAILROAD TRACKS & OLEANDER AVE. BRIDGE, 77' WEST OF CHAIN LINK FENCE, 12' EAST OF CL OF RAILROAD TRACKS.
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PROJECT NO. 4-0-00490
DRAWING NO. 4-1152
SHEET NO. 15 OF 15

L:\100-90 MFBC PH 1 BLDG 1\LATERAL E-9 BYPASS\SD 03-015.DWG